THE MODERN HOUSE IN MELBOURNE 1945 - 1975

THESIS SUBMITTED FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

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This thesis argues that:

Between 1945 and 1975, a complex tradition in Melbourne domestic architecture was concealed by the moral, aesthetic and industrial imperatives of the Modern Movement, the effects of World War 2 and subsequent shortages of materials and labour. This tradition is an assimilation and reformulation of local and overseas sources into a distinctly regional domestic architecture based on Arts and Crafts ideals of honesty of structure and texture and has been perpetuated by the continued idealization of the single family detached house.
Declaration

I declare that this thesis is less than 100,000 words exclusive of thesis statement, abstract, preface, acknowledgements, footnotes, appendices, tables, abbreviations, bibliographies and sources of illustrations.

Philip Goad

Melbourne, Australia, June 1992
Abstract

The Modern House in Melbourne 1945 - 1975

This dissertation reveals the method by which architects in Melbourne have designed the single family house in the period 1945 - 1975 and thus extends Robin Boyd’s attempt in 1947 to describe a regional architectural manner for the state of Victoria.

Critical to the study is an initial outline of a local tradition of condoned eclecticism in 1930s domestic architecture and the presence of an evolving housing stock that was mixed rather than predominantly that of the single family house. Modernism in 1930s Melbourne architecture is found to be part of a compositional tradition rather than emerging from ideological imperatives. Robin Boyd’s idea of a so-called Victorian Type is also found to be part of this compositional tradition. The study then examines the suppressive effect of World War 2 on this tradition and its eventual re-emergence during the ensuing three decades.

The circumstances which encouraged the adoption of the language of modern architecture and its subsequent effects are examined via prevailing architectural themes. These include: the post-war Victorian Type; structural experiment; geometry; the influence of the East Coast Bauhaus and Frank Lloyd Wright; the continuing idiosyncratic assimilation and reformulation process (albeit under the guise of the Modern Movement) which described the modern house in Melbourne of the 1950s and 1960s; the renewed interest in texture, exposed materials and compartmented planning in the 1960s; and the eventual re-emergence of artifice in the composition of space, form and detail and a renewed variety and intricacy in choice of texture and materials.

The three decades are shown to reveal a complex tradition in Melbourne domestic architecture concealed by the moral, aesthetic and industrial imperatives of the Modern Movement, the effects of World War 2 and subsequent shortages of materials and labour. This tradition is found to be an assimilation and reformulation of local and overseas sources into a distinctly regional domestic architecture based on Arts and Crafts ideals of honesty of structure and texture and has been perpetuated by the continued idealization of the single family detached house.
Appendices relate to each chapter and describe: the use of period styles in the 1930s; the changing notion of house as commodity via the speculative house builder and the public housing authority; the machine made-house and the hand-made house as circumstantial choices after World War 2; pre-war dreams of a modern Melbourne house as read through the architectural competition, and the changing image of the exhibition house in the 1950s. Four papers also examine the development of post-war domestic architecture in the United States (1945 - 1960) and Great Britain (1952 - 1969).

The methodology of this dissertation has involved documentation, description and analysis. The study is inclusive and its framework has been deliberately broad to depict the era's previously undiscussed complexity and hence enable a more accurate portrayal of the period than previous selective histories have allowed.
Preface

The research for this thesis has had a long history, growing initially out of undergraduate work in 1983 at the University of Melbourne on the early work of Peter McIntyre 1953-1961 and then in the following year, as a research thesis, a history of the R.V.I.A. Small Homes Service in association with The Age newspaper 1947 - 1961. On receipt of the Henry and Rachel Ackman Travelling Scholarship in May 1985, I decided to embark on a doctoral dissertation focussing on the design and development of the modern house in Melbourne 1945 - 1975.

My task had been prompted primarily by two works written by Robin Boyd. The first was an article entitled "California and Victoria, Architectural Twins" published in The Age, 9th October 1948 where Boyd had emphasised the social, climatic and architectural similarities between two regions. It was an extremely pertinent observation that begged two very simple questions. Was there influence from, or an affinity experienced for, Californian architecture in the post-war decades in Victoria, and was it worthy of recording? More importantly, why was there no distinctly local architectural history discourse for Victoria beyond 1947 which examined overseas influences and determined a validity for our own recent architectural traditions?

It logically followed therefore that the second Boyd work of influence for me was his Victorian Modern published in 1947, being the only extant attempt to define a regional architectural identity for Victoria. In 1985, this book still remained a vital and challenging document. Jennifer Taylor's An Australian Identity: Houses for Sydney 1953, published in 1972 and republished in 1984 had been remarkably influential albeit a selective story which omitted and clouded the varied architectural traditions within Sydney. Though architectural historians have revised her views, the importance of her attempts to codify and understand a period should not be discounted. While there exists a large number of general texts which discuss the Australian house such as Robin Boyd's Australia's Home, Donald Leslie Johnson's Australian Architecture 1901 - 1951, Jennifer Taylor's Australian Architecture Since 1960, and Robert Irving's The History and Design of the Australian House, I felt that there was a need for a specialized study of a single place like Melbourne and its
Preface

environs, i.e. a regional architectural history. Boyd's *Victorian Modern* needed updating, unravelling and extending in its laudable attempt to find threads of continuity and hence describe a local architectural culture.

On receipt of the Ackman Scholarship, I resolved with two overseas trips to become familiar with the worldwide picture of post-war domestic architecture as the basis for an informed comparison with the local architectural scene. For the first trip to California in October 1985, I spent two months living in Berkeley visiting architects and academics, and documenting the architecture of the Bay Region. The next two months were spent as a Visiting Scholar examining the post-war domestic architecture of greater Los Angeles at the University of California, Los Angeles under the sponsorship of Professor William Mitchell. I returned to Australia via Japan in late February 1986. My next trip in 1987 was as a Visiting Scholar at Columbia University under the sponsorship of Professors Robert Stern and Kenneth Frampton. Based at the Avery Library for the Fall Semester of 1987 I produced the papers for American section of the Appendix. June and August 1987 were spent as a Visiting Scholar at the Bartlett School, University of London examining single family houses in Great Britain in the post-war decades. July 1987 was spent travelling in Europe looking at a limited range of post-war housing developments.

Since beginning my thesis, others have begun to contribute to the debate and unearth much needed research on local architecture built between the wars and in the post-war decades. Winsome Callister at Monash University and Bryce Raworth at the University of Melbourne are currently working on similar projects with time frames which overlap my own. It must be noted that Dr. Conrad Hamann's pioneering and unpublished Ph.D. thesis on the work of Grounds, Romberg and Boyd in 1978 was a constant source of inspiration for my own work. Judy Trimble's Ph.D. thesis on the career of Graeme Gunn also predates my research. In 1989, the then editors of *Transition*, Harriet Edquist and Karen Burns, organized the conference, *Robin Boyd - the Architect as Critic* and very kindly asked me to prepare a comprehensive bibliography and exhibition catalogue on the works and writings of Robin Boyd which was subsequently published for the event. Later that year, the R.A.I.A. and The Museum of
Victoria invited me to write the text for the 1990 exhibition *Home Sweet Home - Changes in Domestic Architecture in Victoria 1835 - 1989*. Thus in a small way my interest in the subject has been vindicated by a recent surge of curiosity in the period and attempts to mark its continuing importance.

Parts of this thesis which have been published as articles include an elaborated version of Chapter One: Eclectic Synthesis and the Emergence of the so-called Victorian Type (*Architecture Australia*, June 1988, Discourse Issue) and a much abbreviated version of Chapter Six: New Eclecticism: Ethic and Aesthetic - The Houses of Robin Boyd 1959-1971 (to be published in the forthcoming special Robin Boyd issue of *Transition* due for release in July 1992). Both articles were subject to examination by referees.

The aim of this thesis therefore has been to codify and describe, to document and record, and thus enable others to speculate further and elucidate a more complete picture of the obsessively loved object which we, for the most part, continue to call home in Melbourne, the single family house.

*Philip Goad*
*Melbourne, Australia, June 1992*
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Many people have helped me since the commencement of this thesis, so many in fact, that I feel inordinately embarrassed, flattered and proud to have gained so much from them. By evidence of this document, I hope that I will have returned their generosity.

First, I would like to acknowledge members of the Department of Architecture and Building at the University of Melbourne who encouraged me late in 1984 to apply for the Henry and Rachel Ackman Travelling Scholarship. It was this award in May 1985 which initiated my Ph.D., enabled me to travel overseas and hence provide an invaluable knowledge base for the post-1945 decades. From the Department I would like to thank Professor Peter McIntyre, Professor Graham Brawn, Blanche Merz, Anne Neale, Hugh O'Neill and Bryce Raworth for their advice, friendship and academic acumen. George Tibbits earns a special mention for his encouragement and generosity in allowing me to teach in his architectural history program. David Callow deserves special thanks for his advice and patience on photographic matters. I would also like to thank the staff of the Architecture and Planning Library at the University of Melbourne, in particular Nicole Meredith, Liz Neumann and especially Margot Pizer.

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As a Visiting Scholar overseas, I was greatly indebted to my sponsors, William Mitchell at University of California, Los Angeles; Robert Stern and Kenneth Frampton at Columbia University, New York; and Dr. Martin Syme at the Bartlett School, University of London. I would also like to thank Sally Woodbridge, John Woodbridge, Carolyn Kizer, Hank Koning and Julie Eizenberg for their hospitality, knowledge, advice and friendship. The architects, academics and clients in Great Britain and the United States to whom I owe also debts of gratitude include: Dr. and Mrs. Stuart Bailey, David Bricker, David Dunster, the late Ray Eames, Joseph Esherick, David Gebhard, Daniel Gregory (*Sunset* Magazine), Dolores Hayden, Thomas Hines, Pierre Koenig, Donlyn Lyndon, Vernon de Mars, the late Cliff May, Richard Peters (who also gave me the keys to Charles Moore's Sea Ranch apartment), Julius Shulman, Raphael Soriano, William Turnbull and Gwendolyn Wright.

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To my supervisor, Jeffrey Turnbull, I owe most. His insight, his advice, his willingness to give opinion and above all his friendship have been a source of great comfort and encouragement to complete what I hope will be a stepping stone for others to follow and continue to lay the roots of a recent architectural history for this country.

*Philip Goad*

*Melbourne, Australia, June 1992.*
INTRODUCTION:

SOMETHING TO DREAM ABOUT - THE MODERN HOUSE IN MELBOURNE 1945 - 1975
Introduction: Something to dream about: the modern house in Melbourne c.1945 - 1975.

The single family house has always played an inordinately large part in the history of Australian architecture. Histories of Australian architecture have rarely questioned why this has been so. Instead, most have proceeded to describe and comprehensively tally the highlights of each respective period and continue to posit the house as the inevitable icon of Australian architecture and as the ultimate aspiration of its people (1).

After the Second World War, this healthy and voracious obsession for the house (peculiar to Australia) was to be highlighted. The small scale of the domestic commission; its advantages of sun, space and freedom within the quarter acre block; its potential for individual embellishment and its status as a signifier of land ownership were not only indelibly stamped upon the psyche of the homebuying public but also upon that of the architect, the designer of the highly prized and dearly loved dream home.

Given the apparent singular aim of both architect and homebuyer, the thirty years following 1945 are difficult decades to unravel, concealing an astonishingly broad complexity and diversity within the field of domestic design. What these volumes will do is to account for the understandable and irrefutable dominance of the single family house in Melbourne; provide a critical architectural appraisal of this presence; demonstrate how the Second World War was to affect change; and describe how the ideals and aims of the architect with respect to the house were also to change. The thesis concentrates on the architect-designed house which has been a focus of intense investigation by architects in their search for the so-called "modern" house. The study will expose the benefits and pitfalls of this search, and will attempt to reveal the intentions and irrevocable beliefs of the intractable suburban people of Melbourne.

The reasons for concentrating on Melbourne are quite simple. Most Australian architectural histories have valiantly attempted to cover the entire Australian experience for a given period or building type. In an effort to show a continuity of professional involvement in one city and also an attempt to expose common themes, if any, which occur in one particular Australian location, this study is limited to houses built in Melbourne and nearby sites in the state of

1. For example, a book commissioned for the Australian Bicentenary in 1988, Building a Nation by John Archer was an affirmation of all previous domestic histories of Australian architecture and not a critical appraisal of the Australian house and its relationship to the bush and the city.
Victoria. As Kenneth Frampton has lucidly stated, acknowledging the writings and theories of Ticinese architect Tita Carloni, "The strength of provincial culture surely resides in its capacity to condense the artistic and critical potential of the region while assimilating and reinterpreting outside influences" (2). It is this strength which this study will aim to elucidate with the further aim of identifying common characteristics of Melbourne architectural design.

The study is not a continuation of Robin Boyd's seminal work of 1952, *Australia's Home* which produced the formidable truism that "Australia is the small house" (3). Nor is it a social history. It is a critical architectural appraisal of the period 1945 - 1975 and one that has not previously been undertaken. There are a number of recurring themes which will be followed: the single family house as escape from city and suburb; the cyclical philosophical separation and attempted reconciliation between architect and builder; the flight from an indifferent replication of models, characterized by stylistic choice and the search for a new domestic language of architecture; the continual rise and fall of characteristic qualities of architecture particular to Melbourne, a regional assimilation and reformulation of overseas and local sources; and the prime role of the family as inherent to the development of the design of the detached house.

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In the late 1930s, the dominant dwelling type in Melbourne was the single family detached house. Yet by 1942, with experiment in an accumulating diversity of housing types such as high and low rise flats, duplexes, boarding houses, bungalow courts, and with the conversion of mansions into flats, Melbourne was on the brink of containing a more urbanized residential building stock.

In Fitzroy, the two storey brick and concrete luxury bachelor flats "Cairo" designed in 1935 by Taylor, Soilleux and Overend, were planned in a U-shape around a garden (fig.1). In South Yarra, Howard Lawson's hip roofed towers of flats, "Beverly Hills", 1934 - 36, made allusions to Hollywood with their maze of stairs, balconies, and "Ye olde swimming pool". Roy Grounds's "Quamby", "Moonbria", "Clendon Corner" and "Clendon" blocks of flats brought to the type the forms and details of Scandinavian modernism (4). "Denby Dale" in Glenferrie Road, Kooyong, 1937 by R.B. Hamilton and Marcus Norris was a large Old English cum Tudorbethan complex of three blocks planned around a circular drive (fig.2). Alcaston House in Spring Street, central Melbourne, 1929 - 30, by A.&K. Henderson was a multi-storey block of flats which was derived from American hotel typologies (fig.3). All were part of a diversified approach to notions of

4. "Quamby", Glover Court, Toorak, 1940 - 42; "Moonbria", Mathoura Road, Toorak, 1940 - 42; "Clendon Corner", Clendon Road, Toorak, 1940 - 41; "Clendon", Clendon Road, Toorak, 1939 - 40.
dwellings and offered differing levels of privacy. It was an investigation that involved a different social mix, of bachelors, single women, couples, and small families.

The increase in apartment living was not dramatic but incremental as prejudice against this denser form of dwelling type slowly diminished (5). These flats were not experiments in social housing which were to occur with the high-rise projects of the Housing Commission of Victoria in the 1960s, but were in the luxury class and built in the more affluent suburbs of Melbourne. They were the beginnings of residential densities which did not involve families. Though not nearly as successful as the flat in Sydney, there was from 1930 a huge increase in the number of flats built in Melbourne. This trend peaked between 1933 and 1935 with the number of self-contained flats built in Melbourne in these years almost equalling the number of private dwellings built overall (6). The growth in flat numbers was particularly marked in the municipalities of St. Kilda, Prahran, Caulfield and South Yarra and in these areas a new and distinctive streetscape arose, one which would give these areas a special character, communal mix and density not to be seen again until the flat-building boom of the mid-1960s.

Fig.3 A. & K. Henderson, architects. Alcaston House, Spring Street, Melbourne, Victoria, 1929 - 30.


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Regardless of the new interest in the flat, the continued building and idealization of the single family house in Melbourne did not change. What occurred was the subtle and ever so slight diffusing of the importance of the family as the prime social norm. The single family house however remained the dominant dwelling type. The return to abiding social norms after World War 2 was to guarantee that fact for the three decades which followed 1945. Thus the development of the flat in the post-war decades will not form part of this thesis.

The advantages of the individual private villa, of fresh air, sunshine, private open space, freehold land and a convenient plan, were still the items, which people when given a choice would opt for, rather than the apparently dark congested areas of the inner suburbs, or the exotic dwelling-in-the-air of the apartment (7). Terrace house living was regarded as unhealthy and squalid and lacked the amenity of the tree-lined streets of the suburb. The single family house was still the most desirable dwelling alternative in Melbourne for upper, middle and lower income homeseekers.

In 1938, the first major scheme of the newly formed Housing Commission of Victoria was the provision of housing at Fishermen's Bend in Port Melbourne. A large estate of detached and semi-detached houses was laid out according to the garden suburb principles of Ebenezer Howard (8) (fig.4). The houses were intended for needy
residents relocated from designated slum areas in South Melbourne. The State Savings Bank, with the approval of the Town Planning Commission, had already in 1925 built 184 houses for thrifty low-income earners at Port Melbourne as an incentive for these people to purchase their own homes. It was the residents of these two-storey semi-detached houses who had given the area the title of "Garden City" (9). In 1935, the speculative A.V. Jennings "Beaumont Estate", aimed at a solid middle class market, was begun in Ivanhoe. Built around a series of four cul-de-sacs, the 70 house development was to be when completed, "the most up-to-date and picturesque estate in the Commonwealth" (10) (fig.5).

Meanwhile in Toorak, Kew and Malvern, the higher valued suburbs of Melbourne, it was also the single family house which was idealized. In the pages of the cultured journal *Art in Australia* and the popular *Australian Home Beautiful*, houses designed by architects such as Marcus Martin; Osborn McCutcheon; Yuncken Freeman Brothers, Griffiths and Simpson; Ballantyne and Wilson; and Edward Fielder Billson were elaborately described and lavishly illustrated. Here were indeed the dream homes of the city.

For the progressive architect of the 1930s, this preference for the single family home presented a problem and also special opportunities. In 1934, F.R.S. Yorke wrote rather grudgingly in his introduction to his book *The Modern House*,

This book concerns the individual villa type of house, and though the author does not pretend that the building of villas is a good or even a possible solution to the problem of housing the people, he does believe that for some time to

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come the majority of people will continue to live in detached or semi-detached houses, and it is important for the relation of the modern villa to modern architecture and the modern social system to be appreciated (11).

The town planning principles and the social implications of modernism concern Yorke. The individually owned villa was anathema to the ideals of the collective in the Modern Movement. It is interesting to note that the first illustration of *The Modern House* is a proposal for an 11 storey block of flats designed by Walter Gropius (12) (fig.6). Yorke acknowledges the conflict between the political ideas and aspirations of a new architecture and the desires of a populace committed to land-ownership and territoriality. It was a contradiction that would infuriate architects for years and cloud their appreciation of the urban possibilities of the single family home and the suburb of which the detached house was inevitably a part. The architect who was imbued with the idea of social change would regard the house not as an ideal haven of home, but as an object of research, ironically not part of an integrated urban idea with a responsibility beyond itself - i.e. to a city, street, or garden city ideal.


12. Ibid. The scheme illustrated was a project for High Rise Apartments in Steel Frame Construction, 1929 - 30 designed by Walter Gropius.
It is interesting to quote Yorke again,

_in so far as the modern architect is concerned the villa has had and will continue to have, a great importance as the cheapest complete building unit for examination and experiment and it is most often in this small structure that modern architecture goes through its complete revolution.....And since the architect can gain real experience of new construction only in actual building work, he is most likely to find in the villa, the most easily accessible unit for research_ (13).

Such motives behind investigations into new domestic form both in the late 1930s and the post-war decades automatically encouraged the architect to move from the traditional urban responsibilities and symbolic imagery associated with domestic design towards an objectification of house and home.

Consequently, _experiment_ as an optimistic social goal frequently overshadowed the true function of the house and understandably cast a yet more unfortunate shadow on the machinations of the architect. In attempting to create the perfect house as the basis for wider influence in the greater realm of architecture, architects often confused experiment with drama and glamour. Compositional and structural conceit became not the key to a better future but an affirmation of the architect providing the unusual object. Sculpture and abstraction replaced the notion of domestic styles. Traditional patronage returned for the architect intent on an artistic result. The aesthetic was new however, and determinedly non-domestic. The social goals of modernism were sidestepped in favour of a new image - the style of the Modern Movement.

In the 1930s, fashion and a prevailing stylistic eclecticism in Melbourne had diffused the nascent moral imperatives of the Modern Movement. The Second World War swept away such rich diffusion. The war conditions provided the catalyst not only for change and experiment, but also for the injection of the exclusive aesthetic and industrial imperatives of the Modern Movement into the post-war architect's visual idea of what a _modern_ house must be, although the perception of style itself was to be exorcized. In a period of deprivation and austerity, such an idea for the modern house was readily acceptable to a public,

Ibid., p.5.
eager to escape the grim reminders of the war years and reclaim the suburban lifestyle which had been so quickly and ruthlessly taken away from them.

The story of the modern house in Melbourne is also at the heart of Yorke's dilemma of conflict between ideology and the reality of dwelling. This conflict forms the central theme of this study. The modernist dream was housing for the collective. But Melbourne architects and their public had different ideas to the modernist dream. The first central assumption by everyone, architect and public, was that the single family house was the ideal dwelling type. Within this dwelling type, modern could mean many things. From this basis of diversity, a study of the development of the modern Melbourne house must begin and from which its progress will be coloured for the thirty years after 1945.
CHAPTER ONE:

A TRADITION OF ECLECTICISM - THE MELBOURNE HOUSE 1934 - 1942
Chapter 1: Period styles and their embrace of the modern

The 1930s in Melbourne were the heyday of period revival styled houses. Involved in their design were the leading local architects and architectural firms of the day such as Marcus Martin; Yuncken, Freeman, Freeman and Griffiths; Bates, Smart and McCutcheon; Hughes and Orme; Buchan, Laird and Buchan; Leighton Irwin; Cedric Ballantyne; and R.S. Demaine. The houses were large, opulently furnished and built in Melbourne's better suburbs of Toorak, South Yarra, Ivanhoe and Malvern. They were invariably designed for the upper echelons of Melbourne society which meant their frequent publication in popular magazines such as the Australian Home Beautiful. These houses epitomised for the public, the highest aspirations of refined and glamorous suburban living in Melbourne. The architects for these houses were established and highly regarded amongst the profession. The frequent publication of period revival houses in journals such as Art in Australia and the R.V.I.A. Journal, meant that they were recognized as the epitome of good taste and quality design.

It is interesting then that subsequent architectural histories have overlooked the period house, dismissing it as an aberration in the progressive development of the so-called modern house in Melbourne. Our view of these designs has been coloured by Robin Boyd's determinedly modernist and selective writings which precluded the discussion of eclectic house styles. For Boyd, "Eclecticism died as a sincere philosophy in 1929" due to the Depression and its economic strictures (1). Max Freeland in Architecture in Australia declines to use the word eclecticism and speaks instead, of architects pandering to taste to earn themselves a living (2). Donald Leslie Johnson in Australian Architecture 1901-1951 ignores these houses altogether (3). More recently, Maisy Stapleton refers to the era as a time when architects extracted ideas from a "lucky dip of styles of the past" (4). Yet to dismiss the vast numbers of Georgian, Spanish Mission, Tudor, Tudor-Bethan, American Colonial, French Provincial, and Hollywood style houses designed and built by architects and builders all over Melbourne is to ignore a specifically condoned tradition of eclecticism in 1930s Melbourne. It was a tradition that was to be thwarted full development by Australia's advent into the Second World War in 1942.

To understand and acknowledge the 1930s as a period of exploration rather than one of aberration is to understand

1. Robin Boyd, Australia's Home, p.95.
3. Donald Leslie Johnson, Australian Architecture 1901 - 1951, pp.74 - 76 does mention the Colonial Revival houses of Hardy Wilson and the Spanish inspired house designs of Leslie Wilkinson in Sydney but no mention at all is made of period revival houses in Melbourne.
the eventual influx of International Style forms and ideas not as the "Revolution" of 1934 as Boyd might have it (5), but rather as an extension of a culture of borrowing and re-assembling elements. It was a more up-to-date eclecticism caused by rapidly improved means of communication and a desire by Australian architects to participate in the cultures of Great Britain, Europe and in particular the United States.

In negating the idea of a progressive eclecticism, historians have overlooked an ability of architects to design in several modes, a skill condoned and promoted by the established sector of the profession. Many architects of this period, for example, A.M. McMillan (6) display a proficiency of designing in any style. Roy Grounds was just as comfortable with a version of the Monterey Style as he was with, as Boyd attempts to assert, building "exclusively and unquestionably in the new mood of 'Modern'" (7).

The overlapping of exotic styles and influences has also concealed an overlooked characteristic of houses of this period - the disjuncture between the programmatic functionalism of the plan and its recipe for modern living and the exterior image or style of the house. In many cases it is the wedding of a symmetrical or historically referential facade to a highly efficient and overtly functional plan, complete with the latest kitchen technology and labour saving devices.

In an article entitled "Modern Planning - How the Architect can cut construction cost in designing a Modern Residence", which appeared in the Australian Home Beautiful (8), Osborn McCutcheon's example of a modern residence (figs.7,8) is a "simple version of the

6. For example, A. M. McMillan designed the flat roofed International Styled Graham House, 68 Hopeountain Road, Toorak (corner of Toorak Road), 1936 and the neo-Tudor No.1 Edzell Avenue, Toorak, c.1938.
7. Boyd, Australia's Home, p.96. For example, compare Grounds's Monterey styled Henty House, Frankston, 1934 with his own house at Mt.Eliza, "Ranelagh", 1933 - 36, one of the earliest examples of the International Style in Australia.
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English Normandy Cottage Type”, carefully planned to
minimize excess passage space, efficiently zoned and
maximizing orientation for sunlight and ventilation, as well
as having a satisfying "exterior". By comparison, the
apparent "uncompromising modernism" (9) of the Dr.
Geoffrey Smith House at Hopetoun Road, Toorak of 1934
by Yuncken, Freeman, Freeman and Griffiths conceals a
compartmentalised plan of formally arranged interiors and
formal spatial circulation (figs.9,10).

With the practicalities of a general levelling of society
following the Depression, the architect in designing a
house, had new limitations: a reduction of maids and
household help, a more compact and economical house
plan as the size of house and family diminished, and the
accommodation of new gadgets and services as comfort
and convenience dictated a revolution in kitchen and
bathroom design. Period revival style houses were not left
out of these technological advances. At the upper end of the
social and economic scale, these houses represented the
height of comfort and amenity in terms of the new labour
saving devices while their exterior played on sophisticated
differences to the authority of history. Such deferences
were crucial to the fashionable client who was seeking
status and also to the architect who was in search of a
progressive eclecticism that could be described as
essentially modern. Historical reference be it in detail or
form was a sign of sophistication, gentility and above all
indicative of the residents unquestionable good taste. It was
also a sign of material success. An exotic style such as
Spanish Mission with its arched loggias, wrought iron
lamps and Cordoba tiles alluded to the glamour of Southern
California and the new fantasy life of the movie stars of
Hollywood.

Consequently, the period revival house relied heavily on the image of its exterior for these much desired allusions. The interior, however, often bore little or only token relationship to the presented form. The house plan was invariably functional and described an informal set of rooms, anathema to its sometimes pompous and pretentious exterior. The period house therefore presents without a complex layering of symbol and psyche and a contradictory modern lifestyle of casual living within.

The forms of these houses were often cubic, tightly massed and detailed with historically referential pieces of ornament or specific eclectic detailing techniques - such as timber shutters, oriel windows and regency door canopies or fanlights, applied mouldings, and multi-paned windows. The front door was celebrated by either an elaborate Georgian aedicule or cozy medieval porch. The design method was one of elemental accretion - authentically historic period details applied to simply massed cubic forms. The street was addressed by the house with a sweeping drive to display the latest icon of material success, the motor car. On the more lavish homes, the porte cochere became a temple like set-down and resting point. The motor car was now enshrined by history. Relatively small setbacks from the street reflected urbanity and catered for the complex process of arrival. The garage was deftly integrated into the simple massing. Once inside, the entry hall was often double height, grand and formal with an authentically detailed stair. Two storeys was de-rigueur and immediately connoted wealth. Spaces were compartmentalised and distinct but the circulation between was informal and relaxed with interiors furnished in toned down versions of history. The kitchen however sparkled with the newness of technology. The gardens to the side and rear were formally laid out. There were no Australian natives, and instead, pools and axes, French doors, prim borders and stately walks.

The sources for this outward display of apparent good taste and respectability were varied. A renewed interest in the authority of the British Empire occurred after the First World War. The Depression did not alter this, but contributed a spare austerity to a consideration of all the period revival styles. The Georgian Revival style and its Colonial overtones dominated Melbourne's high society houses (10). It represented truth, morality and cultural associations that were essentially British. Oddly enough, as

Fig. 11 Professor Leslie Wilkinson, architect. "Greenway", Vaucluse, N.S.W., 1922.


a contextual model, Georgian architecture has no colonial precedent of significance in Victoria. Its revival owed much to what Bernard Smith describes as the "Georgian Rule of Taste pioneered in this country by Hardy Wilson" (11) and his eloquent expose of colonial architecture of 1924, Old Colonial Architecture in New South Wales and Tasmania (12). The scholarship and restraint of Wilson's Colonial Revival was rarely matched by Melbourne architects whose house designs were an impure blend of American Colonial Revival houses on the East Coast of the United States where the massing was casual and the detailing, albeit authentic, was sparingly applied and a loose interpretation of early Australian Colonial buildings based on the revered qualities of light and shade on a sheer surface and the elegant arrangement of a lamp or an oriel window on an external wall. In Sydney, a blend of Colonial and Mediterranean architecture, especially that of Spain, was being scholarly produced by Professor Leslie Wilkinson in houses such as his own, "Greenway", at Vaucluse, 1922 (fig. 11). His other houses were well publicised and were complemented by his authoritative writing on Mediterranean architecture and its suitability to the climate of Australia, in particular Sydney (13). The Spanish Mission or Hollywood style was a more free interpretation than Wilkinson's sensitive renditions of Andalusia and relied on glamorous allusions to the sunny climes of Los Angeles and the homes of film stars like Jean Harlow,
Robert Young, May Robson, Bing Crosby and Dixie Lee published in *Australian Home Beautiful* (14), and the frequent publication of Spanish Colonial Revival houses in California by architects such as Gordon Kaufman, Wallace Neff and John Byers from *Architectural Forum*, *Architectural Record* and *Pencil Points*.

The free eclecticism of American journals and glossy monographs on American architects such as Cram and Ferguson; Mellor, Meigs and Howe; and Charles A. Platt (15) proved more influential for period revivalists than the British magazine, *The Architectural Review* which in the 1930s was promoting the new European modern forms of the International Style and the brick vocabularies of Dutch architect, Willem Dudok. The American world view and their freedom to take elements and compose from a variety of periods did not limit itself to Spanish or -American Colonial Revival styles. Tudor, Tudor-Bethan, French Provincial and Chateau styles were explored as well. Romantic ties to England and allusions to a handcrafted existence point to a well established bourgeoisie whose prime desire was that one's home should truly become one's castle. The extraordinary phenomenon of this mercenary procuring of the domestic image was the satisfactory ability with which Melbourne architects were able to compose and detail these houses. What occurs is a cultural identity of a suburban existence on relatively unlimited space divorced from the harsh limits of the Australian bush. A freedom from stylistic traditions and authoritative examples encourages choice. With the freedom to express that choice and express one's individuality and taste, the period revival house represents the ultimate stance against and rejection of a collective tradition of housing and celebrates an ability to express one's own capricious whims. In 1935, Australia, like America, was a suburban nation where each homeowner was free to choose from the the world and make it their own.

The sources and influences for this eclectic tradition are many and various. One must remember first that at its best, eclecticism may result in innovation and progress, and at its worst, an "indifferentism" (16), capitalizing on a client's whims such that the whole notion of stylistic integrity or stylistic tradition is an illusion. The aspirations and desires behind the Georgian strongholds of Toorak and South Yarra perhaps depict the real Melbourne and its hierarchy.
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of the suburban idyll, and the Antipodean gentleman and his negation of the Australian landscape. In the gracious suburban living that apparently embodies Toorak and South Yarra, is to be found one of our most complex cultural traits - the search for an identity of our own, yet using elements from everywhere in the world other than Australia itself. The period revival houses of the 1930s represent an idealisation of the picturesque detached house - they are veritable self-contained castles in the suburbs.

The embrace of the modern

Though various period revival styles were employed by Melbourne architects in the 1930s, their aim was a common one. They believed that their houses could be described as modern and that period detail and specific domestic allusions such as the gable, porch, elaborated doorway, and a modicum of ornament would not hinder the modernity of the house. In discussing the American house of the 1920s and 1930s, both Jonathan Lane (17) and David Gebhard (18) argue for the inclusion of the “Period” house as crucial to an understanding of the development of the open plan, simple unadorned surfaces, the tendency to plan in single room width wings and the increasing provision of outdoor living areas in domestic design. In his book L.A. in the Thirties, David Gebhard writes:

The Regency, the Colonial, the Tudor, the Spanish or the Monterey were loosely fashioned to create the atmosphere of a particular moment of the past. But the illusions were always gentle and persistent, and they were carefully tied functionally and symbolically with the present. Low scaled volume, bland uninterrupted surfaces, easy going, rationally devised plans, and an ability to open up to the out of doors, did as much to establish the real mood of these houses as did their historic allusions (19).

The careful selection of historic fragments and their arrangement as elements upon a modern logically functional building is a hallmark of the Period house of the 1930s. The dividing line therefore between the Modern, Moderne, and Period house is often indistinct. In much the same way that the ranch house of Southern California was to emerge from an eclectic base to epitomize the modern American house (20), the modern house in Melbourne of the 1930s should not be seen as exclusively the result of International Style forms and ideas but rather as the natural outcome of a changing modern lifestyle and the
cumulative results of free-thinking eclecticism. The period house of the 1930s reflects the emergence of a modern way of living and the conflicts with the visual and spatial images traditionally associated with the home. Roof, door, window, wall, porch, chimney were all to be challenged by new non-house images such as the portholes and railings of the ocean liner and the streamlining of the automobile as well as a quietly emerging moral prescription for a visual style and associated way of living.
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For further description of the Period House in Melbourne 1934 - 1942 see:

Appendix 1:
Period Styles and Their Embrace of the Modern
i) The Georgian/Neo-Georgian Style
   (Figs.12-17)
ii) The Tudor and Old English Cottage Style
    (Figs.18-23)
iii) The Spanish Mission and Hollwood
    (Figs.24-26)
iv) The French Provincial
    (Figs.27-30)
Fig. 31 Harry A. Norris, architect. "Burnham Beeches", Alfred N. Nicholas House, Sherbrooke, Victoria, 1930 - 33.
Eclectic Modernism in Melbourne: Moderne and the Quest for Style

The term eclecticism can be applied to the Melbourne use of the various forms of the Moderne and the International Style which were transplanted from Europe, Great Britain and the United States to Australia. For most Melbourne architects, the tenets of International Modernism had not the ideological base that its originators had, no understanding of the theory, nor experience from its teaching in the architectural schools. Consequently, Melbourne architects experimented with these new forms, new ideas, new systems of ornament and the idea of a zeitgeist as additional baggage to their already full stylistic repertoire. Another phase of eclecticism was begun. Only this time it was more exotic.

Robin Boyd, J.M. Freeland, Donald Leslie Johnson and Maisy Stapleton are reluctant to discuss the infiltration of International Modernism on such terms. They prefer to use such phrases as,

But there were some who carried the torch of honesty and sincerity during the thirties.... (They were) young Turks ... (and) idealists (1),

as if to suggest that they were somehow more correct than the Period Revival architect. It is important to note that celebrated early modernists such as Geoffrey Mewton and Roy Grounds, A.M. McMillan, Best Overend, and Edward Billson designed houses in all manner of styles in the 1930s. One must remember that the methods by which new ideas filtered to Australia should be seen more properly as a quest for style rather than be regarded as zietgeist or revolution.

Art Deco or the Moderne

The term Art Deco is difficult to define. Many adjectives have been coined by Australia's architectural historians in an attempt to label a visual style which has no preconceived rules of composition (2). Boyd uses the terms: Modernistic, Waterfall, Streamline, Atmospheric and Jazz (3). Freeland uses the terms: Moderne, Modern Vertical, Modern Horizontal and Jazz (4). Maisy Stapleton and Donald Leslie Johnson do not add to the list except that Art Deco is considered an "aberration" by Johnson (5). For the

3. Robin Boyd, Victorian Modern, p.17, 28; The Walls Around Us, pp.53 - 55; Australia's Home, pp.92 - 104.
means of this study, the term Moderne has been used to describe the architectural aspects of what is commonly called Art Deco.

The features of the Moderne are a set of details and materials rather than planning or structural techniques. Curved walls, glass bricks, corner windows, parapets and portholes are worked into relatively plain stucco-sheathed boxes. Such features tend to be displayed to the street complete with the contradictory hipped terracotta tiled roof and boxed eaves.

Horizontality was eagerly sought,

*as a reply to the call to buildings to free themselves from vertical gravitational laws. It emphasized the wide sweep of the window which characterized the new assault on solid walling* (6).

Yet the combination of an exaggerated horizontality and a heavy terracotta tiled roof accentuating a vertical pushing down of forces, frequently produced heavy and unwieldy house designs. The Melbourne propensity to build in brick assisted this weight, and polychrome bands of orange and red brick proliferated in the name of *horizontality* and *modern*. Walls and details were streamlined, sofas and settees curved, porches curved, stairs and rails curved, all in naive enthusiasm for the dream of the machine. The speed of the motor car, the aeroplane and the ocean liner were symbolized by a new form of applied ornament that was frankly sheathed over conventional structure. These houses were not machines for living in, they symbolized the power and romance of the new machine age (7).

The flagship of the Moderne house in Melbourne was "Burnham Beeches", a vast three storey house built in the Dandenongs in 1930-1933 for Alfred N. Nicholas, the Aspro King and designed by prolific commercial architect Harry Norris (fig.31). One of the finest examples of the Art deco mansion in Australia, Norris's design sits uniquely at the midpoint between the decorative Zig-Zag Moderne style of the 1920s (commonly called the Jazz style in Australia) and the Streamlined Moderne of the 1930s (8). Described as "Xanadu in Jazz" (9), and a "battleship" (10), it was built in reinforced concrete and massed as if the house were a huge ship with curving bays and long stretches of cantilevering decks, accessible from the major rooms on
14. Overseas examples comparable to "Burnham Beeches" fall into two groups: the formalizing stripped classicism of English houses such as a house at Newbury, Berkshire by Thomas S. Tait of Sir John Burnet and Partners, 1928 and the curvilinear free planning of the Streamlined Moderne of the United States, exemplified by the Norman Bel Geddes house designs for the *Ladies Home Journal*, 1931 and the Butler House, Des Moines, Iowa by Kraetsch and Kraetsch, 1936.

Neither example serves completely to classify "Burnham Beeches" which uniquely combines elements of both tendencies. Few Australian examples with the exception of Art Deco apartment blocks in Melbourne and Sydney come close to the elaborate scale of "Burnham Beeches", a rare achievement in the years of the Depression. A house at Bayview, N. S. W. by W. Watson Sharp, 1940 is one of the few comparable examples.

Despite frequent publication in *Art in Australia* and the *R.V.I.A. Journal* of the latest luxury ocean liners and the new "Spirit of Progress" (16), the transformation to a pure streamlined moderne house was rare. Instead there tended to be a set of hybrid designs which were a mixture of Period, Bungalow and Moderne details and forms. This curious assimilation of elements attempted to reconcile local brickwork traditions with often simultaneous links to the Old English Cottage style, the brickwork vocabulary of Dudok and Behrens as well as a desire to emulate the stylish machine imagery of American commercial architecture. These houses are searches for status through fashionable detail rather than a sophisticated rendition of history or innovative experiment with structure or form.

In June 1935, Esme Johnston wrote of "Horizontality - a new note in domestic architecture" and described a recently completed house in Salisbury Street, Balwyn designed by Eric Ziebell (17) (fig.34). It was a "modified modern" house..."a label which exactly describes its striking but not startling characteristics". This equivocal description typifies the awkward assimilation of Moderne forms and details into domestic architecture and the local tendency to modify, alter and scramble visual elements into a schizophrenic combination. Esme Johnston goes on to say:

*The ultra modern note as seen in Germany, for example seems right for Germany. But for Australia...well, climate and landscape must be considered, and here we seem to need something more than the stark realism...the uncompromising determinism of the Continental mode in architecture. It is for this reason that Mr. Ziebell has retained the traditional pitched roof, which is a complement rather than a contrast, to the horizontal note which is repeated everywhere in this interesting house. It is stressed*.
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in the raked horizontal joints of the exterior cream brickwork... in the horizontal glazing bars of the windows... and its ultimate object is to indicate repose... dignified, but essentially domestic repose (18).

The effect is neither Streamlined Moderne nor International Style. The effect is only "slightly nautical" and it stresses the "new while it blends with the traditional". The problem of the domestic image arises once again. The interior however is distinctly fashionable Art Deco with a black front door with sand blasted motifs, cream walls, architect designed furniture in green and cafe au lait etch striped tapestry, cream and green tiles around the fireplace, and satin silver and black arms to the chairs and sofas.

Similarly, houses by architects such as Taylor, Soilleux and Overend, the well known architects of Streamlined Moderne cinemas of Melbourne (19); Marsh and Michaelson; and R.M. and M.H. King employ this mixture of curved entry porches, steel framed windows, and stylised mouldings weighed down by the use of hipped roofs, overhanging eaves and exposed brick stripes rather than entirely stucco. As with the Period house, there is a tendency to compose Moderne elements and details upon a prismatic frequently exposed brick form. The composition is intentionally picturesque, with allusion strictly by detail rather than form or plan. The palpable symbol of the machine is thus wrung from the building and an idiosyncratic assemblage of building details appears. In describing the two storey Mr. and Mrs. A. Staley House, Waiora Road, Caulfield by R.M. and M.H. King, Nora Cooper states "that whilst the house is modern, there is a certain air of compromise" (20). In the Clarke House, Glen Iris (fig.35) designed by the same architects, the sparsest example of the Moderne is indicated by the planting of a

Fig.35 R. M. and M. H. King, architects. F. Clarke House, Glen Iris, Victoria, c.1936.
curving stucco porch onto a basic hipped roof bungalow plan (21). In the F. Armytage House, Balwyn, 1934 designers, Taylor, Soilleux and Overend spoke of "the simplicity of smooth flush surfaces of materials, beautiful in themselves, (which) has a distinct and inherent dignity, and this principle has determined the form and finish of this house both externally and internally" (22) (fig.36). Yet for reasons of summer sun protection, the eaves overhang of the hipped roof is three feet all round the house, an interesting regional touch to the severe surfaces, ship handrails, concrete cantilever balconies and a reinforced concrete entry porch canopy roof which was supported off two slender steel posts. Within the stairhall, the unsupported circular concrete stair climbed in an even sweep from the ground floor to the first floor.

A house frequently suggested to be a forerunner of the International Style in Melbourne was the well publicised house of young Melbourne socialites, Dr. & Mrs. Geoffrey Smith in Hopetoun Road, Toorak, 1934 by Yuncken Freeman and Freeman (23) (fig.37). Rather than exemplifying an "early flight into uncompromising modernism" (24), the house is a picturesque composition of individual formal elements which bear little resemblance

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22. "A Stranger within the Gates" (F. Armytage House, Balwyn Road, Balwyn), Australian Home Beautiful, July 1934, p.7.

23. Nora Cooper, "A Very Much Discussed House" (Dr. and Mrs. Geoffrey Smith House, Hopetoun Road, Toorak), Australian Home Beautiful, May 1935, pp.5 - 11; "This Modern Domestic Pattern", R.V. I. A. Journal, May 1937, p.46, 50; Beiers, Houses of Australia, pp.70 - 71.

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Fig. 37 Yuncken, Freeman and Freeman, architects. Dr. Geoffrey Smith House, Toorak, Victoria, 1934.

To the planar compositions and open spaces of the International Style plan. Spaces are statically conceived and compartmented. The elements which comprise the house are certainly authentic factory made steel windows, and the sheer white walls and flat cubic forms contribute to this machine made impression. But the conception is a formal one. Each wall is symmetrically composed, the parapet has an implied cornice. The openings in the walls are windows rather than spaces between planes. The outdoor terrace of green and white chequered concrete tiles, the roof garden on two levels, the light fixtures of glass panels set flush with the ceiling, and the elegant stairway are but fashionable and chic passports to owning a modern house. The design reflects neo-Georgian formality. The repose of this firm's other residential commissions were commonly carried out in versions of modern Georgian.

The Moderne house followed no stylistic rule and as such, in terms of classification, it blurs comfortably into Period and International Style houses in Melbourne. Detail and the accoutrements of style were applied to simple easy-going plans. There was little investigation of new structure or cladding techniques. A revolution in domestic architecture seemed far away.
The Modern House in Melbourne 1945 - 1975

The International Style, cream brick and Willem Dudok

The influx of the International Style into Melbourne's domestic architecture came by a number of routes, all of which intertwine, to form a complex development. The results evolved from the Melbourne tendency to assimilate ideas in an idiosyncratic manner rather than whole, to adapt rather than accept the pure item, and reproduce it - either by ignorance and a superficial knowledge of international ideas or occasionally through a sincere understanding of these new ideas and an honest attempt to adapt these to Australian conditions.

The number of pure examples of the International Style house in Melbourne are few. In fact, just a handful of houses suggest the seeds of change and it is these which have received the most publicity and on closer examination, the "Revolution" of 1934 (1) is rather a whimper than a bang.

In the catalogue for the "Modern Architecture" exhibition held at the Museum of Modern Art, New York in 1932, Henry-Russell Hitchcock and Philip Johnson wrote,

*The effect of mass, of static solidity, hitherto the prime quality of architecture, has all but disappeared; in its place there is an effect of volume, or more accurately of plane surfaces bounding a volume. The prime architectural symbol is no longer the dense brick, but the open box. Indeed the great majority of buildings are in reality, as well as in effect, mere planes surrounding a volume. With skeleton construction enveloped only by a protective screen the architect can hardly avoid achieving this effect of surface, of volume, unless in deference to traditional design in terms of mass he goes out of his way to obtain the contrary effect* (2).

Coined as a phrase from this exhibition to describe the new white architectural forms emerging from Europe and the United States, the International Style was predisposed to a universal approach, emphasising lightweight technique, synthetic modern materials and standard modular parts implying rapid pre-fabrication and erection. The open plan and the skeleton frame were preferred to masonry. Kenneth Frampton has noted that such thinking became formalistic where particular regional and specific conditions could not support the application of advanced lightweight technology.


(3) Le Corbusier's villas of the late 1920s consisted of concrete blocks and panels supported by a reinforced concrete frame, the whole stuccoed over, which belied the image of pure white homogeneous machine made forms.

In 1927-29, the Dr. Philip Lovell Health House designed by the Austrian emigre architect, Richard Neutra was built in the hills of Los Feliz in Hollywood, Los Angeles (fig.38). It was a house built of a skeletal steel frame, assembled in less than forty hours and clad in a lightweight skin of thin steel panels. In Thomas Hines's words,

filled and covered with light concrete, steel and glass, the frame became the essence of the building. Rhetorically echoing its Chicago school origins, the frame was the house, the house WAS the frame. Structurally and aesthetically, it gave the house its meaning (4).

Its open plan reflected the liberal and permissive quality of the clients personality. The Lovell House epitomized the intimate connection of the 

modern

man and his 

modern

lifestyle and the new architecture of the International Style.

Just two years after the 1932 exhibition of the "International Style" was held at the Museum of Modern Art, New York, the Australian Home Beautiful in June 1934 published an article entitled "A Seaside Cottage Built of Prefabricated Units" (5). The two storey house, designed in 1933, was to be built of pre-fabricated wall panels of steel and composition sheeting with open web steel joists for ceilings and floors. The units were to be bolted together on site, for a completion time of 10 to 12 days. Bricks and plaster were to form no part of this 20th century house "which could be dissembled, sold and re-erected elsewhere virtually without waste, replacement or
the use of skilled labour. This is actually done in America" (6). All windows were to be steel framed, internal partitions to be of insulation board or inch thick plywood panelling (fig.39).

The architect was Roy Grounds who had just returned to Melbourne in 1933 after an overseas sojourn of five years including work in London, then in New York for a firm of period style eclectic architects and finally as a set designer in Los Angeles (7). The house was for himself, his wife and son Marr. The completed house was republished in May 1936 and described as a "Ship aground at Ranelagh" (8). The original design with its ship's railing, portholes, open plan, banks of glazing, sundecks, corner windows and apparent modular system of building construction was to have been the first example of the International Style in Australia where the surface of the building had been treated as a taut white skin over a regular frame. However, at Ranelagh what eventuated was in actual fact, walls of standard timber frame construction clad with asbestos cement sheet. In this case the formalistic requirements of the International Style had been met, as Le Corbusier had met them, with a representation of a factory made skin.

6. Ibid., p.32.
As Conrad Hamann points out, "Ranelagh" was a curious blend of European and American acknowledgements and local construction techniques (9). There was a Dudok-like entrance door of receding brick panels with strongly raked horizontal courses. The lemon yellow and white striped front door opened in half like a stable door. The banks of vertical mullioned windows and simple cubic forms resembled Richard Neutra's VDL Research House, Silverlake, Ca., 1932 or Mosk House, Los Angeles, Ca., 1933 (10) (fig.40).

Nautical analogies abounded at "Ranelagh": portholes, a spiral steel stairway to a bridge-like sunroom on the second floor, and an emphasized horizontality via the cover strips to the asbestos cement sheet cladding. The proposed ships railing was thick rope draped between vertical upstands. Banks of french doors took the place of huge areas of plate glass. The house (fig.41) demonstrates Grounds's interest in texture and determination to render the house not as machine but as a textural assembly of diverse and exotic International Modern forms and details. Interestingly, the
form of the house is a collection of open single room width rectangles butted together. The location of each box is guided by functional adjacency and the desire to create protected outdoor spaces which had the proportions of rooms. It is a planning feature of other period house designs by Grounds at the same time such as "Lyncroft", Shoreham, 1934, a house which derived much from the Californian houses of William W. Wurster, an architect whom Grounds admired immensely (11).

A modern lifestyle of health and relaxation was epitomized at Ranelagh for its inhabitants were "great lovers of sunshine". An open informal living room, a kitchen which was "a model of efficiency and economy", decks for sun worshippers, outdoor showers for swimmers walking up from the beach, all made for a veritable Maison Citrohan perched on a cliff above Port Phillip Bay or indeed a "ship aground" (12).

Grounds was to pursue his experiments with lightweight construction in the Rosanove House, Frankston, 1935 (13) (fig.42). This flat roofed house set amidst the ti-trees employed asbestos cement sheet cladding, louvred windows and a modulated timber construction and a fragmented plan which created protected outdoor courts.

These two examples by Roy Grounds were unique in their understanding of the principles of the International Style in the years preceding World War II and point to the minimal infiltration of this style in its pure form to domestic design in Melbourne. There were few other built examples which attempted to come as close to International Style principles (14) and amongst Roy Grounds's oeuvre, these two experiments constitute one of many eclectic themes undertaken by him.
One architect with an overt interest in promoting the International Style, as well as being a producer of divergent styles, was the extravagant and noticeable young man with bald head and bow tie, Best Overend. Overend had spent three years in England (1931 - 33) as chief draftsman in the office of confirmed modernist Wells Coates. Whilst in England, Best Overend is also reputed to have worked for Erich Mendelsohn and Serge Chermayeff, and Raymond McGrath (15). On his return to Melbourne, he entered into partnership with H. Vivian Taylor and G.A. Soilleux and produced with them a range of streamlined moderne cinemas and the highly acclaimed existenz-minimum flats "Cairo" in Nicholson Street, Fitzroy, 1935 whose model was almost certainly Wells Coates's Lawn Road Flats, Hampstead, London, 1932 - 34 (16). Yet even in "Cairo's" U-shaped block of cantilevering stairs, pipe handrails and porthole windows, green doors and overburnt red clinker bricks give a textured and reassembled International Style set in a lush garden regardless of its uncompromising rational planning and economy. Overend's Moran House, Arthur's Seat, 1941 (17) (figs.43,44&45) had a dramatic curving bay reminiscent of the typical punctuation points of Erich Mendelsohn and Serge Chermayeff's buildings such as the De La Warr Pavilion at Bexhill-on-sea, Sussex, 1935.
and a complete wall of floor to ceiling glass, with the remaining walls in exposed brick. The eaves overhang and low-pitched gable further dilute visibly traceable influences and add to the reformulation of diverse collected elements.

Overend's most concerted attempt at the International Style was a 1939 project for a house on a hillside site in North Balwyn which was described as an "excellent example of close planning" (18) (fig.46). Set on a Miesian gridded podium, the house was a two storey rectangular prism, flat roofed with a suggested construction of stuccoed brick or fibro-cement sheeting with steel or wooden window frames. The plan was open with the dining area separated from the living by a sliding curtain. All storage was built in. Glazing was floor to ceiling in bold and simple cut-outs with fully glazed corners and on the terrace sat a chaise longue and tubular steel Breuer chairs. A built in wall ladder gave access to the roof. The uncertainty of the design, the model for which would seem to be Mies van der Rohe's Tugendaht House, Brno, Czechoslovakia, 1930, and also the critic's opinion of it, is evidenced by the concluding line of the article.

The simple yet dignified nature of the elevations is not as easy an achievement as might seem to be the case (19).

One of Best Overend's visions for the house was however built as an exhibition piece at the 1939 Home and Building Exhibition in Melbourne. The "House without Walls" was a hipped roof glass pavilion, roofed in terracotta Marseilles tiles and with floor to ceiling glazing all around its perimeter (fig.47). It was a Barcelona Pavilion with a hipped roof, an extraordinary anomaly and indicative of the iconic strength of the indigenous hipped roof in Melbourne's domestic architecture (20).
Best Overend's vision for the home of the future was continued in his writings. In June and July of 1938, he wrote two articles for Australian Home Beautiful, entitled, "The Desirable House" (21). He introduced them with an unreferenced quotation which reveals a romantic attraction for the new zeitgeist of the International Style rather than its rationale.

And on that mystical site I would build me slowly a house; more of one colossal room facing that sea, with glass walls to slide away upon a wide patio shaded for half its width by the overhanging roof tree, one flat, or having but a slight slope. . . . then there would be odd cubicles which would be the sleeping quarters; and there would be plenty of shower rooms and sanitary units. The kitchen would be a fitted passage and the dining room merely an extension of the living space, separated on occasions by heavy sliding curtains...

The external appearance of the house would be a combination of the concrete, of the glass, and of the bricks of which it would be formed. There would be no painting at all, the metal windows being sprayed or left natural in their zinc or copper or whatever material would weather indefinitely. . . . There would be little else except the views and the gardens...

this garden would grow slowly into the house, and it would be a natural thing; quite unlike the ordinary garden and very difficult to describe indeed. Only native shrubberies would appear there and flowers would not be cultivated, but they would appear, in a purely fortuitous manner, from season unto season. . . . (22).

Using photographs from Innen Dekoration and Architectural Review, including a reference to Raymond Mortimer's plea for a judicious linking of Period style with Modernism, Overend advocates the adoption of Modernism. He cites the source of the "modern house" as

born of the demand of the average homeowner, of their healthy dissatisfaction with their previous lot, their desire for all the conveniences and comforts hitherto enjoyed by the wealthy and accordingly powerful (23).

Here is perhaps the first inkling of an understanding of the political zeitgeist of European Modernism. Overend then goes on to cite the success of the modern house as being due to "the direct recognition following visual examination
24. Ibid.

of those comforts and conveniences and there was and is a natural desire to emulate" (24). Overend's judgement or appraisal then becomes entirely visual. It is in such terms that Melbourne architects viewed the new modern architecture, as a visual resource rather than a zeitgeist of philosophical proportions.

The "Desirable House" is then advised by Overend to have an open plan, a long and low living/dining room, a sun terrace, vast windows, a breakfast nook, separation of the bathroom fitments and w.c., and sliding glass walls.

In his third article of the series, "The House of 1960", Overend proposed a house for 1960 (25). His admiration for Mies Van Der Rohe is accompanied by pompous prose. The word house is replaced by "shelter", and Overend proposes that the evolution of shelter will keep pace with that of new automobiles and aeroplanes, and that all parts of this shelter bear analogy to the parts of a machine or car in their fabrication, construction and layout. The house is portrayed as machine. Buckminster Fuller's Dymaxion House is admired and described. The houses drawn by Overend are minimalist standardised steel and glass framed mass-produced structures. One resembles Mies van der Rohe's 1929 Barcelona Pavilion complete with swimming pool (fig.48), the other a reversed view of Mies's Tugendaht House (fig.49). There is a fascination with man made materials, "we will use unbreakable glass and cork and rubber and asbestos compositions and timber fibre
materials and rich cloths and shining metals in sanitary places..." and air conditioning (26). The economy of these "units of accommodation" is also stressed, and a suggestion that one might buy them in the big stores of the town. Chairs will be "bent of plywood or just a sheet of aluminium". The fascination for the factory made article is not unlike that of Wells Coates (27) who argued for the social equality available from mass production and evidenced by the mass production of the motor car. Overend goes on to say,

There will, I hope, be quality and chastity in SHELTER that there is today in some other mass produced economic products, where everything is cut to a minimum except the material. There are no gable fronts on Boeing bombers (28).

Overend's visions were not put into practice in his own detached houses but his thoughts on prefabrication were no doubt influential in the decision-making processes of the Housing Commission of Victoria after World War II. Overend was a member of the H.C.V. Architects Panel from 1938-1955 (29). In 1949, he travelled overseas to investigate pre-fab construction techniques being employed in Europe and recommended that the Housing Commission of Victoria import several houses from Europe and the U.K. for display purposes and possible adoption (30).

Other attempts at the International Style were invariably cubic designs of little structural or planning interest. They were visual explorations and generally only a small part of each architect's domestic oeuvre. The Watt House, Grosvenor Court, Toorak, 1935 by Mewton and Grounds (fig.50) has strip windows and three intersected cubic forms typical of this unofficial partnership's visual and formal predilection for interlocking form. Robin Boyd described this house as "one of Victoria's few contributions to the pure International Style" (31). The two cubic houses by A.M. McMillan; the Dr. Boyd Graham House, corner Toorak Rd. and Hopetoun Road, Toorak, 1936 (fig.51) and the Isobel Tweddle House, St. George's Road, Toorak, c.1938, are also stylistically accomplished but form a small part of this architect's repertoire of eclectic house designs (32).

Thus the infiltration of pure International Style into Melbourne is very slight between 1933 and 1942. It is
apparent that few architects wrote about or understood its ideological zeitgeist or constructional emphasis. Rather what was attractive to these architects was its visual characteristics, a release from the stranglehold of period style, in particular the Georgian. There was an eagerness to experiment with its forms and to develop a proficiency in it, and the potential to find in it the classic truths of early colonial architecture in Australia. There were other forms of European Modernism and these were regarded also as fair game for the eclectic Melbourne architect.

The work of Dutch architect Willem Dudok was compulsory viewing for any Australian architectural student on the grand tour in Europe during the 1930s. Dudok's buildings, in particular the Hilversum Town Hall, Hilversum, 1928 - 31 was frequently written about and illustrated in the professional journals, *Architecture* and the *R.V.I.A. Journal* (33). In England, many municipal buildings were being constructed in the cubistic vocabulary of Dudok and being published in *The Architectural Review* (34). The use of mellow cream brickwork, coloured tiles of lemon yellow and sky blue were all appealing to Australian

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33. For example, see correspondence of travelling scholars in *Architecture*, May 1935; October 1935; December 1936; July 1937; July 1938; *R.V.I.A. Journal*, March 1937; September 1937.

architects who, because of the rise of a nationalist architecture in Germany and disappointment in the recent work of the Third Reich, were encouraged to look at new works in Holland and Scandinavia. Consequently these northern European countries had greater appeal to Australians on tour. New architecture in France however was rarely discussed. The latest buildings of Le Corbusier did not appear in Australian architectural journals in the 1930s.

Geoffrey Mewton on his overseas tour with Roy Grounds and Oscar Bayne between 1928 and 1933 eagerly visited many Dudok buildings while his future partner Roy Grounds went to New York in 1929 (35). Mewton returned to Australia at the end of 1932. In 1933, Grounds returned to Australia from California. Mewton meanwhile had started a one room practice in Queen Street, and Grounds asked if he could join Mewton and pay half the rent. Each worked individually and collected their own profits, whilst practising unofficially under the partnership name of Mewton and Grounds (36).

One of the first houses designed by Roy Grounds under the fictitious partnership name was "Wildfell", the Critchley Parker House at Upper Beaconsfield, designed in 1933 and published in the January 1934 issue of the Australian Home Beautiful (37) (figs.52,53&54). Though Donald Leslie Johnson sees this house as making complete the introduction of the International Style to Australia (38), it should be regarded as rather, the authentic introduction of the style of Willem Dudok into Melbourne's domestic architecture. The house is firmly rooted to the ground with a red brick plinth, silver white painted brick and stuccoed

![Fig. 52 Roy Grounds, architect. "Wildfell", Critchley Parker House, Upper Beaconsfield, Victoria, 1933.](image-url)
walls, a flat roof with corner windows. Brick features such as piers and entrance trims are picked out in reds and creams in Dudok style, and laid with strong horizontally raked joints. The plan is low and spreading, simple single room width wings, pinwheeling into the landscape. Internal walls and ceilings were lined with insulating board, probably a pioneering use of caneite, laid in stock sizes with the joints running horizontally along the walls. The whole composition is a de Stijl one, neatly embedded into the landscape. A contemporary description of the house however depicts the modern Australian house unhindered by the vagaries of a suburban site and reinforcing a bush ethos that was to imbue much of the following thirty years of domestic architecture.
The main walls are silver white to provide a glistening background for the everchanging shadows of the trees. The rust red window frames and fascia reflect the peeling bark of honey eucalypts. Shade and a gayer note is sung by the striped awnings which fold away to oblivion when winter's sun is searching hopefully to live within the rooms. This is La Mabeillion - Modern by circumstance (39).

This house was followed in 1934 by Geoffrey Mewton's George Stooke House, Halifax Street, Brighton (fig.55). Another Dudok composition of interlocking white painted cubic forms and planes, the plan of the house (fig.56) was the classic T-shape: an open planned living/dining room wing, glazed to the north and south which provided a barrier to the street to enjoy the private pleasures of the rear garden with a sleeping and services wing running along the side boundary. There were no maid's quarters. The block was a suburban one and Mewton arranged the form of the house to maximise usage of the garden and orientation for sunlight. Once again the horizontal brick joints are strongly raked to emphasise horizontality. The gate was painted in bright horizontal stripes, a flat concrete door canopy was inserted into the brickwork and at the rear of the house, stairs lead up to a roof terrace. A bold corner window with steel framed windows framed by the chimney and low front wall plane delineated another outdoor room. The house won the 1936 Ideal Home and Building Competition for a house up to five rooms and was described as "the kind of house you see in the Germany of today" (40). Door and window trims were in primrose glazed tilework, with furnishings in rough linens and earthy greens, tans and "prune" and "cafe au lait" (41).

40. Esme Johnston, "A Very Modern House at Brighton Beach", Australian Home Beautiful, March 1936, p.32. A later house in Findon Avenue, Caulfield designed by Bilson and Mewton c.1939 also demonstrates an interest in the interlocking brick forms of Willem Dudok. See A. Lanyon Clark and Geo. R. Hamm, 50 Modern Homes, Sydney 1940.

Another house by both Mewton and Grounds is the Robert Ingpen House, Newtown, Geelong of 1935 (42) (fig.57), another strongly interlocking cubic design with strong chevrons recalling Swiss Heimastil on the front door, and glazed projections reminiscent of Belgian architect, De Koninck's Villa Lenglet, Le Loclet, 1926. The Rivers House at Essendon, 1935 (fig.58) also bears comparison with not only Dudok, and English designs such as Amys Connell and Basil Ward's New Farm, Haslemere, Surrey, 1932 but also the Melbourne architect Donald Ward's winning entries in the Centenary Homes Competition, Victoria, 1934 (43). Geoffrey Mewton had brought back
with him from London two books which fuelled his interest in interlocking forms. The first book, *Modern European Buildings* (1928) by Francis Yerbury (44) showed much of the brick architecture of Dudok and his contemporaries, Jan Wils and Harry Elte. The second book, a particular favorite of Mewton's, was a 1931 publication by the Russian architect Iakov Chernikov, the text in Russian but beautifully illustrated showing the development of constructivist composition and the development of interlocking forms from two-dimensional planes, to forms, to buildings (45).

The early houses of Seabrook and Fildes also reflect an interest in the work of Dudok. The most vivid example of Dudok influence in Melbourne is Norman Seabrook's 1933 design for the MacPherson Robertson Girls High School which in massing, detail and choice of finishes is a work of studied eclecticism (46). The cream brick, the triple element motif and the bright reds and blues in window frames and tiles in Dudok's work are all present. Two houses further this interest in Dudok's buildings with their cream brick and horizontally raked joints. A house in Beaumaris, c.1942 (fig.59) has a projecting bedroom wing to the street and transverse living room with entry at the junction of the T, a plan very similar to the Stooke House with services and bedrooms to the boundary side. A flat roof with slim projecting eaves with an equally slim white fascia delineates the cubic perimeter. The carport has bright red columns and a blue ceiling, and there are blue soffits to the eaves. Slim terracotta tiles are used as sills, a red brick pier marks the entrance. French doors open onto a paved terrace. Floors are polished timber, the chairs are tubular steel designed by Marcel Breuer. Three portholes run along the passage. The colours are white, cream, red and blue (47).

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45. This book was in the possession of Geoffrey Mewton at the time of the interview with the author. Its title is in Russian.


Fig.59 Seabrook and Fildes, architects. House, Beaumaris, Victoria, c.1942.
Norman Seabrook’s own house in Hawthorn of 1935 (figs.60,61) mixes Dudok detailing and colours with what appears to be an abstraction of Frank Lloyd Wright’s Winslow House, Oak Park, Illinois, 1893. The hovering hipped tiled roof, formal symmetry and entry of the street facade and the projecting glazed bay to the rear give an unusual visual reference to Wright’s seminal work. The simple rectangular cube has white painted brick walls, horizontally raked joints, with a deep eaved porch to the front and window boxes built high up to the underside of the symmetrical kitchen and bathroom windows which flank the recessed entry. Eaves soffits are blue and the
fascia is brilliant red. The porch piers are warm brown brick. Internally Seabrook used strong fresh primary colours. The sitting room had walls of chrome yellow. Polished timber floorboards, built in cupboards and furniture, chrome plated Breuer chairs and tables and curtains of rainbow colours augment a tight plan stripped of any ornament and decoration - a de Stijl Winslow house! One critic of the house noted that it was rather like "a machine to live in". Mr.Seabrook's reply was "Isn't that exactly what a house is?"..."And collectively we could think of no reply" commented Australian Home Beautiful (48).

Yet even if it seems that Seabrook had read the Frederick Etchells 1927 translation of Le-Corbusier's Vers une Architecture of 1923 (49), knowledge and action were two very different things. Most Melbourne architects tended to respond to an already textured modernism such as the English, Dutch and Swiss Heimastil variations of the International Style which employed softer vernacular forms for their inspiration; and in particular less spectacular structural methods for achieving a soft earth bound modernism. There was a delight in detail and a rich mixing of colour that suggested a continuation of Arts and Crafts ideals. Horizontality derived not only from Dutch work but also from Streamline moderne examples of both the U.S. and the German Expressionist architects such as Erich Mendelsohn with whom most architects were familiar through the continual publication of letters from architects on tour in Europe. As with the Period house, the approach to these more obviously modern houses is a distinctly local assimilation that ruminates over borrowed elements and reassembles them as uniquely Australian compositions. The "machine for living in" may have been known and admired but its realization was not sought by Australian architects. For architects such as Mewton and Grounds, such experiments with Modernism were just a few of many domestic commissions. The broad background of eclecticism precluded the strong adoption of one particular style of modern Melbourne house.

Another house in Goldsmith Avenue, Kew, c.1939 designed by Seabrook and Fildes blends the domestic imagery of Wright with the abstract brick planes of Dudok. See Clark and Hann, op. cit.

Eclectic synthesis and the emergence of the so-called Victorian Type

Running parallel to the experiment with Period Revival Styles and the various forms of International Modernism, concurrently undertaken by architects who were participants in both areas, was the emergence of a changing attitude to the resolution of informal living, revised notions of space, reduced household help, the prevailing tradition of eclecticism, the problem of climate, the search for an Australian idiom, and an attempted resolution of the plan and its visual image to create a house integral to its materials, region and the times.

Robin Boyd attempted to describe the uncertain birth of such a house, his so-called Victorian Type, in his first book Victorian Modern (1947).

Thus the Victorian House has developed, with something inherited from a century of Victorian living, something borrowed from the more sophisticated experience of California, and a great deal learned from the world-wide modern movement. Its birth in Melbourne early this century is wrapped in mystery. No-one can say where it was born or who was the father? (1)

Six pages before Boyd had visually traced a dubious typological development of the "Type". He had begun with a single room width homestead just south of Geelong. The wings formed an open courtyard. They were roofed by gables and not a hipped roof which was a more common form of construction. Access to the rooms was via the narrow internal verandah of the court. Griffin-inspired detail and massing applied to a house in Armadale, Melbourne formed another visual link. Once again, it was the gabled single-room width wing, which formed the crucial and highly tenuous link through to the final "coming of age"(2) of the Type; a murky photograph of the Harold Freedman House, Bayswater, 1946 by John Mockridge (fig.62) with its slim low-pitched gable bedroom wing butted gently onto a living wing.

The plan form has not radically changed; in these works it has always been based on the spread of single room width wings....The roof has gradually deflated, but in this Victorian Type, it seldom lies quite flat (3).
Boyd had developed his Type from a historiographic path of carefully selected peaks of Australian architecture based on the primitive functionalism of the Colonial homestead, the visionary and heroic forms of Griffin, and finally, the pragmatic and circumstantial functionalism of post-war austerity. Even on such a cursory analysis of his examples, Boyd's thesis is hard to believe. Is this supreme wit or a serious architectural proposition?

Boyd's "Victorian Type" is a flawed but valiant attempt to create a new orthodoxy of Australian domestic architecture by the description of a typology which actually did not exist. The word "Type" implies a universally accepted building form, drawn from history "and merged into a timeless canon, supported by the fiction of a morphological perfection attributed to each "species" of building" (4). Boyd's examples are not universal to Victorian architecture, nor do they adhere to apparently immutable laws. The frequent use of the single room width gable wing and a low pitch gable roof hardly constitutes a building typology. If one is to believe Boyd, one is forced to play into his selective hands. The examples which he uses over five pages of Victorian Modern to back up his fabricated typology certainly bear a family resemblance. Yet on closer examination, one finds that this collection of houses exhibits a diverse range of sources and ought to be divided into two major forms of expression rather than be conveniently and mistakenly categorized as a "Type".

What follows therefore is the speculation that the houses described by Boyd as precursors of the "Victorian Type" of the immediate post-war years are better classified as either the "bush" or the "urban" expression of the developing modern house. In his book, The Architecture of Country Houses (1850), Andrew Jackson Downing, the mid-19th century American house pattern book author, makes a similar distinction between a "country house" and a "town house" based on a discussion of the general, the local and the specific truths of expression in domestic architecture (5). The general truth distinguishes the dwelling house. The local truth expresses the townhouse as distinct from the country house, and the specific truth distinguishes amongst country housing, the cottage, farmhouse or villa. Classification is based on an expression of purpose rather than a set of typical forms and elements which are independent of specific response to programme and occasion.


This is not to discount the value of Boyd's attempted baptism of the "Type". It was a bold and brave attempt to forge a path of consensus in domestic design. The value of Boyd's observations lies in his astute collection of "bush" and "urban" expressions of the house which reconcile an issue previously outlined earlier in this chapter: the little discussed characteristic of the overtly "Modernist" and "Period" houses of the 1930s - i.e. the disjunction between the programmatic functionalism of the plan with its recipe for modern living and the exterior image or style of the house.

The '30s houses chosen by Boyd in *Victorian Modern* resolve this schism between the referential exterior image and the open plan within. The result was a house integral to its site, materials, region and the times, and without the much feared label of style.

Both the "bush" and the "urban" expression of the modern house were the result of an eclectic synthesis and not a zeitgeist or "1934 Revolution" (6) of modern architecture in Melbourne. Both forms of expression drew from overseas and local examples in an accomplished eclecticism of restraint responding creatively to site and climate. These exciting linguistic imports from contemporary Europe and the United States were extracted from both a modernist and period catalogue.

What also must be emphasized is that these expressions were not limited to Victoria but were Australia wide. In Sydney, various houses designed by Leslie Wilkinson, Ellice Nosworthy, Gerard H.B. McDonnell and Sidney Ancher exhibit similar formal and elemental responses to their specific programme and occasion (7). These houses are the Australian response to a world-wide shift in the 1930s and early 1940s toward a regionalized modern house opposed to the aesthetic proscriptions of the International Style. The house developed through an evolutionary process of eclectic synthesis which included the revolutionary language of the International Style (8). With the desire for orthodoxy and universality, Boyd's label of the "Type" ignores the richness of this process and in fact, contradicts his own text where he writes,

*For what happened in the '30's was no deep revolution. It was the application of open planning technique to the*
elements which had evolved through years of Victorian living, combined with a free and impartial approach to the familiar materials (9).

By thinking in terms of the bush and the urban expression of the house and not Type, Boyd's first history retains credibility as a useful document of Australian architecture.

The bush expression
The bush expression of the modern house generally consisted of a low pitched gabled roof of corrugated iron or asbestos cement, white or cream painted timber window frames, exposed rafters under shading eaves, weatherboards, french doors, block fireplaces and walls of mixed construction. The plans were long and stretched linear wings of single room width, sprawling informally and responsively across the site unhindered by the horizontal limits of the suburban block. These houses were characterized by a frank expression of materials, invariably left to weather to their muted natural tones; a sophisticated, seemingly artless carpenter-like construction, and the provision of outdoor terraces or rooms, paved and often covered by pergolas or generous covered living porches. These were often holiday houses or country retreats freed from the self-conscious trappings of suburbia, capitalizing

Fig.63 Roy Grounds, architect. "Lyncroft", Shoreham, Victoria, 1934.
Chapter 1: Eclectic synthesis and the emergence of the so-called Victorian Type

on an atmosphere conducive to a lightweight, expediently constructed building with a resourceful and often improvised mix of texture and materials. These houses delighted in the sun and shade of the Victorian bush setting of silver green eucalypts and wild native gardens. The bush and the house merged calmly into one.

Architects such as Roy Grounds, Geoffrey Mewton, Seabrook and Fildes, John Mockridge, and Scarborough, Robertson and Love were building such houses on the Mornington Peninsula and the outlying "bush" suburbs of Melbourne: Croydon, Ringwood, Kalorama, and Warrandyte. The most important examples of these houses are the early designs on the Peninsula and in the country by Roy Grounds. "Portland Lodge", Frankston, 1933; "Lyncroft", Shoreham, 1934 (figs.63,64); "Chateau Tahbilk", Nagambie, 1935; Grounds Beach House, Mt. Eliza, 1937 and the Loris Pirani House, Mt. Eliza, c.1937 are all part of this inclusive "bush" expression.

By examining "Lyncroft" one finds the recurrent themes of the "bush" expression; the division of internal spaces into simple rectangles, each being related to a specific function, the informal collection of these loosely connected open spaces to form a stretched linear plan, a picturesque mix of low-pitched gables and lean-to roofs related to functions

Fig.64 Roy Grounds, architect. Plan of "Lyncroft", Shoreham, Victoria, 1934.
within, and a harmonious and often improvised choice of natural materials and traditional construction. At "Lyncroft", the cement blocks of the ground floor walls were made on site and untreated logs were used as verandah posts. Vertical boards line the first floor bedroom block and the house is roofed in corrugated iron. All the materials were left untreated to weather and blend into the Australian bush of bleached green and silver grey. Traditional homestead references of verandahs, shutters, french doors and multi-paned windows and a soft barrel vault within, suggest a respect for the Colonial tradition of Hardy Wilson and an innovative interpretation of that reposed tradition yet without aping its forms. However, a comparison with the houses of Northern Californian architect, William W. Wurster, an architect whom Roy Grounds and Geoffrey Mewton admired enormously (10), reveals closer sources for this new breed of Australian house.

William Wurster believed that building modestly was essential, that "we should design up from the log cabin, instead of trying to compress the mansion" (11). He pared away unnecessary detail and ornament, and adhered to traditional methods of construction, earning the label of "shanty style" for his numerous Californian houses (12). His use of low-pitched gables roofed in shingles, timber shutters, multi-paned windows, and the u-shaped courtyard plan defers subtly to tradition, particularly the Monterey Style and the Anglo/Spanish ranch house tradition of California. Richard Peters in *Bay Area Houses* notes that Wurster's houses were characterized by the continual reuse and refinement of a set of architectural elements (13): the living porch, the glazed gallery, the screened verandah and the garden living room described by Wurster as a "kitchen cave", a type of inside outside dining room space.
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This set of elements was accompanied by single room width linear plans strung informally together to create protected courtyards and terraces to shelter from the fickle Northern Californian climate of wind, rain and sun during any one day. (c.f. Melbourne!)

Wurster's portfolio of houses of 1931 - 32 at Pasatiempo, near Santa Cruz (fig.65) and the seminal Gregory Farmhouse, 1927 of Santa Cruz include all of these elements: the shingled roofs, shutters, the simple unadorned walls, the protected courts, French doors divided into 3 panels, the generous covered porches and loosely connected linear plans. Similarly, the portfolio of Grounds's houses on the Mornington Peninsula 1933 - 37 depict a family resemblance with elements drawn from the Wurster repertoire.

Grounds's first Arthur Henty House, "Portland Lodge" at Frankston (figs.66,67) is built on a steeply sloping site and follows the contours in a stretched linear plan with outdoor terraces to either side (14). The form of the house is composed of gabled prisms with flush gable-ends and
block chimneys, punctuated vertically by the vertical boarded double storey kitchen and bathroom block. Within, open rectangular spaces, on the main floor plan of dining, morning, living and sunrooms all interconnect. Each room has one function. Multi-paned windows and striped awnings defer loosely to the past.

The Loris Pirani House (fig.68), overlooking the Bay at Mt. Eliza, and also built along the contours, is planned around a U-shaped garden courtyard to provide a sheltered sitting spot from the prevailing winds (15). "Chateau Tahbilk" at Nagambie (fig.69) has the same vocabulary of wings, french doors, gabled prisms and outdoor rooms to follow the sun during the day. The west facing terrace has pergolas and a screened after-dinner coffee terrace off the dining room facing south for cool relaxation during the summer (16). The Ramsay House, Mt.Eliza (fig.70) has a "kitchen cave", a Wurster-space that includes kitchen, living room, dining room, and drawing office (17). Externally the low gable was roofed in shingles and the weatherboard walls were oiled and left to weather to a ti-tree grey.


Fig.68 Roy Grounds, architect. Loris Pirani House, Mt.Eliza, Victoria, c.1937

Fig.69 Roy Grounds, architect. "Chateau Tahbilk", Nagambie, Victoria, 1935.
In true eclectic fashion, Grounds was to experiment with the planning themes of the "bush" expression. "Wildfell", the Critchley Parker House at Upper Beaconsfield, 1933 has the sprawling winged plan and outdoor terraces off every living space yet with a vocabulary that referred to the interlocking forms of Dudok and the horizontality of the Streamlined Moderne (18). Similarly, the Rosanove House, Long Island, Frankston, 1935 has a generous outdoor "living porch" at its rear though its panelled construction suggests an understanding of the tenets of the International Style (19). Likewise "Ranelagh", Mt.Eliza, 1934 has a plan of sheltered outdoor terraces and a bank of french doors that open up completely to the rear, but the flat roof, decks, and proposed panelled construction also suggests an attempted linguistic mastering of the International Style (20). Grounds's portfolio suggests the ease with which he and many other Australian architects of the 1930s could adapt the themes of the "bush" to a different language and a different circumstance.

Norman Seabrook, noted for his skilful interpretation of Willem Dudok's cubistic vocabulary slipped easily into the thematic humanism of the "bush" when building a house for himself at Croydon in 1941 (21) (figs.71,72). The house, though, has a different formal base from which it must meet Boyd's selective ends. A pin-wheel plan of functionally zoned wings, living, bed and service wings extends into the landscape, stressing horizontality and nestling into the unkempt bush around it. The house is built of exposed brick, natural timbers within, a very low pitched corrugated iron roof, a flagged terrace that goes from within to without, a fireplace with built-in seating, low window sills and banks of windows that go right up to

the underside of the eaves. This house is not a synthesis of Wurster elements but a regionalized interpretation of Frank Lloyd Wright’s early Usonian Houses, such as the first Herbert Jacobs House, Westmoreland, Wisc., 1937 (figs. 73, 74) with zoned wings, the wide weatherboards horizontally laid and mitred at the corners and the vertical fireplace block mass stretching the glazed wing into the bush. Similarly, Richard Neutra’s Miller House, Palm Springs, 1937 and Neutra’s Beckstrand House, Palos Verdes, 1940 have long banks of vertical mullions stretched by a vertical fireplace mass to reveal a startling likeness to the Seabrook House which has been designed in a local vocabulary of construction and materials.
Described as "California in Kalorama" (22), "Shangri" by Scarborough, Robertson and Love at Kalorama, 1940 is a double storey L-shaped winged plan with sun balconies and outdoor barbecue, white painted weatherboard walls and window frames, and an open plan where passages are eliminated and one walks from space to space (fig.75,76). The house perches off and sits into a rubble rock wall; internal walls are lined with natural timbers; the roofs are low pitched gables roofed in corrugated asbestos cement. A simple craftsman aesthetic of honest functional and styleless expression, simple rectangular spaces and volumes, was assembled informally together according to
aspect and the slope of the site. The doctrine of the specific response to site and local circumstances is coupled with a planimetric functionalism and a quiet picturesque outline emerges.

Geoffrey Mewton's home in Bluff Road, Sandringham, 1938 (fig.77) brings this "bush" expression to the suburbs. A linear plan was roofed by parallel gables. The living room garden-facing windows could slide back completely to create a vast uninterrupted space by which the garden could enter the house and the distinction between the floor surface of the interior and the terrace outside became indistinguishable (23). Mewton like Grounds, also admired Wurster's ability to open up a space to the exterior. Wurster had used a similar device in his suburban stucco and frame Benner House, Berkeley, 1934 (fig.78) which has a sun porch of folding french doors to open up the house completely to the rear garden (24). Mewton's plan also is zoned with the open living area separating kitchen and sleeping spaces, a plan much admired and frequently adapted for R.V.I.A. Small Homes Service plans after the war (25).

Though Boyd has cited these houses as examples of the "Victorian Type", the sources of their design are varied, even disparate. Boyd has grouped them by their final appearance. Yet in no way is there a school, a recognizable set of stylistic principles, let alone a strict typology (26). Rather than pinpoint a "Victorian Type", Boyd has unconsciously laid the foundations for a description of the "bush" expression of the modern house where from differing responses to specific issues of the programme, there has arisen an observable family resemblance, tempting the selective historian into personal speculation. This "bush" expression is quite different from the "urban"
Chapter 1: Eclectic synthesis and the emergence of the so-called Victorian Type

expression of the suburbs and an examination of a further selection of Boyd's "Type" precursors and some extra examples of the Period house will reveal this.

The urban expression
The urban expression generally consisted of gabled and hipped brick prismatic forms butted together, white painted and stuccoed brick walls, slim white steel circular columns, french windows, often a terracotta tiled roof, terracotta pipe gable-vents and a subdued solid formality that hinted at the neo-Georgian and the Colonial Revival. Upon these houses were placed specific elements of historical detail that lent immediate contextual authority and satisfied suburban notions of status and style.

Architects for these houses included Roy Grounds, Leighton Irwin, Roy Stevenson, Geoffrey Mewton, and Edward Billson, Yuncken Freeman Freeman and Griffiths in the safer suburbs of Toorak, Malvern, Brighton and South Yarra. Once again these houses numbered but a few amongst the greater œuvre of each architect's own domestic work. These houses nod politely to their Georgian neighbors with discreet quiet challenges - purity and formality have been erased only to appear again in elegant compositional glimpses, giving clues to the lineage of a Beaux Arts education adapting to change, challenging pre-conceived notions of style within the Georgian strongholds of upper-class Melbourne. Elemental authenticity is acknowledged while form, orientation, planning and the process of detail selection undergo subtle change. The gracious classical proportions, spaciousness, and reposed compositions of the Colonial Georgian Revival are "un-architected" in much the same way that William W. Wurster in San Francisco or Paul Williams in Los Angeles

Fig. 78 William W. Wurster, architect. Benner House, Berkeley, California, U. S. A., 1934.
were producing sophisticated "natural" designs of unnerving informality and precision in a version of Modern Regency, where the allusions to history were strong enough to gain respectability and a tenuous label of style for the aspiring client.

The theoretical position of these designers is the individual in search of truth beyond the vagaries of style. Geoffrey Mewton said in 1943 that "The only sound basis for good architecture is truth" (27), summing up the past ten years of a search for a truthful response to planning, climate, and the Australian environment. As with the "bush" expression, this search involves a concern for the plan above the satisfaction of the exterior. There is a determination for the plan to respond to climate with the use of pergolas, verandahs and wide overhanging eaves. Words such as "clear, honest, straightforward thinking" and "sensible and logical" pervade architectural writings at this time (28).

Emphasis on the plan and its subsequent zoning into functional areas ensured that the satisfaction of the functional programme of the house preceded a visual image of the proposed home. Informal blocked massing emanating from the plan invariably resulted in a picturesque outline.

On the typical suburban site, privacy, aspect and orientation were sought. The urban expression often did not face the street but a view or an orientation. "Opening up the house" and "spaciousness and freedom" were all. Bedrooms opened onto their own garden court, the living areas faced the garden or the sun at the rear, private and quiet and away from the street. "You may dine outside or bask in the sunshine. Your house and garden merge together; the inside and outside are not two separate places" (29). Balconies and terraces were included to encourage everyday living in the great outdoors. The new informal living took a solid and gracious approach to form and detail; white painted brick walls, hit and miss brick vents, the occasional shutter, glazed french doors, walls flush-finished and moldings reduced to a minimum. Important too, were the colonial virtues of sunlight and shadow which were seen as essential links to an ongoing Australian style and an unacknowledged respect for classical notions of order and repose. This was a soft functional approach of appropriateness and subtle economy. It embraced a frankness and rational use of materials and traditional construction; houses placed firmly on the ground, an
emphasis on the horizontal, and humanistic renderings of texture and surface; tiles brick, terracotta, timber and essential domestic elements such as gables, porches, overhanging eaves and the elaborated front door, the status symbol of one's private domain. One is reminded of A.J. Downing's moral stance on the home,

Every feature, on the other hand, which denotes domestic life, becomes a valuable truth in Domestic Architecture. Windows, doors, and chimneys, are the first of these truths, though they are not the highest, as churches, factories and outbuildings also have windows, doors and chimneys; and, therefore, such windows, doors, and chimneys as particularly belong to or distinguish a dwelling house from all other buildings, are more valuable truths than those forms that are merely useful without being truthful. Verandahs, piazzas, bay windows, balconies etc., are the most valuable general truths in Domestic Architecture; they express domestic habitation more strongly because they are chiefly confined to our own dwellings (30).

The Fairbairn House, Toorak, 1936 by Roy Grounds (fig.79) exemplifies the quietly progressive restraint of the "urban" expression (31). White painted cubic form, exposed eaves, flush gable ends, and a light hovering roof of slate and slim white steel columns bespeak an easy grace and calm response to the functional requirements of a tight triangular sloping site. A bow window and symmetrical flanking chimney elements add a graceful Voyseyian reference to the north facade high above Myrnong Crescent, a touch of formality and propriety deferring carefully to the contextual surroundings of the neighboring neo-Tudor, neo-Georgian and Spanish Mission houses.
One is reminded of the simplicity of Wurster's stripped essential domesticity in houses such as the E.C. Converse House, Carmel-By-The-Sea, California, c.1935 (32). The Fairbairn House presents a subdued anonymous aspect to the street, with the overscaled window above the stair, and a slate covered verandah leading from the garage to the front door. The house incorporates the garage as part of the building, appearing as a gabled extension of the single storey living room wing which is built out from the main structure of the house. From the living room and study, French doors open onto a square north-facing sunporch. Stairs lead down to a terrace, onto which the French doors of the dining room open. Practically every room in the house faces the garden. On this steeply sloping site the gabled prisms are heaped up to compact single room width wings into a three level house. Urban propriety and safe subtle domestic responses ensure a competent fit of minimal dramatic impact on the suburban environment.

The countering of modern with the traditional and the vernacular continues in the houses designed during the brief partnership between Edward F. Billson and Geoffrey Mewton between 1939 and 1942. These houses are deliberately low-keyed. Qualities of bland anonymity are crucial to these amalgamations of traditional, modern and builders vernacular elements. Familiar details recur throughout these Billson and Mewton houses; the pipe gable vents, gridded brick screens, slim steel columns, strongly raked horizontal joints, white painted brickwork, all minimal but essential details to what are simple unadorned prismatic forms.

The three storey W. L. Ryan House, overlooking the Yarra on Yarradale Road, Toorak, c.1940 (fig.80) is described as a version of "modern Colonial" and has a "kitchen cave"
- like rumpus room complete with barbecue (33). The G. R. Griffith House, Lisbuoy Court, Toorak, c.1941 (fig.81) presents a simple long double storeyed hip roofed mass to the street with moderne detail centred on the entry (34). The Haunstrup House, Barkers Road, Hawthorn, 1939 by Billson (figs.82,83) is a collection of brick gabled prisms with the living room facing the street and rear to form a T, a common response to the typical suburban block in Melbourne (35). Geoffrey Mewton's Stooke House, Brighton, 1935 and a house in Beaumaris, c.1940 by Seabrook and Fildes both employ a T-plan with the living
room as the leg of the T yet the language is a cream brick interpretation of the interlocking forms of Dudok, adapted to the quarter-acre block. The two pairs of maisonettes in St. George's Court, Toorak, c. 1939 by Billson and Mewton (fig. 84), similarly are extruded gables in buff brickwork (36). Regency canopies denoting formal entry, abstracted brick dentils at the eaves line, and an oriel window are the authentic formal details played off against an informal massing of simple cubic forms.

Boyd's inclusion in Victorian Modern of a house at Wheeler's Hill, 1934 by Stuart Calder (fig. 85) is an attempt to place the modern period home within the confines of his "Victorian Type" (37). Within, the floor plan is free and open, and outside, the massing is once again a collection of extruded gable forms. Yet the steeply pitched roof, the shutters, and the Colonial details refer to the American Colonial period home rather than indigenous colonial examples. Boyd also included the faintly Spanish Mission 1927 Brighton home of Leighton Irwin with its white stuccoed walls and Cordoba tiles and describes it has having an "advanced simplicity" (38).
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These urban examples are sophisticated houses with their minimal deferences to taste and requisite honorific treatment of entry. But there is little volumetric exploration or experiment and improvisation with materials as compared with the bush expression. Rather there is an understated transition from the purity of period allusion to progressive open planning, retaining selected essential detail be it Moderne, Georgian, American Colonial or French Provincial. The importance of the urban expression is to illustrate the level of pragmatic retention of domestic imagery and detail. The Haunstrup House and the Fairbairn House make the task of the empiricist historian, a difficult one. They sit at the edge of stylistic respectability and avoid categorization.

Rather than think of the "Victorian Type", the bush house and the urban house (in this case, urban describes the suburbs) are more fitting descriptions for the houses which Boyd illustrates in *Victorian Modern*. The so-called Victorian Type is the result of an eclectic synthesis free from the label of style. A type has developed not through a common school of thought but rather there are common solutions to specific functions and specific sites either for the Australian bush site or the suburb. What has evolved is an Arts and Crafts response to the country house, a bush house; a sprawling winged plan, gabled low-pitched roofs, the mixing of as-found materials and improvisation and the creation of outdoor rooms and terraces, and a response to the sun, shadow and hues of the bush. Similarly there is an urban house, deferring to the contextual materials and textures of the suburbs, a creative and innovative interpretation of the Classical tradition (usually the Georgian), gabled brick prisms and essential domestic elements, the familiar domestic truths which assist the "caractere" (39) of the house. There is emphasis upon the entry as the public marker of status to the street and the dominant form of the house retaining its essential domestic outline. Propriety and appropriateness ensure incremental and not revolutionary development.

Common to both the bush house and the urban house is elementary composition, aggregative planning related to a one-space/one-function composition of boxes, their placement and connection being dependent on site and orientation and the interaction with outdoor spaces of a similar size. A picturesque composition eventuates.

39. The idea of "caractere" or character is defined by Jacques-Francois Blondel in *Cours d'architecture*, (Paris 1772) vol.2., p.229 et seq. as "all the different kinds of productions that belong to architecture should carry the imprint of the particular purpose of each building; each should possess a character that determines its general form and declares the building for what it is."
Common to both also is that the progressive eclectic source is predominantly America not Europe, namely the domestic work of William W. Wurster, the Los Angeles work of John Byers, Clarence Tantau, Wallace Neff, the emerging American modernist, Richard Neutra, the re-energized Frank Lloyd Wright, and the period houses of the U. S., namely the free and informal interpretations of the American Colonial, the Monterey Style and the Spanish Colonial Revival.

The development of the open plan, response to climate and local materials is evolutionary and not revolutionary. Boyd's cheeky description of the Type was a pertinent observation, but for his own ends in 1947 in attempting to concoct and describe a line of modern architectural development in Victorian domestic architecture. The post-war continuation of the bush Victorian Type supports this 1947 proposition yet by 1952, the "Type" in *Australia's Home* had been labelled as the "Cottage Style" (40). It was derided as part of the New Empiricism, prompted no doubt by the disapproval in International circles of both the woody and regional New Empiricism of Scandinavia and post-war England, and the Bay Region in the United States (41).

World War 2 interrupted the development of the bush and urban expression of the modern house. Homebuilding came to a virtual standstill in 1942 and suspended what had been almost a decade of fruitful assimilation of local and international ideas about the house. The house was to be transported to another status. First and foremost it was to grow as a dream and imprint itself upon the minds of all Australians as the homecoming prize for a nation which was, for the first time, completely at war. Australia had entered the world political arena. Architects also began to prepare local architecture for its entry to the world via the utopian aims of International Modernism. It was to be the beginning of a parting of ways.


41. The 1948 Symposium, "What's Happening in Modern Architecture?" at the Museum of Modern Art, New York focussed on issues of functionalism and humanism. The Bay Region Style as labelled by Lewis Mumford and the New Empiricism as advocated by The Architectural Review were the targets for heavy criticism by architects such as Walter Gropius and Marcel Breuer.
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For further discussion of the pre-1942 years of development towards the modern house in Melbourne see:

Appendix 2:
Dreams of a Modern Melbourne House - Ideal Home Competitions 1933-1939
(Figs.86-111)

Appendix 3:
The Emergence of the Large Scale Housebuilder: A.V. Jennings and the Housing Commission of Victoria
(Figs.112-127)
CHAPTER TWO:

WORLD WAR 2 - THE HOUSE BECOMES A DREAM
1942 - 1945
Chapter 2: World War 2 and the demand for housing

World War 2 and the demand for housing

If World War 2 had, as Donald Leslie Johnson suggests (1), brought about an architectural limbo for Australian architects and reduced building productivity to a myopic and unstable level, then it also highlighted the stark reality of the level of house building in Australia. Homebuilding came to a virtual standstill during the war. In 1942, at the advent of Australia's full scale involvement in World War 2, there was already a shortage of 25 000 homes in Melbourne alone (2). In 1941, the number of building permits issued in Melbourne for private dwellings was 5491; in 1943 that number was reduced to 32 (3).

The need to provide more houses, the need to produce, swept aside the exploration of meaning, language, form, space and the search for a distinctly Australian architecture (4) that had been slowly developing during the 1930s. Instead, energy was focussed on solving the shortage and the means by which to do it. The architect was pushed into the leading role as holding the solution. The time was ripe for the professionals to show their expertise and lead the nation in the post-war provision of housing for its men returning from the front.

The war exposed the country as having no national plan for house building on a large scale any more than having a town building plan. Apart from Canberra, the only Australian town being built to a plan was Swan Hill in north-western Victoria (5). Slums and slum clearance also became an issue, as it had been before the war, but now it was charged with the spirit of evangelical purging (6). There was also the question of what to do with the mushroom crop of defence factories and how to provide large scale settlement in the country, and in the cities, how to provide housing estates, suburban community facilities, factories, electricity, apartment blocks and walk-up flats.

The small home was to become the icon for solutions and the leitmotif for a new life after the war. It was to be the symbol of return and provide the foothold for ex-servicemen to get the country back on its feet. In an article entitled, "After the Bombs", from SALT, the education journal of the Australian Army, the editors remarked,

6. In the article "Our Slums", SALT, vol.5, no.5, 9th November 1942, p.12, F. Oswald Barnett speaks of the "slums", "they are turning our children into invalids", and "dead-end kids..."
In fact, our whole post-war plan is linked with building. Thus the perspective drawing of a five roomed cottage is linked with a perspective drawing of Australia (7).

For F. Oswald Barnett, Deputy Chairman of the Victorian Housing Commission, planning for the post-war years was a matter of urgency when he said in 1942,

I believe that we must properly plan for the plain honest working man, or as a nation, we shall perish (8).

Boyd's 1952 maxim "Australia is the small house" (9) therefore was already a post-war rallying cry in 1942. For the architect, it was a time of great opportunity. There was not only the need to assist in the demand for housing but there was also the potential to develop new policies for the design of the single family house; to inject progressive ideas at a greater rate due to the demand for solutions than would otherwise be expected; to question the program of the single family home and also the idea of the suburb and the subdivision; and to investigate ways of providing large numbers of houses while at the same time providing ones of quality.

Large architectural firms continued to operate during the war years, designing large building schemes such as hospitals and barracks (10). Builders such as Jennings sought from the government the construction of huts, camps and low rise hospitals, employing the same type of tradesmen as had been used on housing (11). The smaller architectural firms and builders simply closed shop and ceased working. Many architects worked for the government, joined the armed forces or worked for the United States armed or support services in an architectural or engineering capacity. It was a period of frustration for architects, one of dreaming of the future, of pent-up thoughts and ideals left to brew. One of the few outlets during this lack of building activity was an opportunity for architects to draw attention to their role in society and state publicly their newly-found position of importance in books and journals published during the war years. In the immediate post-war years, such attention frequently took the form of housing competitions where the dreams of architects' war years would find full expression and give a taste of the decades of domestic design to come.
Visions and Dreams of the Post-war House: Wartime Publications

To cope with the frustration of virtually no building and respond responsibly to the demands of the housing shortage foreseen after the war, architects began to dream - as did the serviceman and his wife back home. The common dream was the detached single family home. The experimentation in flats and urbanized living of the late 1930s and early 1940s was put aside as the projected ideal of the family; man, wife and two children was touted as the norm, the problem, and the ideal. It was an ideal with implications that were to reinforce Melbourne's urban form as that of a suburban city of detached houses and encouraged radial sprawl east and south of the city centre. Ideas of the European density and scale of the prototypical flats of the 1930s dimmed before society's projection of the lifestyle of the family as the demographic model with the highest priority in the post-war years. The vision was not to be row houses nor even semi-detached houses nor even the superblocks of Le Corbusier. Dreams were to be embodied in territoriality and individuality, to be realized in the single family detached house.

Few architects questioned that projection and dreamed in much the same way as the public did, though in many cases were determined that post-war, the speculative builder would not dominate the housing scene as he had before the war. The ideas and aims of the 1930s were transmuted into different issues; the lack of available finance and materials, the quest for an International architecture, and the much feted solution of prefabrication were all to transform the regionalised modern house which had begun to develop before the war. Importantly, architects were determined their wartime dreams would be brought to reality. They would attempt to shrug off the pre-war years of cumulative experiment and development and start anew.

SALT

SALT was the authorised education journal of the Australian Army. Articles written by architects frequently encouraged the wider use of architects and their services, emphasising the small 15% of houses designed by architects. In Donald Ward's article "Who'll plan it?" (1), the problem of the architect and the small house was narrowed down to one of fees and the solution suggested was that of a "plan bureau" with a range of standardised

designs prepared by a group of architects to be offered at minimal cost to the public. It was an idea which reflected current discussion within the R.V.I.A. concerning a proposed small homes service. Attention was drawn to the scarcity of building materials. In 1942 it was virtually impossible to obtain properly seasoned hardwood and the desperate need to impose some form of control on all building resources such as timber, bricks, cement, and glass was raised (2).

Wider issues of prefabrication and the suggestion of the nationalisation of the building industry were also discussed. The concept of production efficiency was a seductive proposition. The manufacture of ships and planes and their associated industries for the war effort was seen as a potential post-war house building solution. One suggested idea was for a house produced in eight hours after spraying concrete onto a canvas rubber balloon (3). Time was to become a pervasive issue with the need to provide houses as quickly as possible. The concept of the house was to be reduced socially to that of an article of production with the loss of crafted detail and traditional domestic textures, a factor of economy and harder times. The building of the house was to be seen as building and servicing "just like a car" (4). F. Oswald Barnett, the deputy Chairman of the Victorian Housing Commission, calculated that as soon as the war permitted, Australia would need to build 1000 houses a week and keep it up for at least 10 years before the housing shortage would subside. His conclusions were based on figures that stated a shortage of 112,000 houses in Australia and a further 67,000 houses to make up his 179,000 estimate. This additional figure was housing he categorized as slums, requiring demolition and replacement. Added to this, the regular 35,000 houses built each year brought a forecasted total shortage of 250,000 houses in Australia (5).

The talk of slum clearance, the alarming accommodation deficit and nation-wide planning controls must have seemed of distant importance to the ordinary man at the front dreaming of home. Sergeant Robin P. Boyd, alert to the average digger probably only aware of his immediate problems rather than those of a political or national nature, attempted in a SALT article "to put foundations under the castles in the air pictured by most men when they read the last lines of their letters from home" (6).
Boyd did this with a house for "the typical case of our tentmate: Corporal. J. H. Jones", to be built on an outer suburban block of 55 feet by 120 feet in a new street with a north-facing frontage (Fig.128). The £1000 cost for the 8 1/2 square house proved Corporal Jones to have been a smart man for having chosen an architect, and Boyd was emphatic on the benefits of such a choice.

The house was advanced for its time in terms of planning, form and choice of materials. Boyd, one of the emerging generation of younger architects was astute in his advocacy of progressive ideas in small house design. The war was to provide a breathing space, a chance to promote new ideas in form and expression, at a fast rate.

The house was zoned into living and sleeping blocks expressed externally with a broken gable. The roof pitch at 22 degrees was lower than usual and it was not hipped. There were exposed rafters under the eaves; banks of vertical mullioned windows with glazing right up to the underside of the ceiling; a massive fireplace which was part of a brick wall that extended into the garden to harness external space. The plan was open with little or no passage space (Fig.129). The services were grouped and the lounge and dining room combined to form one space. A coat cupboard screened the front door from this open and largest room of the house. Areas were small and tight and without decorative treatment. All was simple, spare and modest.

The clear delineation of spaces arose from a conception of spaces arranged on plan rather than the compaction of roofs under a hip or picturesque romantic composition. The symbolic representation of the sheltering roof was second to that of the expression of the plan. The effects of war were indicated by the choice of materials and structure. The house was timber framed clad with weatherboards and the
Floors were to be waxed local timbers. The fibro-cement roof meant a reduction of weight and the lowered roof pitch.

By contrast, the dreamers of 1944 envisioned a future age, one unbound by reality. The SALT cover for 17th January 1944 (7) shows Australia Day in 1994, a scene of aerodynamic streamlined houses, helicopter commuting, cars which resemble those designed by American industrial designer Norman Bel-Geddes (8) (fig. 130). The houses are set amidst a rolling pastoral English landscape. The myth of the house as a homestead in a verdant paradise is perpetuated. It is a graphic forecast of the apparent meeting of high-tech and rural aspirations. The suburb has no place here in a time of machine-age farmers. In the cover story, Clive Turnbull (9) talks of mass produced housing, prefabricated kitchens and bathrooms and cars that run on octane spirit.


8. For a comprehensive introduction to Bel Geddes’ designs and philosophy, see Norman Bel Geddes, Horizons, Boston, 1932.


Fig. 130 Australia Day, 1994, Cover of SALT magazine, 17th January 1944.
Chapter 2: Visions and Dreams of the Post-war House:
Wartime Publications

The question of the changing role of women in the work force was given scant attention by SALT. The idea of women retaining their war-time jobs was not an issue. Women were expected, as they were in America (10), to make way for returning servicemen, an action that would reinforce the pre-war programme for the household and the model of the family. The potential for a changing family status of two working parents, community provided child-care facilities and schooling, and the equalisation of the strongly gender-based division of industry and industrial decision making was ignored. In an article entitled "Futures for Females", S. E. Sibley claimed that working women "many in war work, sing of a post-war Home Sweet Home" (11).

In one article by Sgt. H. A. Prince (12), solar design principles advocated by American architect Fred Keck (13) were applied in a simply zoned house with flat roof. In another article, Gnr. K. G. Hardcastle discusses that "small factory", the "heart of the home", the post war kitchen, eagerly describing the technological advancements to take place there (14). War technology highlighted the development of new materials. Talk of stressed skin plywoods and especially "plastic" for wall coverings, flooring and household fittings pervades many SALT articles (15).

SALT asked the prominent Victorian architect Harold Bartlett (of A. C. Leith and Bartlett) to design three homes based on the recommendations made by the Technical Bodies Advisory Committee report for the Ministry of Post War Reconstruction (16). The three designs, like Boyd's, were simple and unaffected (fig.131); low roof pitches, wings of the house of single room width, vertical timber

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10. Dolores Hayden, Redesigning the American Dream, pp.4 - 13, 35 - 38.

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Fig.131. Harold Bartlett, architect. House design for SALT based on recommendations made by the Technical Bodies Advisory Committee report for the Ministry of Post War Reconstruction, 1944.
boarding, minimum bedroom sizes and emphasis on the ability to mass produce, even prefabricate the houses. The brick garage is right on the street acknowledging the contemporary role of the automobile, and planning takes advantage of all parts of the site to gain maximum privacy. The cost of these houses is to be covered by "mass production (which) should ensure that costs will not be prohibitive." There is a lightness in the wafer thin roofs and slim structural members that engenders an aesthetic, not one of slim Miesian elegance, but one of lean expediency.

In response to these designs, servicemen regarded the houses as "slum-like", "no thanks, not on your life! As a garage - yes, maybe, or a foul house" (17). Necessity and force of circumstance were not met with praise.

Other designs by laymen which appeared in SALT were naive and unrealistic in terms of allowable area, plans with tortuous passages, complex roofs and a lack of response to the potential usable area of the site (18). One set of designs incurred the wrath of Sgt. R. P. Boyd (19) who berated the designers for their ignorance of planning, orientation and area calculations, his words an indication of frustration and impatience with the ennui of inactivity.

**Home Again!: Domestic architecture for the Normal Australian**

*Home Again* was written by Sydney architect John D. Moore in 1944 (20). This book was divided into two parts. A brief resume of the Australian condition preceded a set of heavy handed house designs of traditional construction and proportion. The Georgian Revival of Leslie Wilkinson's houses and Moore's own designs was clearly present in simple but eminently workable designs. A design for a "holiday house for the seaside" with a bold skillion roof, mezzanine volume, double garage integral to the square plan and fold-away doors to a large open living room overlooking the sea was one of the most daring designs offered in this serious book (21) (fig.132). Moore's attitude to the Australian people is most revealing and explains his reluctance to experiment.

*The land we live in is good, and the people of Australia although handicapped, and to a certain extent warped and twisted in their adherence to certain wrong standards*
This alarming statement is followed by a series of do's and don't's of good and bad taste. For Moore, the post-war home was the key to a new sanitizing of taste.

**Homes in the Sun**

*Homes in the Sun* was published in 1945 and written by Sydney architect Walter Bunning (23). It is a book of two parts exuding optimism for change in house design and town planning. The first part is a brief history of architecture, entitled "Yesterday", and the remainder, "Tomorrow" is a critique of Australian urban planning and proposals for house design and town planning.

Bunning proposed a number of house designs set on the typical suburban block which employed screening walls and single room width wings to create usable outdoor rooms. Suntrap House 2 (fig.133) was a Richard Neutra-
like conception with french doors, flat wafer-thin roof, outdoor living terrace, open dining and living areas, the now familiar block fireplace, and the site became a usable patchwork of indoor and outdoor rooms (24). The Solar House was a sophisticated box, once again derived from the interlocking thin planes of Richard Neutra designs, generously glazed and given a single vertical emphasis by the sculpted fireplace centerpiece (25) (fig.134).

Functional simplicity and a conscientious response to climate were sought. Brazilian examples from *The Architectural Review* were used to illustrate ideas of open planning, courtyards, brise-soleils and patio living. Geoffrey Mewton’s own house in Sandringham, 1938, with its wide expanse of doors that fold away completely to open the interior to the garden, emphasised the connection between house and garden. A small chapter section was devoted to the virtues of prefabrication, citing Swedish and Scottish examples as being suitable for Australian conditions.

The most interesting part of the book was the section dealing with apartment houses and town planning. Apartment blocks and open green space in the manner of Le Corbusier’s *Ville Radieuse*, flats from Stockholm, Romberg and Shaw’s "Newburn" Flats, Melbourne, and J.H. McConnell’s "Deepacres Flats", Adelaide, were all suggested as possible housing alternatives. The open air schools of Richard Neutra in California and Impington Village College by Gropius and Fry were suggested as positive prototypes for new school design. Satellite towns were advocated and were based on Le Corbusier’s designs for a city centre of public buildings encircled by satellite suburbs, each functional zone being separated by a green belt.

24. Ibid., p.50.
25. Ibid., pp.52 - 53.
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The issue of replanning existing nineteenth century neighborhoods and the insertion of community facilities and green space was also raised (26) (fig.135).

Bunning made the connection between the form of the dwelling and the physical break-up of the family or lifestyle in an effort to encourage diverse building types for different lifestyles (fig.136). However, an understanding of particular Australian qualities of urbanism and suburbanism was sidestepped. Change was sought rather than an analysis of existing typologies. The Corbusian vision was swallowed whole.
Planning the Australian Homestead

As an immediate post-war publication, Kenneth McConnel's *Planning the Australian Homestead*, of 1947 was a subdued and conservative book which concentrated on house design in rural areas (27). The designs drew their inspiration from a Colonial tradition of studied repose and Georgian simplicity. The verandah, the hipped roof, embracing courtyard plans, formalised entry porticoes were all elements to include in a post-war space-saving plan. There was no desire to express function or use new materials and new technology. The "open plan house", for example (28), was an informal butting together of forms typical of traditional homestead design (fig.137). This house also bore a strong resemblance to the Butler House, Pasatiempo, 1931 - 32 by William W. Wurster with its winged plan and open air living porch.

Home Plans

Edited by Eve Gye, *Home Plans* was a booklet of architect-designed house plans published by *The Australian Women's Weekly* late in 1945 (29). While progressive open plans were contributed by Australian architects such as Trevor Bain, John P. Mockridge (fig.138) and Sidney Ancher, and a period styled house designed by Sydney architect, A.E. Hanson was illustrated, many of the advanced house designs in this booklet (with copious amounts of glass and flat roofs) were designed by American architects, notably Californians such as Mario Corbett, John Funk, and John Ekin Dinwiddie. Other designs by Australians, Edgar Gurney and Les Rowell, and Coxhead, Mason and Bath were low-pitched gable roofed L-shaped house plans, precursors of Robin Boyd’s so-called Victorian Type. A two-storey design by John Mockridge, built for "Sun and privacy" (30) showed a typical blend of open planning techniques, a gable roofed box sitting above a rough stone wall which divided the

Fig.137 Kenneth McConnel, architect. The "Open Plan House", design for Kenneth McConnel, *Planning the Australian Homestead*, 1947.


28. Ibid., p.34.


30. Ibid., p.5.
private and public spaces of the ground floor and included a warm mix of textures (fig.139). The infusion of responsible modern domestic design into Australia was the aim of this publication, for perhaps...

this book will prove of national importance if it helps to prevent exploitation of our people by speculators like those responsible for the flood of poorly planned, poorly designed and badly constructed houses that followed World War I (31).

These publications were modest attempts at proposing new ideas for the post-war house. Their sombre format and tentative experiments at progressive design indicate the meagre resources available during wartime. But their presence assisted the dream of the home to remain firmly in place. As competitions for the post-war house proliferated and glossy publications from the United States continued to appear despite the strictures of war, the onslaught of post-war single family house propaganda had only just begun.
Post-war House Competitions
During the war years, and immediately afterward, many architects eagerly took part in architectural competitions. Naturally the ideal subject for a competition at this time was the light at the end of the tunnel, the single family house. By looking at two of these competitions one can find an accurate picture of Australian architects ideas for the post war family home.

The Sun Post War Homes Competition
The Sun Post War Homes Competition of 1946 presupposed an important suburban phenomenon - a flat suburban block 50 feet x 150 feet which implied a free standing house with private front and rear gardens and the provision for at least one motor car. The adjudicators for the competition were the builder, E.A. Watts, architects Les Perrott and Geoffrey Mewton, and the editor of The Sun newspaper. Watts and the Sun editor wanted "Georgian Houses". Mewton however focussed the jury on the issues which he considered to be of importance: open planning, a northerly aspect, the integration of house and garden, and the use of all available space on the block (1).

Consequently the winning design in the single storey section by Jeff Harding presented a blank face to the street with a low pitch gable extending on the west side to form a carport. The living room was at the rear of the site with generous areas of glass with vertical structural mullions (2) (fig.140). This generous expanse of glass extends down the east facing bedroom wing of the L-shaped house. It is a low key, apparently styleless entry, discreet and progressively undramatic, in form, structure and plan.
Coxhead, Bath and Mason’s 2nd prize plan was a similarly safe and accommodating response, a simple gabled rectangle of 9.95 squares, living areas to the north and service areas to the south, expandable from its first stage of two bedrooms. The dining room was condensed to a nook and the hall was simply a screened area of the living room (3).

In the third prize entry by Noel B. O’Connor and Ian Turner, the house was no longer a taut container but a collection of internal spaces borrowing external volumes and extended freely over a Miesian gridded plane (4) (fig.141). The cut-out pergola entry and generous areas of glass recall houses designed by northern Californian architect John Funk (5), while the flat roof, the sliding walls of glass and de-Stijl plan is similar to houses of Richard Neutra in Southern California.

Sidney Ancher’s unplaced entry is similarly located on a Miesian plane. Fin walls merge as Neutra’s houses do into luxuriant planting, extending far beyond the house to harness yet more space (6) (fig.142).
Boyd and Pethebridge’s scheme for an extendible house does likewise yet its formal elements visually acknowledge Boyd’s view of the "International style with its implication of white concrete walls and roof that were in fact brick, wood, fibro and sheet iron" as Conrad Hamann notes (7) (fig.143). The massing and horizontality recall Neutra’s works but the boxed windows and entry screen recall work publicised in The Architectural Review (8) and similar details employed by Walter Gropius on the East Coast of America (9). No other entry suggested so explicitly the direct use of international motifs. The majority of design entries were conservative, austere, well planned compact small homes, unpretentious and displaying little innovation.

The two storey section of the competition elicited a similar sober, if well oriented and planned low pitched gabled box-like house. John Mockridge’s 2nd prize entry was perhaps the most striking image of the whole competition with his confident rendering technique delineating bold prismatic forms, sophisticated structure and advanced planning technique (10) (fig.144). The house was planned on a three foot module with storage units factory fabricated. The house was to be a light steel frame with an upper floor of...
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Fig.144 John Mockridge, architect. Second Prize, Two Storey Section, The Sun Post-war Homes Competition, 1945.

reinforced concrete with infills of brick or plastic sheeting. The house was sited on the boundary implying medium density housing. Modern details were confidently employed such as the reinforced concrete cantilever stair, roof terrace and south wall of brick or natural stone, in much the same manner as Marcel Breuer was using natural rubble walls in Connecticut, U. S. A.. Man-made materials were played off against as-found materials. Along with Baldwinson's competition schemes of 1938 (11), this entry is among the first examples in Australia of the East Coast International Style of Gropius and Breuer.

A two storey maisonette section of the competition acknowledged the need to provide houses at a greater density than the detached suburban house. Leslie T. Brock's prize winning entry modernizes Melbourne's terrace house tradition, providing car access from the street, garbage collection facilities and a modern galley kitchen (12) (fig.145). The scheme bears comparison with projects proposed by Northern Californian architects Vernon De Mars and Burton Cairns (13). Few examples of rowhouses

13. For example, the Co-operative Farm Community Housing, Arizona, U.S.A., 1936 - 37 by architects Vernon De Mars and Burton Cairns. See Alfred Roth, The New Architecture, pp.61 - 70.
similar to Brock's were built after the war. It was not until the mid 1960s that the question of the town house received renewed interest in Australia.

All the entries show a predilection for planning. Few new ideas of form, details and structure arose. The flat roof eliminated the heaviness of terracotta tiles and the house was stretched horizontally to encompass more of the site and landscape. Privacy was emphasised. The dining room was dissolved, and built-in storage filled any excess area on plan. As a requirement of the competition, houses were designed as expandable depending on family requirements. As Sally Woodbridge points out "freeing the plan" (14) could stretch the small budget of the post war family. Passage space was eliminated, the number of interior partitions was reduced, mechanical equipment and plumbing were rationalized. The area of the house could be compacted to an average of 1000 - 1400 square feet.

In addition to the competition, The Sun undertook a public survey to find the most desirable type of small home. Understandably the survey revealed suburban attitudes and a reluctance to exist in an urban residential manner, or exist communally. 90.5% of those questioned preferred to live in a single storey house, 77.5% objected to living in a house which was one of a pair (i.e. a villa flat or maisonette), and 89% wanted their own private fenced-in garden rather than one common garden maintained by the council (15). There was also a reluctance to abandon the idea of the living room at the front of the house rather than the frequent advantages of having the living room at the back where it may make

15. The Sun News Pictorial, op. cit., p.3.
better use of the sun or utilise a private garden or terrace space for outdoor living. A desire for status and a public face to the street seemed apparently important.

The "Tomorrow's Timber Frame House" Competition

In December 1944, the Timber and Asbestos Cement Industries of Australia conducted "Tomorrow's Timber Frame House" Competition for small homes in timber or asbestos cement in three classes: a £720 house, £960 house and a £600 holiday house (16). Held in Sydney, the competition attracted 450 entries which was claimed as an all-time record (17). The results of the competition however were conservative and uninspired. Winning designs by Robert C. Coxhead (1st, £960 section), J. Mason and R. Bath (1st £720 section and 3rd £960 section), all from Melbourne and H. R. Orr and Ethel M. Richmond of Rose Bay, N.S.W. (1st, £600 holiday house section) continue the low pitched gable roof of corrugated asbestos cement over a compact rectangle or L-shape with living in one wing, sleeping in the other. Living and dining areas were combined (fig.146). Plumbing areas were grouped, rafters were exposed and there were enlarged but not overly generous areas of glazing (18). The imagery was subdued, homey, honest and pragmatic, eminently functional, yet lacking nostalgic sentimentality and decorative detail.

A. V. Jennings's architects, E. M. Gurney and L. E. Rowell's two storey £960 home entry hints at the subtly sophisticated house designs of Californian William Wurster with its overscaled stair window, elegant fenestration, generous board sizes and sun porches (19) (fig.147). John Mockridge's entry also owes much to Wurster with its vertical boards, wide oversailing eaves, relaxed and
informal bi-nuclear plan, large casement windows, and doors opening out onto an implied outdoor room (20) (fig.148). The plan graphically delineates the functional zones of the house but the finish of the house is distinctly textural. Exposed timbers and raked ceilings, a chimney of natural stone, and a glazed gallery of sawn redwood logs show Mockridge’s regard (21) for contemporary Californian work of the Bay Region, in particular with the informality of roofline and the varied and sensitive use of texture and materials, exposed concrete blocks and rafters and use of natural timbers. This competition entry with its spreading wings and bi-nuclear plan predates similar planning techniques employed by Harry Seidler and is the basis for Mockridge’s Watts House, Sorrento, 1946-7 and the Freedman House, Bayswater, 1946 (22).
20. Ibid., p.158.


24. Ibid., p.160.

When these houses are seen alongside his entry for *The Sun* Post War Homes entry, one finds in Mockridge a talented architect conversant with International themes and ideas and prepared to test them not in an imitative way but absorbing and amalgamating diverse architectural sources to produce solutions relevant to the conditions and materials of Melbourne. The results are often well planned and resolved, but formally awkward and apparently gauche when seen against the authority of international prototypes. But the products are actually an original and authentic means of accepting new architectural ideas without accepting them as formal dogma.

The holiday house entries of the competition extended such a habit. Exposed timbers, rubble wall fireplaces, outdoor barbecues and zoning of the plan into discrete blocks created a new image for the Australian home, blending a rational plan with a lifestyle that was relaxed and informal. The entry of H. R. McCaulay's was a carefree splaying of two discrete yet tightly planned blocks to create a romantically sited composition (23) (fig.149). A flagged living porch connected the two blocks.

![Fig.149 H. R. McCauley, architect. Unplaced entry, first prize, Holiday House Section, "Tomorrow's Timber frame House", Competition, 1944.](image)

The second-placed design by Frank Jessup, Kevin Pethebridge, Robin Boyd and Stewart Joy emphasized open living areas, duplicating indoor space with outdoor rooms, and suggesting the ensuite. Labels of style were eschewed, the parts of the house reduced to simple elements (24) (fig.150). This collaborative entry highlights the predicament of architects in wartime. Many local architects found themselves in the same army unit. At one time, the 3rd Field Survey Unit included: Kevin Pethebridge, Stewart Joy, Frank Bell, David Kerr, Robin Boyd, Marcus Barlow Jnr., Norman Barton, Neil Clerihan.
and Bob Brown (25). Discourse between these architects was always active and optimistic. The new architecture that would appear after the war was continually discussed, in particular ideas about the small house. It was at this time that Boyd was writing articles for the Army educational magazine, *SALT* and for design competitions, he would team up with Kevin Pethebridge, Neil Jessup and Stewart Joy. As a group they put forward numerous entries in each competition, the chief designer being the first name in the list of authors when published. A conscious effort was made in each house design to show up mistakes or shortcomings of pre-war domestic design such as the placing of the verandah at the front of the house regardless of its orientation (26).

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26. Ibid.
Chapter 2: Visions and Dreams of the Post-war House: Post-war House Competitions

The post-war competitions are important elements in the architect's image of the new exciting period to follow the war. They were not only an opportunity to break free from the shackles of style but also a time to infuse new international ideas into domestic design be they formal, structural, about materials and details, or an informal way of living. These were accomplished by a new drafting and rendering style which was bold, scratchy and confidently expressed, a studied artlessness, dismissing the contrived and secure romanticism of pre-war rendering with seeming practicality and a smack of realism, of getting on with the job of building.

Internationalist and regionalist tendencies were blended with caution. No local literary spokesman or authority existed at the time. It was a time of tentative exploration with limited means. The publication of *Victorian Modern* by Robin Boyd would be the first post-war publication to be architecturally influential. But this book was not to appear until 1947. The wartime competitions then represent the first stirrings of change.
Immigrants and Sources of Influence 1939-1946

As Donald Leslie Johnson suggests (1) there was a small group of immigrant architects, not English or American but Europeans, who could not return or chose not to return to their homeland either before or after World War 2. Their influence on domestic design in Melbourne has yet to be fully assessed. Certainly in Sydney, the work of Harry Seidler was to be widely publicized and influential throughout Australia from 1947 but predating his arrival, there was in Melbourne, a small number of European architects practising and being published. They included Frederick Romberg, Fritz Janeba, Frederic Rosenbaum, Dr. Ernest Fooks and O. Notman. Their presence in Melbourne resulted in local exposure to specific European models of domestic design of varying quality and interpretation, and of an influence that is difficult to gauge. Suffice to say, they brought with them various forms of the International Style.

Frederick Romberg

Frederick Romberg arrived in Melbourne in late 1938 from Switzerland on a travelling scholarship gained from a successful thesis design at the Federal Technical College in Zurich (2). Romberg began working as a draughtsman for Stephenson and Turner on his arrival in Melbourne. He was designer for their 1939 Australian Pavilion at the Wellington Centenary Exhibition in New Zealand, a building with a softly streamlined interior and a spectacular curving stair echoing the work of his Swiss teacher and mentor, Otto Salvisberg. A private commission for "Newburn" flats in Queens Road encouraged Romberg to establish his own practice in partnership initially with Richard Hocking then later with Mary Turner Shaw. A series of apartment buildings brought Romberg critical acclaim as a distinguished designer who revelled in variety of detail and materials such as stone chimneys, projecting and tapering timber rafters, boldly painted chevrons and improvised details typical of his native Swiss Heimatstil architecture. Between 1939 and 1945, Romberg designed and built the "Newburn"Flats, Queens Road, 1939; "Glenunga" Flats, Armadale, 1940-41; "Yarrabee" Flats, South Yarra, 1940; "Stanhill", Queens Road, 1942-50; and "Hilstan", Brighton, 1947 (3).

Romberg's first house commission was the two storey Ellery House at Upwey, 1940 (4) (fig.151) where he

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3. Unbuilt apartment projects designed by Romberg in this period included "Kinnoul", Toorak, 1941, the Melville Road Flats, Brunswick, 1941; and the "Gloucester" Flats, 1945.
employed a theme which would be repeated in a number of Romberg house designs, that of a vertical anchored fireplace, projecting forms and broken massing. Another vertical element of the house was the stair tower with its mitred glass corner window.

A house project for Heidelberg, 1942 (5) (fig.152) like the Ellery House, was also designed for a hillside site. This design blended traditional domestic materials and textures, exposed rafters, weatherboards and rubble rock chimneys with a cantilevering balcony and a recessed ground floor which was entirely glazed. Roofs were simple skillions with tapering exposed rafters. The broken massing and projecting elements gave the house when viewed from below a dynamic outline.
Romberg's most evocative design from this period is the 1943 house project at Heidelberg (6) (fig.153), where aerial forms, the recessed basement floor of rubble stone, the bold concrete cantilever supports for the balcony, and staggered cantilevering window bays of the bedroom and garage wing, the strong expression of functional volumes within, combine to create an expressionistic collection of elements. Frank Lloyd Wright's "Fallingwater", the Kaufmann House, Bear Run, Pa., 1936 (fig.154) is recalled by the vertical anchor of the stone fireplace, the pergola cut out from the flat roof and the leaping forms while the Mendelsohnian tail to the plan suggests a penchant for creating expressionistic form.

Later house projects such as the Stanley Korman House, Brighton, 1945 and schemes for a mass-produced steel house, 1945 continue aerial themes but both were compromised by wartime finance and materials shortages (7).

Romberg's work is a mature and personalized reworking of the International Style, an assimilation of local materials via an organic/additive approach to composition.
The whole is not expressed. Rather, what is expressed are the parts which make up that whole. As Conrad Hamann points out, Romberg's houses are not the reproduction of a collectively approved style nor are they able to be codified as such (8). It is this codification which Australian architects were avidly seeking and were to find in architecture of Harry Seidler and his copybook Harvard Bauhaus style. Consequently Romberg's work was not of wide influence, rather it displayed an affinity with the local tendency of domestic design, of additive functional expression and the use of various textures and materials to achieve elemental interest, rather than coherence of overall form. Where Romberg's houses differ is in the injection of a raw and tense lightness, the dynamic of weightlessness, improvised and brave, and despite wartime shortages of materials and resources. His houses fuse the vernacular and the international in a fashion similar to contemporary houses by Finnish architect Alvar Aalto and the German, Hans Scharoun (9). The aerial quality of the houses is not that of Seidler, heroic and above the land, rather the site is actively engaged with in the same manner as Wright's "Fallingwater" which springs out of the rocky ledges above the stream below. As well, the nature of each material becomes articulate. It is a complex and inclusive modernism attune with the culture of assimilation already developing in Melbourne.

**Fritz Janeba**

Frederich Alois "Fritz" Janeba arrived in Australia from Vienna in 1939 (10). Attracted to Warrandyte where his wife Kathe could pursue her pottery interests, Janeba built a number of houses there with a bush palette of...
weatherboards, white painted window frames and simple skillion roofs. His designs show as Hugh O'Neill points out...

_frank appraisal of the qualities of building materials such as stone, pise-de-terre, caneite, laminate, a rigorous consideration of ergonomics and solar penetration and great care in planning_ (11).

Janeba's personal approach to architecture found meaning in process and materials rather than notions of style or formal rules. It was a design philosophy with which he was to continually challenge students having been invited to teach in late 1946 by Professor Brian Lewis visiting Warrandyte accompanied by Roy Grounds. Janeba was to teach at the School of Architecture at the University of Melbourne from 1947 to 1962 (12).

In 1939 in partnership with C. Wells, Janeba designed a large two storey house in Lansell Road, Toorak (13) (fig.155). It was a flat roofed brick house, intricately planned and detailed with folding doors, an internal garden, pergola, busily furnished, and ever changing with the climate as the house could expand and contract with planes of doors and windows which could be moved at will.

The James Wigley House, Warrandyte, 1943 (14) (fig.156) sits on a base of warmly coloured Warrandyte stone. It is a simple skillion roofed box atop an angled rock base that contains a studio facing south through large white framed windows. The studio space is broken up by adzed structural timber posts. The soft splay of the rock walls,
stair and balcony are subtle demonstrations of formal manipulation. This is a non-assertive architecture that has emerged gracefully amidst the gums.

Janeba's own house at Warrandyte, 1948 (15) (fig.157) is a skillion roofed vertical timbered box with a bedroom cantilevering boldly over a carport and with a simple white generously glazed interior. Similarly scaled, detailed, simply massed and planned is the Dove Wigley House, Warrandyte (16) with its carefully laid stone fireplace, and informal stringing together of rooms. This house was the model for the later Paul Lederer House (17) also at Warrandyte.

Janeba's houses may be seen as part of the artistic atmosphere of Warrandyte in the 1940s, a stylistically unaffected architecture where materials, texture and the inherent qualities of the materials themselves were to suggest form and lend meaning to their surroundings. It is as-found materials, ad-hoc freedom, and simple pragmatism which guides the design of these houses.
Together with houses such as that by the Russian sculptor and painter, Danila Vassilief, "Stonygrad" (18) and the teachings of the experimental "free" school, "Koornong" (19), they form part of the thriving cultural milieu of the area, with its painting, pottery, and design. An environment of intellectual and aesthetic experience permeates these relaxed domestic designs. The Warrandyte phenomenon may have much to do with the apparent difficulty Melbourne's post-war architects had in understanding an urbanity for Melbourne. Much of Melbourne's artistic culture was located not within the city or suburbs but in the bush with bellbirds at Warrandyte and Eltham.

Frederic Rosenbaum

Frederic Rosenbaum was another Viennese immigrant. He was a regular contributor to *Australian Home Beautiful*, and his illustrations of white cubic International Style Houses in Austria quietly filtered the visual motifs of the new style to Australia. Rosenbaum also equated this new style with health and well being (20). In a SALT article, he

Articles by Frederic Rosenbaum include: "Planning on a Big Scale - Some Thoughts on Post-War Construction and Rebuilding", *Australian Home Beautiful*, July 1943, pp.7, 40.

Fig.158 Frederic Rosenbaum, architect. House design for SALT magazine, 1943.

Fig.159 Frederic Rosenbaum, architect. Sketch of a typical suburban house with a "Mary Anne backyard plus disease" for SALT magazine, 1943.
illustrated a picturesque romantically composed suburban house within a fenced allotment of ramshackle sheds and outbuildings with a "Mary-Anne backyard plus disease" (fig.159) and compared it against a "house with light, air, trees, health, though expensive", a formally composed International Style house in open verdant grounds (fig.158). The drawing of the new house is in crisp hard line work as opposed to the rough sketch of slums (21). Examples of his built work in Melbourne are not known.

**Ernest Fooks (Fuchs)**

Another Austrian architect from Vienna, Dr. Ernest Fooks (Fuchs) was to become a prolific designer of houses in the 1950s and of flats in the 1960s. His major contribution during the war years was his series of essays published as a book in 1946, *X-Ray the City: The Density Diagram: Basis for Urban Planning* (22) urged a thorough survey of the metropolitan area of Melbourne as the basis from which to begin to plan seriously for a post-war future. Fooks also published many articles on design and urban planning in *Australian Home Beautiful* in the early 1940s (23).

**O. Notman**

O. Notman was another immigrant architect, originally from Czechoslovakia. Like Rosenbaum, his International Style house designs appeared in *Australian Home Beautiful* (24) (fig.160), however little is known of his subsequent work in Australia.

In Melbourne, the immediate influence of European immigrants is difficult to quantify. The substantial number of articles by Fooks, Rosenbaum and Notman exhibit attempts to build in materials and techniques which did not
take into account a straitened wartime economy. Their published designs were thus exotic spice to a pre-existent tradition of textural and formal experiment. The built works of Janeba and Romberg extended that tradition but did not have the glamorous polish of Seidler's Sydney houses which were built after 1947 and which were much feted in the architectural press. It is the singular visual authority of Seidler's houses, that of the so-called Harvard Bauhaus, which the work of the Melbourne immigrants lacks. But, more importantly, the presence of European architects in Melbourne in the war years foreshadows the complexity of image for the modern house in Melbourne that was to emerge in the following decade. It must also be said that there were undoubtedly more immigrant architects than have been listed here. The later influence of these European immigrants on Melbourne architecture, particularly a prolific house designer such as Fooks, remains a study in itself and unfortunately does not form part of this thesis.
Sources of Influence 1939 - 1946

During the inactivity of the war years, when house building had virtually ceased, the appetite of frustrated architects was appeased by the continuing publication of architectural journals (particularly those from the United States), architectural books and an occasional travelling exhibition such as the Exhibition of American Housing and Planning held in Melbourne from October 16th - November 6th, 1944 at the Metropolitan Gas Company Showrooms in Flinders Street (1) which was a repeat of an exhibition shown at New York's Museum of Modern Art earlier in the year. In addition to the impressive low cost housing schemes already underway in the United States, and the formation of a National Housing Agency, the workman-like example set by the Americans seemed exemplary and a lesson from which much could be learned. The exhibition included house designs by modernists, Walter Gropius and Marcel Breuer.


1944 also was the year of New York's Museum of Modern Art publication, Built in U.S.A. - 1932 -1944 (2) which illustrated an exhibition of buildings built in the U.S.A. in the twelve years following the 1932 M.O.M.A. exhibition which had centred on codifying the International Style by curators Henry-Russell Hitchcock and Philip Johnson (3). The 1944 exhibition examples were chosen to illustrate the development of a growing and authentic American version of the International Style. Curator Elizabeth Mock also noted a renewed interest in the work of Frank Lloyd Wright, particularly "Falling Water", the Kaufmann House; also the hexagonal-based Hanna House; and the textured, woody and compact "Usonian Houses". As well, she stressed the regionalised modern of California, exemplified by the work of such architects as John Funk (fig.161),
The Modern House in Melbourne 1945 - 1975

Gardner Dailey, Harwell Hamilton Harris, and William W. Wurster. Later in 1948, *The Architectural Review* reaffirmed Lewis Mumford's label of the work of these architects as the Bay Region Style (4). An interest in texture, natural materials and indigenous vernacular building was also argued as indicative of a move towards a humanised modernism, apparently expressed by the East Coast houses of Gropius and Breuer. Mock noted also the move towards greater privacy and courtyard planning in domestic design. Also noted was the ready acceptance by American architects of Scandinavian modernism, particularly following Alvar Aalto and Sven Markelius's exhibition buildings for the 1938 and 1939 New York World Fair.

Australian architectural periodicals such as *Architecture* and the *R.V.I.A. Journal* between 1939 and 1946 were brief and cursory observers of a very quiet Australian architectural scene. Articles on the Housing Commission of Victoria's housing estates at Fishermen's Bend, Richmond and Coburg appeared as examples of one of the few housebuilding programs still occurring (5). *Architecture*, to make up for the lack of building activity published in each issue photographs sent back by N.S.W. travelling scholars of buildings in Scandinavia (6). *Art in Australia*, which ceased operation in 1942, published an article by Walter Bunning criticising narrow minded Sydney municipal councils for their conservative and reactionary stance to the flat roof. His article was lined with International Style houses from Europe and the U.S.A. in an effort to show by example recent houses by acknowledged architects such as Le Corbusier, Alvar Aalto, Maxwell Fry and Ludwig Mies Van Der Rohe. The advanced state of design of these houses were to be examples to inept and ignorant councils (7).

By contrast, *The Architectural Review* which continued to publish during the war years, concentrated on areas where the war was not being fought, more often than not in distant isolated parts of the world away from the European authority of International Modernism. Consequently, it exposed regionalised and often individual expressions of the new architecture of Modernism.

In 1939, two houses in Massachusetts by Walter Gropius and Marcel Breuer were published (fig.162), along with


6. For example the photographs of Harold Orr of contemporary Danish, Dutch, Finnish and Swedish architecture.

special supplements on English private houses of fiercely neo-Corbusian tendencies by architects: Tecton; Denys Lasdun; Serge Chermayeff; F. R. S. Yorke and Marcel Breuer (8). However, after England's entry into World War 2 in 1939, local work was replaced by articles on South Africa, California, buildings by Erich Mendelsohn in Palestine, special issues on Canada, Sweden, Switzerland, Brazil, South Africa and wartime housing schemes in the United States. Articles such as these throughout the war years were interspersed with graphic photographs of bomb damage to major buildings in British cities. In 1946, houses in California by John Ekin Dinwiddie, Harwell Hamilton Harris, Serge Chermayeff and Richard Neutra were published along with house examples from Copenhagen in Denmark. In 1947, *The Architectural Review* ran articles on the "New Empiricism" of Sweden (9). The frequent publication of regionalised versions of modernism at a time when Australian architects were eager to find out more about this new architecture meant an exposure to the textural and carpenter-like simplicity of Sweden and California confirming the "bush"notions of pre-war years. Informality and lack of rigorous doctrinal rules concerning composition and detail, easy planning and a keen search for structural expression prevailed. The lush gardens and generous glazing in California, the restraint and texture of Sweden, the exuberant forms of Oscar Niemeyer in Brazil, seemed to constantly appear in *The Architectural Review* at this time.

Between 1939 and 1946, American journals devoted themselves almost entirely to the call for housing. Articles on neighborhood planning and low-cost housing schemes proliferated as well as numerous post-war house design

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8. Various houses by F. R. S. Yorke and Marcel Breuer; Serge Chermayeff; Denys Lasdun; and Gropius and Breuer appear in the January, March and November issues of *The Architectural Review*, 1939.

competitions such as the *Pencil Points* - Pittsburgh 1945 competition for a "House for Cheerful Living" all of which featured overtly modern house designs (10) (fig.163). American pragmatism, individualism and the essential presence of home prevailed in the U.S. periodicals rather than history and theory as in the English magazine, *The Architectural Review*.

In *Architectural Forum*, it is the houses of the West Coast which proliferate, those of Wurster, Dinwiddie, Mario Corbett and J.R. Davidson, as well as numerous articles on the merits of prefabrication and the Solar houses of Fred Keck in the Mid West. One of the most revealing articles for the post war dream home is the September 1942 issue of *Forum* where the new house of 194x (11) (fig.164) is forecast by 33 young American architects in terms of scientific analysis and engineering, of new materials, prefabrication, simplified living, new structures, flat roofs and copious amounts of glass. The house is to be virtually engineered. In July 1943 William W. Wurster was featured and described as a "master of the Californian style". In 1945, Frank Lloyd Wright unveiled the Guggenheim museum proposal, a scheme to be followed up by a feature in *Architectural Forum* in 1946.

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Chapter 2: Immigrants and Sources of Influence 1939 - 1946

Fig. 164 Mario Corbett, architect.
A House for 194x, Project for a light metal prefabricated house for Architectural Forum, September 1942.

Progressive Architecture (at that time Pencil Points) also emphasised housing and prefabrication with virtually no overseas content. Architectural Record following its usual format, published regular building-type features on houses. In 1945, Joseph Hudnut, Dean of the Harvard Graduate School of Design, spoke of the "post-modern" house, challenging architects to think beyond the "engineered house" to something that would not only facilitate the daily functions of humans but also illumine their lives. Though firmly entrenched in contemporary ideals of technology, Hudnut was repelled by the ascendancy of engineering,

Our forfeit is that we must look (and think) like an engineer. We must have - God forgive us - an engineered house (12).

Hudnut was idealistic about the post-war conception of the home. He urged architects to concentrate on new ideas of space and light rather than structure for effect or the baroque featureism of structure and technology. His "post-modern" owner is a virtual Renaissance man of modern living, retaining the essentials of humanism whilst enjoying all the benefits that modern technology could offer.

I shall not imagine for my future house a romantic owner, nor shall I justify this client's preferences as those foibles and aberrations usually referred to as "human nature". No, he shall be a modern owner, a post modern owner, if such

a thing is conceivable. Free from all sentimentality or fantasy or caprice, his vision, his tastes, his habits of thought shall be those most serviceable to a collective-industrial scheme of life; the world shall, if it so pleases him, appear as a system of casual sequences transformed each day by the cumulative miracles of science. Even so, he will claim for himself some inner experiences, free from outward control, unprofaned by the collective conscience. That opportunity, when all the world is socialized, mechanized and standardized, will yet be discoverable in the home. Though his house is the most precise product of machine processes, there will be entrenched within it this ancient loyalty invulnerable against the buffettings of the world (13).

*Arts and Architecture*, being a Los Angeles based magazine devoted itself almost entirely to the publication of West Coast designed houses. Its post-war small homes competitions were widely published in all U.S. architectural journals. In 1945, editor John Entenza inaugurated the Case Study house program which was to form a main feature of the magazine until 1962 (fig.165). *Arts and Architecture* published art and design as well as architecture. The magazine's popularity in Australia was such that in 1952, a new magazine was produced in Melbourne called *Architecture and Arts*, a neat reversal of the American title. The Melbourne magazine attempted to emulate its format and content.

![Fig.165 Ralph Rapson, architect. "Greenbelt House", Case Study House for the magazine, *Arts and Architecture*, U.S.A., 1945.](image-url)
In addition to the magazines emanating from the United States, there were numerous books on the post-war house. James Ford and Katherine Morrow Ford's *The Modern House in America* (1945); Elizabeth Mock's *If You Want to Build a House* (1946) and George Nelson and Henry Wright's *Tomorrow's House* (1946) are just three of many that illustrated the textured modern houses of the United States and encouraged the new imagery of modern architecture. These were books which,

challenge not most but all of the sweet scented nostalgia on the domestic scene (14).

Houses by Walter Bogner, Marcel Breuer, Mario Corbett, John Ekin Dinwiddie, Richard Neutra, William Wilson Wurster, and Paul Schweiker were all featured in such books. Their houses had flat roofs and open plans but materials such as exposed timbers, simple timber frames, eaves and terracotta floor tiles. This was a localized form of modern house which did not attempt to be a machine. Books by American Period revival architects also appeared at this time such as Royal Barry Wills's *Houses for Good Living* (1940); *Better Houses for Budgeteers* (1946); and *Houses for Homemakers* (1945) (fig.166) or Paul Williams's *New Homes for Today* (1946) and *The Small House of Tomorrow* (1945).

![Fig.166 Royal Barry Wills, architect. Design for a Colonial farmhouse type from Royal Barry Wills, Houses for homemakers, 1945.](image)

The direct influence of these U.S. books and magazines on Australian architects is difficult to gauge, suffice to say that Californian domestic architecture bore a strong resemblance to contemporary Australian output. Australia's affinity with the U.S. had increased following the connection between the two countries during World War 2. Australian architects gained intellectual stimulus from the English *Architectural*
Review but its publication of houses and housing was practically nil. America epitomized optimism and production - pragmatism and results - in a straightforward and unpretentious, and overwhelmingly modern approach to design. The U.S. publications provided sustenance at a time of little building production. They indicate an ambience of architectural thought which was predominantly visual and which was not accompanied by the theoretical package of the European modern movement. As the war ended and building resumed in the late 1940s, Australian architects would find comfort in the similar aesthetic of American domestic architecture and a sense of modest participation in the international arena of modern house design.
CHAPTER THREE:

POST-WAR PANACEA - THE SINGLE FAMILY HOUSE 1945 - 1952
Chapter 3: Shortages and Restrictions: the Age of Austerity

Shortages and Restrictions: the Age of Austerity
If the standard house of the immediate post-war years was an unlovely thing (1), it came as no surprise. House design was compromised by materials shortages, lack of finance, and restrictions placed on homebuilding by both the State and Commonwealth governments in an effort to conserve manpower and materials. Between 1940 and 1952, the restricted quantity, size and use of materials in homebuilding ensured pragmatic and necessary austerity not only in domestic design, but also in the home-building psyche of the average Australian.

A spartan search for the barest essentials of the house ensued and reinstated a pioneer mentality amongst post-war homebuilders that would result in a powerful conformity of house form. An equally powerful suspicion of the architectural profession saw the post-war shortages be regarded as a challenge to develop an entirely new domestic vocabulary based on International Modernism.

Consequently, the average suburban home was stripped to essentials, invariably a hipped roof L-shaped version of a Californian bungalow plan (2) (fig.167), with its eaves given a digger haircut, its pre-war Georgian scaled windows reduced in size and broken up into simple double-hung sashes, creating a small and dark interior. The porch was reduced to a concrete canopy. There was a garage at the side with a concrete drive and grassed centre strip and a low brick front fence. The plan was compact, closed in to shut out any relationship with its site or sun. These were mean boxes that have become a type in themselves, despised by architects but eagerly consumed by a public desperate for housing. Circumstance created a type, to be enshrined by 1952 in Boyd’s Australia’s Home.
As a result of rising costs, c.1950, the exterior of the house lost its flippancy. Materials shortages and economy ruled every detail....There was little pretentiousness or exaggeration. The traditional house shape had reached the end of the road (3).

Building Restrictions

The introduction of building restrictions was a major factor in the apparent aesthetic decline of the average house. Building restrictions were enforced in December 1940 (4), when no permit was allowed for the erection or alteration of a building the cost of which exceeded £5000. In 1941, this amount was reduced to £3000 for the erection of a dwelling, reduced again in 1942 to £2000. From August 1945, no permit was to be issued for the erection of a dwelling, the estimated cost of which exceeded £1200 (5). In addition to the control on the price of a home, the size was also controlled. From May 1946, the maximum area for a timber framed house (not including brick veneer) was 1200 square feet, while all other types of house construction were limited to 12 1/2 squares (6). No permits were issued for garages. The average pre-war house had been about 15 squares (7). Such restrictions made people acutely conscious of the measurement of the "square" as money was tight and restrictions ruled. Before the war, houses were costed, as they ought to be, on form, contents and quality. Size was but one of many controlling factors.

With controls such as these, domestic design became a search for the minimum. Excess space in the passage and hallways was eliminated. The bedrooms and utilities were reduced to a practical minimum. Where possible a separate laundry was often eliminated and a washing machine was installed in the bathroom or kitchen. Plumbing services were grouped together, entrance halls shrank or disappeared as the house was compressed into a rectangle or stubby L-shape. An impression of general spaciousness was salvaged by throwing any extra area that could be afforded into the living areas, a desperate attempt at an open plan.

In 1945, the State Uniform Building Regulations also set down minimum room sizes:

5. *Victorian Yearbook 1943 - 4.*
living room and main bedroom - minimum area: 140 sq.ft.
dining room (if any) and bedrooms - minimum area: 110 sq.ft.

After five rooms had fulfilled these conditions, extra rooms as small as 80 square feet could be added. In practice, however, the first five rooms more often than not carried the average plan to the area limit imposed by the State Building Directorate for houses without a special permit, so that any homebuilder's creative resources were constrained by size.

Plans had to allow for later expansion. Minimal single bedroom houses were often considered as first stage for a later larger house on the same block. In a 1942 article entitled "Why not Austerity Homes?" in *Australian Home Beautiful*, Royden Powell argued for semi-finished homes for the duration of the war, based on the idea of a "nucleus" of a permanent house (8). Internal linings and painting could follow at the returned serviceman's leisure and according to his means.

Any homebuilder with a plan below 12 1/2 squares needed no other permits other than local consent to build. If a plan exceeded 12 1/2 squares, the building surveyor would not pass the drawings until proof of a Directorate building permit was submitted. Many local councils however set down minimum area requirements above the Directorate limits of 12 1/2 squares. In parts of Kew, the minimum was 16 squares, and in Heidelberg 14 squares, an anomalous fact that some families were obliged to build to the limit whether or not the extra space was required.

In July 1948, the State Minister for Housing, Mr. Warner, raised the maximum area to 1400 square feet for any dwelling house for every construction method (9). The regulations then administered by the State Building Directorate were:

1. Every new home larger than 1400 square feet required a special permit.
2. Alteration or maintenance of a house costing more than £150 per annum required a special permit.
3. Any addition to a house required a special permit.
4. No cement or bricks were to be used in paths, fences or garden ornaments.

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The situation did not improve between 1947 and September 1949 as housing costs rose by 80%. In January 1950, the perogative of deciding the maximum permissible house area was passed onto municipal councils by the State government and the minimum requirements for rooms within any house became:
1. two rooms each of 140 sq.ft.
2. a kitchen of at least 70 sq.ft.
3. a bathroom of not less than 30 sq.ft. and a laundry.

In December 1949, the permissible minimum ceiling height was reduced to 8 feet 6 inches from the 9 feet regulation of the 1945 Uniform Building Regulations which meant a saving in bricks. There was an immediate change in the proportion of the standard house, away from the tall slim house of the 1940s. Meanwhile architects pushed for an eight foot ceiling-height minimum to be introduced to match international standards with 7 feet 6 inches in service areas, and to allow for living room ceilings to increase. Tasmania and Canberra were at that time already enforcing 8 foot minimum ceiling heights. State building regulations were closely examined as to where unnecessary expense could be reduced.

In August 1952 all controls on housing were lifted. If an increase in housing was presumed to occur then it did not. By 1952, it was not size control that kept house building numbers down, it was economic restraints. Inflation and credit restrictions, coupled with the unchecked rise in prices began to exert the real controls of the day.

In addition to cost and area restrictions, there were in the first five years after the war, chronic shortages of building materials. Framing timber, weatherboards, bricks, terracotta tiles, glass, fibrous plaster, piping, roof guttering and fittings were all in short supply and if available were of dubious quality (10). Bricks were often badly burnt and chipped, timber was green, and poorly mixed paint imperilled the lifespan of these new houses. The cost of employed tradesmen skyrocketted while quality of workmanship and quantity of work plummeted, as tradesmen in great demand could ask more for less. The cost of a home soared. An average brick veneer house of 1200 square feet had cost £1000 in 1940. In 1946 the same house cost £1500 and by 1950, it cost £4500 (11).

11. Ibid.
Austerity had made a mark with the severe L-shaped hipped roof house type, born of necessity and reinforced not by choice but by circumstance. Architects began to learn to hate them. Melbourne began to be covered by them. These houses had discarded the lessons of the 1930s and reverted to the sullen state of the object on a site with a face to the street, this time with no money for make-up. And the habit took root.
Fig. 168 G. Burridge Leith, Chief Architect, State Savings Bank of Victoria. Type T15, standard timber type house for the State Savings Bank of Victoria, 1938.

Fig. 169 G. Burridge Leith, Chief Architect, State Savings Bank of Victoria. Type M3, standard timber type munition workers house, Footscray, Victoria for the State Savings Bank of Victoria, 1941.
Chapter 3: Who Can Buy a Home? - Post-war Housing Schemes

Who Can Buy a Home? - Post-war Housing Schemes

Many people needed help in building their own home after the war. The major problem was finance and how to come by it. As Robin Boyd noted, out of the whole building operation at the end of World War 2, the only figure not represented by a collective voice was the homeowner (1). Consequently, some homeowners began to organize themselves into co-operatives, which if state-sponsored could provide low-interest finance for privately organized building contracts and offer loans of up to 90% of valuation for up to thirty years. Others took advantage of generous loan terms offered by banks (2) and the War Service Homes Commission (3) while some took to building by themselves with whatever they could lay their hands on. Others less fortunate succumbed to the wiles of the jerry-builder.

The Post-war State Savings Bank House

Standard house plans could be obtained from the State Savings Bank of Victoria by those who were being financed by that same institution. The standard of these plans was a reworking of pre-war ideas, perpetuating the austere hipped roof bungalow of the 1930s with its tightly contained plan (4) and ensuring its steady evolution as the most accessible and economic choice for the average Melbourne homeowner. It was a typology that was to be unconsciously developed by the strictures of the post-war economy.

Throughout the 1920s and 1930s, the State Savings Bank had provided standard house designs as a means to a more economical provision of housing. Instead of attempting to improve existing housing conditions, the Bank’s involvement was primarily financial and the aim was to quickly build large numbers of houses that could be afforded by ordinary people (5). By comparing immediate pre-war State Bank houses with post-war standard types, one finds a progressive paring away of detail and shrinking of the plan. The war instilled an overall austerity that was to reverberate through to the 1950s. All the houses were designed under the supervision of Chief Architect for the State Savings Bank, G. Burridge Leith.

Type T15 was a standard timber type designed in 1938 (fig.168). An integral brick chimney, porch and flowerbox wall give the hip roofed house with a simple bungalow
plan, a semblance of importance. Type M3 demonstrates the effects of wartime restrictions (fig.169). It was a standard two bedroom weatherboard type developed in 1941 for munition workers to be built in Footscray, Braybrook, Essendon and Williamstown. This was an austere bungalow form with hipped roof and simple brick porch. The dining room has disappeared, the w.c. has been sent outside and overall size has been reduced. Type T2 was a standard two bedroom house type designed in 1946 (fig.170). The post-war State Bank house had increased in size marginally, but the detail of the 1930s had not returned. Type T4 was a State Saving Bank Type in circulation in 1956 (fig.171). The house has lost its heaviness and started to grow again in size. The roof is a low pitch gable with exposed eaves and large areas of glass, the living room relates to the rear of the site and there is only the slightest trace of elaborated entry with a simple screen. The house has lightened and lost its decorative details and textures (6).

In brick houses, the change is also clear. B25 is a pre-war standard type available in 1939 ((fig.172). It is an English Cottage Type with an arched brick porch and exposed brick


5. Ibid., pp.119 - 121. See also "Melbourne needs 20 000 more houses", Australian Home Beautiful, February 1923, p.52.

Fig.170 G. Burridge Leith, Chief Architect, State Savings Bank of Victoria. Type T2, standard timber type for the State Savings Bank of Victoria, 1946.

Fig.171 G. Burridge Leith, Chief Architect, State Savings Bank of Victoria. Type T4, standard timber type for the State Savings Bank of Victoria, 1956.
Chapter 3: Who Can Buy a Home? - Post-war Housing Schemes

Fig.172 G. Burridge Leith, Chief Architect, State Savings Bank of Victoria. Type B25, standard solid brick type for the State Savings Bank of Victoria, 1939.

Fig.173 G. Burridge Leith, Chief Architect, State Savings Bank of Victoria. Type B7, standard solid brick house for the State Savings Bank of Victoria, 1946.

War Veterans' Estate, Edwin Street, Heidelberg
A pre-war example of a development built on a co-operative basis was the 1938 housing estate, designed by the recently established War Veterans' Homes Trust on 2 1/2 acres at the corner of Edwin and Forster Streets, Heidelberg (8). Being financed entirely by voluntary subscription, the intention of the Trust was to build groups of houses on approved lines in various localities as funds became available. The Commissioners of the State Savings Bank agreed to carry out the building work. Under the direction of the Chief Architect, G. Burridge Leith, one of the members of the Trust, five types of houses were planned for the group of seventeen dwellings. The total cost of the development was £12 000 or about £700 per house. The estate was planned about a cul-de-sac for a "garden highlights on the walls. There is a separate breakfast room, a pantry and a generous entry porch. Type B7 is a post-war brick house (fig.173). Gone is the decorative detail and the generous spaces. This house is a spare and rudimentary house but more satisfactorily planned with respect to the orientation of the block (7).
suburb" effect. Each house design was a sober and pragmatic hip-roofed bungalow with central hall and rooms to either side (fig.174). Two types were semi-detached, massed to give the impression of a larger unit and retaining a strong picturesque outline. Practicality and subdued gentility was the message.

The Peter Lalor Home Building Co-operative Society

After fourteen months of building an initial group of sixty houses, the Peter Lalor Home Building Co-operative Society officially opened the new suburb of Lalor in April 1948 (9). The scheme, planned as a garden suburb was set on an arid plain north of Melbourne. It was here that 1200 ex-servicemen built up their own materials and factory stocks and were able to reduce building costs by approximately 25%. On the site at Thomastown, the Society had its own timber stores and carpentry and joinery shop. Here the building frames were completely pre-cut for trucking to the lots and cupboard joinery was fabricated. Cement tiles and windows were also made by the Society.

To qualify for one of these houses, all a member had to pay was £60 - £125 for land, £10 for a share in the society and £25 for an advance payment on the house. A series of standard house designs for selection by the members was prepared by the architect, Stanley L. Frew. The houses were mostly brick veneer working out at about £150 a square fully fitted out, with electric hot-water service, stove and joinery. Frew also planned the layout of the community with offices, theatres and shops, all co-operatively owned and controlled. In the end, the scheme was defeated by a shortage of labour and materials, and the lack of finance to complete the proposed parks and amenity buildings.

Fig.174 G. Burridge Leith, Chief Architect, State Savings Bank of Victoria. House design for the War Service Veterans’ Homes Estate, Edwin Street, Heidelberg, Victoria, 1938.


Robin Boyd laid the blame for such a defeat at the hands of "the unco-operative individualist" (10), the rise of the owner-builder simply building for himself with whatever he could get. Ideas of mass housing finance to help large numbers of people were futile in the atmosphere of the "I'm alright Jack" of the suburbs.

The South Australian Home Builders Club
One successful venture, though not a Melbourne one, had been the South Australian Home Builders Club (11) begun in 1945 and by 1950 still functioning well. By being a member, men worked not only on their own home but on others as well, with the final result being the building of a home for approximately one third of the cost of a house built by a contractor. The aim of the club was to assist people of limited means to build their own homes by co-operative effort. In 1950, membership was 430. Labour was pooled according to personal skills. The houses, built of homemade concrete bricks, conformed to the standard typology of the war-time bungalow, with clipped eaves stripped of decorative detail.

The Sol Green Soldier Settlement, Sandringham
In 1944, Mr. Sol Green, a prominent Melbourne businessman announced his intention of creating a trust fund to provide homes for returning members of the fighting forces (12). The idea behind the scheme was to make it possible for returned members of the armed forces to purchase homes on small deposits free of interest, the balance payable over a number of years, with the hope of leading eventually to the development of a model village complete with playgrounds, baby health centres, and parks. Land for the first seventeen houses was purchased in Sandringham, and the architects for the trust, Marcus R. Barlow and Associates prepared detailed plans, not only for the houses, but for the landscaping and beautification of the whole site. All services including telephone wires were to be kept underground so that no unsightly poles or wires would mar the prospect and allow the trees to grow to their full luxuriance. Low stone fences in front and brushwood fences between would ensure that nothing would spoil the "sylvan harmony". The first group of 20 houses was officially opened in July 1945 by the Governor of Victoria, Sir Winston Dugan. The compact tiled gable roofed homes had steel framed windows, feature canopies and period styled front doors. They were tasteful cottages with

11. J. Sweeney, "They Build For Each Other", *Australian Home Beautiful*, April 1950, pp.15 - 18, 77; see also Boyd, loc. cit.
generous amounts of glass, with internal partitions of terracotta hollow bricks or corrugated a.c. sheets, plastered both sides to a total thickness of three inches (fig.175).

Small housing schemes such as these were to provide small but valuable respite to the housing shortage caused by the war and perpetuate the austere double fronted bungalow type. The heritage of immediate post-war housing became a circumstantial solution of short-cuts and bare essentials. A type developed, from which architects recoiled in horror. Materials and labour shortages encouraged younger architects to veer away from the development of the standard type, to experiment with new materials and techniques, and advance new typologies for the post-war decade.
Chapter 3: The Architect & the Opportunity of the Post-war House

The Architect and the Opportunity of the Post-war House

With the Second World War now over, for the architect, the design of the post-war house was up for grabs. The student Robin Boyd gave subtle warnings to architects with his caricatures of two extremes of domestic design in the student broadsheet, Smudges with his Insulwool advertisements. The miseries of too much glass were parodied by a glass box house elevated on a rock base. This "Solar House" had an "eaves overhang (which) is scientifically designed so that when the sun is at its zenith the refrigerator door jams shut" (1) (fig.176).

Fig.176 Robin Boyd, architect. "The Solar House", house design for Insulwool advertisement, Smudges, 1947.

By contrast, Boyd depicted the aesthetic horrors of the "Califonnausie" which combined "the ageless gracious charm of American Colonial with the latest in brisk, virile Streamlined Modern—this dream home really gives the prospective homebuilder something to have dreams about" (2) (fig.177). The house was a hotchpotch of styles and detail, a fearsome plan deliberately contorted by Boyd.

1. Insulwool Advertisement, Smudges, vol.6, no.47, October 1947
2. Insulwool Advertisement, Smudges, vol.6, no.46, May 1947.
Neither of these extremes occurred in the immediate post-war years. Between 1945 and 1952, amidst material and labour shortages, size restrictions and years of austerity and penny pinching, the direction of the architect-designed house was to take four distinct paths.

The first path for the house was that of prefabrication where it was proposed that massive numbers of houses could be produced by machine to balance the housing shortage incurred by the war. The government believed that wartime industries could be adapted to the pressing needs of house production and that there was justification for importing large numbers of pre-cut houses.

The second path for the architect designed house in these immediate post-war years was the inception in 1947 of the R.V.I.A. Small Homes Service - a socially responsible service providing house plans and specifications for a minimum fee in an effort to encourage good design. The service was begun as the Institute's contribution to Melbourne's serious housing shortage.

The third was a retreat to the bush at Eltham and the accompanying use there of mud brick construction. Here, a determined anti-suburban and anti-urban philosophy of self-build and frontier pragmatism and economy prospered amongst artists and house designers in the late 1940s. Out at Eltham and Warrandyte, free and informal interpretations of the home were being built in simple readily available materials: rubble rock walls instead of bricks, weatherboards and mud brick. These houses were more determinedly of the bush, expedient and inexpensive. In the restrictive post-war years, mud brick was cheap and readily available in the silurian soil of Eltham and conducive to the socialistic leanings of designer Alistair Knox and the artistic circle in which he moved in Eltham.

The fourth path for the architect-designed house was a retreat to the bush for available cheap sites and the opportunity to use lightweight materials in the outer suburbs of Melbourne such as Beaumaris, Balwyn, Blackburn and the Mornington Peninsula where there were no brick building requirements of local councils. The houses built in these areas were those which Robin Boyd was to label as the "Victorian Type". They were simple
unaffected houses of single room width blocks, a relatively open plan, low interlocking gables, white painted joinery - all part of a modest post-war vocabulary.

Implicit in these four paths was the potential for the architect to show himself as the progressive agent, the upholder of modern thinking and modern design. The speculative builder was largely absent from the immediate post-war scene due to manpower and materials shortages. The architect was to launch a campaign for modern design and the jerry builder was the villain. The speculative builder was now being largely categorized in this vein as well, a quite different situation of the progressive builder of the thirties, where the aesthetic gap between architect and builder had been a narrow one. The moral imperatives of modernism would see that change in the 1950s. For the moment architects, like everyone else, had to simply make do with the limited resources available.
The Prefabricated House: Dream or Reality?
With post-war shortages of skilled labour and conventional building materials, the prefabricated house was seen both by architects and government bodies as a potential solution to the pressing demand for housing. Many of Robin Boyd's early articles in *The Age* newspaper for the R.V.I.A. Small Homes Service advocate prefabrication. Boyd believed that industrialized housing gave promise of a socialized form of housing and hence a more collective society. He saw as did many others the temporary relief that could be gained by state-funded prefabricated housing, that "to apply engineering organization to dwelling construction seems a normal extension of industry" (1). Between 1946 and 1952, the engineered house was a topical issue but faded rapidly from currency as shortages were overcome and schemes failed either from political intervention or lack of finance and materials.

The Beaufort Home
At the end of the war, the Commonwealth Government sponsored a project of constructing metal factory-built houses as an attempt to provide large numbers of houses and convert munitions factories to peacetime needs. In 1946, the technical staff of the Beaufort Division of the Department of Aircraft Production in Melbourne in association with the architect Arthur Baldwinson, designed the Beaufort Home (2). The project was ultimately developed by the Victorian Government through the Victorian Housing Commission.

[Image: The Beaufort Division of the Department of Aircraft Production in association with Arthur Baldwinson, architect. The Beaufort Home, prefabricated steel house, Treasury Gardens, Melbourne, Victoria, 1946.]

Aluminium was intended for the basic construction, but instead zincanneal sheet steel was chosen as it was supposed at the time that quantities would be available. A prototype for public demonstration was erected in early...
June 1946, in the Treasury Gardens (3) (fig.178). The house was designed with standard units of spot-welded sheet steel, simply bolted together using a frame of 16-gauge steel sections clad in 18-gauge spot-welded sheet steel, and packed with 50mm of rockwool. Based on a three foot grid, like the "Sectionit" system produced by the Van Dyke Brothers in Punchbowl, New South Wales (4), the plain wall panels were interchangeable with window and door panels. The external wall panel sheathing was designed as a stressed skin which braced the entire structure, a construction method evolved from aircraft building techniques.

The house was a simple two bedroom gabled rectangle, roofed in zincanneal sheeting, with a compacted dinette and minimized passage/hallway, softened by a rubble rock porch encircling the glazed corner windows of the living room. The walls were sand-textured and coloured a very light cream.

The necessary quantity of steel for prefabrication on a large scale, however was not forthcoming and the project was plunged into turmoil. In late 1946, the only architect then in Victorian Parliament, Robert B. Hamilton, a member of the Opposition, hotly denounced the Beaufort and favoured adoption of a badly designed equivalent produced by private enterprise (5). Optimism prevailed and by February 1947, a total of 10,550 were ordered by the State and Federal Governments for erection in Victoria within three years.

In 1948 after only two hundred houses had been built, T. T. Holloway's new Liberal/Country Party Government, "pledged to oppose socialism" (6) cancelled the Beaufort House project as well as the privately developed "Myer" House.

The Myer House
In October 1945, the Myer Emporium and Ansett Airways co-operated in the erection of an exhibition prefabricated house at the Ansett Airways Ltd. factory close to the Essendon aerodrome (7) (fig.179). The house was called the "Myer House" after the large Melbourne department store sponsor which had announced its intention to market a people's house since the end of the war (8).
The basic construction of the house was an all-steel structural frame, rustless and fireproof, sheeted internally with standard fibrous plaster and externally with cement coated board, with insulation sandwiched between. The houses were designed to come from the assembly line in prefabricated box-sections, each 24 feet long, 12 feet wide and 9 feet high, making two rooms 12 foot square or one 15 feet long and the other 9 feet long. These "boxes", built in four sections could be bolted together to form the completed house on previously prepared foundations. The simple gabled roof could be erected with a spanner and tiled within 24 hours.

Four basic types were to be offered: two of two bedrooms and two of three bedrooms, with at least ten different types promised in the first year's output. It was proposed that given manpower and materials, the buyer would be able to choose the type of house and furnishings required and have his house ready for occupation within three days. Ansett Airways Ltd. was prepared to convert its Essendon factory which had been used during the war for the manufacture of aircraft components into a production line factory for prefabricated houses.

The house was planned as two gabled rectangles butted together, a service block containing kitchen, laundry and bathroom butted to a bedroom and living block. Roofed in terracotta tiles, and with the familiar porch and chimney, the asymmetrical massing veiled over the machine-rationale of this apparently normal house.

This scheme like the Beaufort was doomed to disappear in 1948 with the T. T. Holloway government cutting this
privately financed enterprise as well as its state-funded counterpart (9). Action such as this aroused anger in young commentator, Robin Boyd and the cutting of both schemes was never forgotten. Titles such as "14 Invisible Homes a Day - a lament on an anniversary" appeared in his Age "Small Homes Section" as if to recall a battle lost (10). He lamented the fact that, Australia, untouched by war damage, had to wait for Europe to help out with its housing shortage. Prefabricated houses were imported from England, Scandinavia and France. "Is Australia incapable of solving for herself this problem?", Boyd asked (11).

Yet various state governments found such a solution an expedient one. Numerous overseas manufacturers offered rival houses from England, Scandinavia, France and other Continental countries, in timber, aluminium and steel. Australia's housing problem was aggravated by an accompanying manpower shortage.

"Operation Snail" - the Victorian Pre-cut Housing Project

It was in such an atmosphere that in 1948, Colonel W.S. Kent Hughes, then Victorian Minister of Transport, proposed a scheme for attracting one thousand urgently needed British migrants for employment by the Victorian Railways. In order to house such a large number, and to compensate for the inability of local resources to supply the housing upon which the whole idea depended, it was decided to seek houses from abroad. Late in 1948, "Operation Snail" - a quest for a suitable pre-cut or prefabricated house, began (12).

Proposals were invited from firms in England, Sweden and Austria from which, Simms Sons and Cooke of Nottingham were appointed as principal contractors for a pre-cut house yet to be designed. In January 1949, the architects, Yuncken, Freeman Brothers, Griffiths and Simpson in association with the architects, Baxter Cox and Associates were appointed as designers and mass importation began under the name of the "Victorian Pre-Cut Housing Project". Other government departments took advantage of the speedy relief offered so that by late 1950, over 2000 permanent timber houses were being supplied at a rate of forty per week to not only Victorian Railways Projects throughout the state, but also to the State
Electricity Commission's new townships of Newborough (Yallourn) and Mt. Beauty (Kiewa) and to the new town which the State Rivers and Water Supply Commission was building at Eildon.

The houses themselves (fig.180) were a blend of imported and locally produced components with the maximum proportion of labour content of the houses being applied at the English end. Australian components included the stumps, bearers and joists, gas or electric stove and canopy, and the installation of electricity and plumbing. The superstructure was pre-cut, packaged and marked in England and delivered in complete house lots.

Most of the timbers were Swedish whitewood, dressed throughout and formed to the exact size and shape. All the timbers were kiln dried, and the external vertical lining boards were primed in England to minimize distortion during transit through the tropics. The roof was made up of light timber trusses. The roofing was Trafford tile pattern asbestos cement sheeting but later replaced by a specially designed interlocking aluminium sheeting.

The result was a range of forty-four different house types of two, three and four bedroom homes. The kitchen, bathroom and utility area formed a standard service block to which bedrooms and living rooms were added. Minor rearrangements enabled the same components to be assembled to accommodate all orientations hence giving the scheme unusual flexibility.

The trim vertical boarded houses with low-pitched gables exuded Scandinavian neatness and though traditionally compartmentalized in plan, were generously glazed, and
shaded by white pergolas. Hugh Stubbins Jr.'s compact boxy houses for the F.H.A. at Windsor Locks, Connecticut, U.S.A. of 1942 were similarly scaled and precisely detailed (13) (fig.181).

Australia's First Prefabricated Plywood Residence

The first prefabricated plywood house in Australia was built in Naroo Street, Balwyn in 1944 (14) (fig.182). Plywood merchants, Romke Pty. Ltd. and contractors, Jennings Construction Co. collaborated to produce this very rigid house, a two bedroom, triple fronted hip roofed bungalow with a surprisingly open S-shaped living/dining room.

Ready for occupation in just under three weeks, all the exterior walls and floors were in five ply bonded together with water impervious glue, the same plywood which had been used in the construction of the P.T. boats and the famous plywood Mosquito aeroplane. Studs and ceiling joists were incorporated in the wall and ceiling sections which were glued together with their exterior and internal surfaces. The sections were locked together on site and the doors, windows and lighting and other fixtures went in


14. Earl Robeson, "Plywood Undergoes a New Test: Australia's first prefabricated Plywood Residence", *Australian Home Beautiful*, January 1945, pp.18 - 21. The house was inhabited by the sales manager of Romcke Pty. Ltd., the plywood merchant for the house, as a first test client to carry out market research and judge its thermal performance. The follow-up to this scheme is not known.
immediately afterward. All conduits and pipes were incorporated in the walls during prefabrication. The only on-site timber work was needed for the floors and roof. The assembled units were locked together by driving a rod down grooves into adjoining sections. The complete wall was then raised into position and jointed at the corner by means of a spline.

The Commonwealth Housing Department Steel House
In October 1945, the Planning Division of the Commonwealth Housing Department announced that its architects had designed a metal house that could be built in quantities of 10,000 for £750 and in larger numbers for £650 (15) (fig.183). The frame was to be of light steel sections, and the doors and windows of standard steel sections. The wall panels on the frames could be sheeted with three alternative materials externally and internally.

These houses, sophisticated in terms of zoned planning, but with a large external wall surface area, had a bi-partite arrangement of a living and sleeping block butted together, each block having a very low-pitched roof, a completely open living/dining room, and very large expanses of glass. The whole of the kitchen and laundry fittings were to be prefabricated with pipes then in stock for aircraft production. Cupboards, basins, and other equipment was to be pressed from duralumin sheets. The Victorian Housing Commission proposed to undertake to build two or three of the houses to test the major claims and criticisms of the scheme.

Apart from the political wranglings over such schemes, prefabricated houses had problems of cost and practicality.

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The question of an expanding family, buying a small house that would take 20 years to pay off and the rigidity of a fixed engineered system were pinpointed by Nora Cooper (16) who advocated the solution to the housing problem to be a "nucleus" house of prefabricated kitchen, laundry and bathroom units but living and sleeping quarters which could be extended at will. The prefabricated working unit could be transported direct to the site for inclusion in the house, the rest of which could be erected by local building effort. She suggests that architects and engineers should co-operate to achieve a division of labour saving both time and money, as well as the inclusion of a practical woman in the architect/engineer conference on planning.

The Triton House
Triton Constructions (Australia) Pty. Ltd., describing themselves as prefabrication specialists, designed the Triton House, a small and compact L-shaped 832 square foot home (17) (fig.184). This firm which specialized in the construction of the outer shell of the house also built pre-fab cottages, huts, country bungalows and sleepouts. Prebuilt floors and wall sections were assembled on prepared stumps and nailed to the bearers. The walls were sheeted with a form of waterproof plywood. The pre-built framed roof was sheeted with corrugated iron. Fitting and lining of the interior was carried out according to normal building practice.

Fig.184 Triton Constructions (Australia) Pty. Ltd., builders. Advertisement for The Triton House in Australian Home Beautiful.
The Duplex Timber House
In June 1946, G.A. Winwood, a well known Melbourne building contractor proposed a system to prefabricate the entire house in a factory and transport it in two, or perhaps three sections for speedy erection regardless of distance (18). In collaboration with the Victorian Housing Commission panel of architects, designs were prepared and after a satisfactory demonstration of the scheme, a contract for the delivery and erection of 500 houses over a period of 2 to 3 years was signed. Winwood then established a "manufactory" of homes in Summit Avenue, Sandringham. During the following months, the sight of "houses on wheels" became a familiar one in the Sandringham area, and following demands from within the government, from the State Rivers and Water Supply Commission who required houses at Robinvale, the S.E.C. at Morwell and the Kiewa Valley (fig.185), and the Victorian Railways in several parts of the State, duplex houses began to travel the state to places such as Warragul, Wangaratta, Drouin, Kerang and Geelong.

There were two types available suitable for suburbs or country. The suburban type was a simple L-shaped Victorian type, with low pitched roof of wide corrugated asbestos cement, while the country type was a low-hipped roof, of 16 1/2 ° pitch, 30" broad eaves, a glazed porch, corner windows and two brick chimneys. As with many of these schemes, their success is not clearly known.

Interstate prefabricated housing schemes
Other timber prefabrication factories had by 1950 also been established, but were interstate. These included one in New South Wales by Veneer and Plywood Pty. Ltd.,

Fig.185 G. A. Winwood, builder. The "Winwood" prefabricated house, Kiewa Valley, Victoria, 1946.
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assisted by the Commonwealth Experimental Building Station in Sydney (19) and one in Hobart, by John Paine Pty. Ltd. (20).

An imported house was the Italian "Redifice" house, (a compound of the words, "ready" and "edifice") a simple hipped roof over a compact plan and planned for erection in South Australia (21). Four British prefabricated houses were also erected at the Commonwealth Experimental Building Station at North Ryde, Sydney; the Airoh (aluminium), the Tarran (reinforced concrete), the Arcon (steel) and the Uni-Seco (timber framed) (fig.186) were built and available for public inspection (22).

Another interstate scheme relying on imported homes included one made up of three manufacturers, the Stex Organization of Sweden and the Puurakenne and Puutalo firms of Finland (23), who pooled their resources in an effort to devise an ideal factory-made house to suit Australian conditions.

Six trial houses were brought out to Australia through the agency of the East Asiatic Company, Australia Pty. Ltd. One was erected in Canberra, the others at various sites near Sydney. Two were pre-cut, two were a pre-fabricated panel type and the remaining were a mixture of the two systems. From these experiments evolved the "cell-house" system whereby whole sections of rooms, with floors, walls and ceilings were assembled as cells in a factory and then transported directly to the site and placed on previously prepared foundations and joined together speedily by four or five workers.
The Riley Newsom Factory Made House was a factory-made timber dwelling being exported by Messrs. H. Newsom, Sons and Co. Ltd. of Lincoln, who secured a contract with the Australian government. The simple rectangular house was designed by an Australian architect, A. B. Armstrong and developed by one of the English firm's technical staff, James Riley. Sitting on Australian stumps and hardwood bearers, the panellized framed house, roofed in aluminium, could be completely erected and finished by 12 men in one week (24).

Another English firm, Hawkesley Constructions of Gloucester had delivered approximately £1 1/2 million worth of not only houses but of offices, hospitals, and schools by November 1951. All the buildings were in panel form, the external wall panels each comprising a framework of light alloy extrusion, horizontally braced with timber, faced externally with ribbed light alloy sheets and internally with hardboard or plasterboard. Roof panels of light alloy faced with aluminium were supported by light alloy trusses which were assembled in the factory (25).

The Concrete House
The development of the prefabricated concrete house was lead by the Victorian Housing Commission who took over the Fowler prefabrication company, to develop it into a highly successful technology which reached its apotheosis in the dubious social ventures of the prefabricated concrete panel high rise towers of the early sixties.

Originating from the early 1920s experiments of T. W. Fowler, a surveyor on his farm at Werribee South, the system evolved was a simple tilt-slab technique developed for building concrete dairy sheds and farm buildings (26). Walls complete with the required openings were cast on horizontal tables adjacent to the position of erection. The 76mm thick slabs could then be tilted up and placed on previously prepared concrete piers.

In a 1939 competition, "Housing for Low-Wage Earners", conducted by the recently formed Victorian Housing Commission, the second and fourth placegetters, A.C. Leith and Bartlett, and Frank Heath, both designed their entries for the Fowler System (27). Both schemes were


very simple and austere bungalow designs; in Heath's scheme the houses were semi-detached gable roofed houses.

In 1940, Fowler received contracts to build 28 houses and after his death in 1942, the plant was leased to a firm of builders who still operated manually, to produce with about 28 men, three houses a week. By 1944, the plant was lent to the Housing Commission who were to begin using mobile cranes and tilting tables to raise the slabs to the vertical position.

By 1945, the Commission had taken a lease of the Commonwealth Factory at Holmesglen, a factory previously involved in the manufacture of armoured vehicles and tank turrets. The Fowler System was mechanized into a fully industrialized production line, where cast components were delivered to the site ready for erection. By May 1951, 3000 of these concrete houses had been manufactured having begun from beginnings of 596 houses between 1944 and 1946. Up to this time all the houses had been single storied. In 1952, two-storey structures with 100mm walls were first built.

A typical plan of one of the houses being erected under the Fowler System shows it to be an austere standard L-shaped plan, with corner windows to the street-facing living room and master bedroom, the laundry and w. c. relegated to outbuilding status, and simple gabled roof forms with concrete tiles and glazed metal entry screens (fig.187).
Other Victorian prefabricated houses
Frederick Romberg produced a design for a prefabricated steel house in 1945, an aerial form with skillion roof, wide overhanging eaves and cantilevering first floor, generously glazed but a design which was scuttled by austerity and post-war politics (28) (fig.188). This had been a "floated" proposal overtaken by the ill-fated Beaufort and Myer House schemes (29).

In 1952, three examples of Small Homes Service model number T289, a simple compact timber framed house, designed by Neil Clerehan and prefabricated in Sweden were built in Melbourne before import restrictions postponed further development of the scheme (30) (fig.189). A three man team could build one of these houses in 150 hours. The Service also produced several designs suggested for temporary use before a
larger house was built. T216 designed by J.W. Rivett was one of these semi-prefab houses, a bold skillioned timber framed box with a generous verandah room to its front (fig.190).

![Small Homes Service Plan No. T216](image)

**Fig.190** J. W. Rivett, architect. R. V. I. A. Small Homes Service Type T216, c.1948.

After 1952, the subject of prefabrication faded from discussion as various schemes ceased with the new boom in housing and the re-emergence of speculative building companies, and as shortages in materials, labour and finance were overcome. Robin Boyd's ideas on prefabrication were to be realized in the popular Peninsula House, a 1955 project house he designed for the Beaumaris building firm, Contemporary Homes Pty. Ltd. The idea drew heavily on the idea of the factory-made house, but was derived more directly from Small Homes Service prototypes. Post-war ideals of prefabrication were defeated by "the unco-operative individualist" (31) once again and by various government agencies wary of the economics and the politics of mass-produced housing.

The R.V.I.A. Small Homes Service

..... the profession has long represented the only creative art, the personal appreciation of which is beyond the pocket of the populace. It may not be merely coincidence that it is also the creative art least appreciated by the people. Stock plans may not be the answer but I have not heard of a better. Allowing even 90% loss to uninformed amendments and deliberate sabotage, the present rate of our sales still permits 100 buildings a year which have been produced on reasonably progressive lines, beyond the number normally built by architects. If the service had never existed there is no doubt that these 100 houses would have been dead losses to the progress of architecture.

Without an architect's aid, they would have been abject failures, expressing the old conflict between an imaginative but technically ignorant owner and a conservative but technically arrogant builder.

This potential 100 per year per city seems to me to be sufficient justification for those who demand it, of the stock plan principle.

Robin Boyd, letter to the editor of The Architectural Record, 21st December 1948.

The response of the profession to the desperate need for housing was the inception in 1947 of the Royal Victorian Institute of Architects Small Homes Service which operated in conjunction with The Age newspaper. Seeds of the service had been sown in the late 1930s by strong vocal comment in the Victorian Architectural Students Society magazine, Lines, in an article written by Peter Newell entitled "Bread and Butter Building" (1). Newell deplored the near exclusion of the private architect from the small house field, and proposed that "under the sponsorship of the Institute, a Small Homes Bureau should be set up in order to provide the advantages of professional advice at minimal cost, to a wide section of the public" (2). The idea was not new and had been attempted earlier by the I.A.N.S.W. chapter and the Board of Architects in N.S.W. with minimal success (3). The importance of the eventual formation of the Service in Victoria was that it was a body established under the control of the Institute and had learned much from its forerunners.

2. Ibid.
Chapter 3: The R.V.I.A. Small Homes Service

It acted with a real sense of social responsibility and a genuine desire to help deal with the post-war housing crisis, had adequate, if not lavish financial support, and it had a regular weekly space and other publicity in The Age, a close contact with the public. (4)

With a forecasted shortage of 30,000 houses in Victoria by March 1947, the R.V.I.A. began to plan for the future as early as 1940 (5), with the hope of bringing architecturally designed houses within everyone's means and curbing the damage being done by speculative builders in the south eastern suburbs of Melbourne (6).

From R.V.I.A. committee meetings held in July 1940 through to 1944 (7), recommendations were forthcoming for the establishment of a centre or bureau whose aim would be to display plans and specifications of various types of small house designs to the public, that various practising architects would be on call to give advice and that plans and specifications be made available at minimal cost. It was proposed to limit the sales of each type to encourage variety and diversity amongst the houses offered. Insurance companies and money lending bodies would be approached with the aim of recognising the quality of such houses and easing the facilitation of finance for building these homes.

In 1944, the then President of the R.V.I.A., John F.D. Scarborough actively re-initiated discussion of the idea and a "Small Homes Committee" of architects was formed under the chairmanship of architect Geoffrey H. Mewton (8).

The Small Homes Committee put forward the proposal that house designs would be prepared by architects in the form of detailed working drawings, specifications and a form of contract. There were to be designs suitable for differing sites, aspects and other conditions, and thus with a complete set of drawings, specifications and contract, these would be made available to the public for a relatively small fee. Each architect responsible for a design was to be paid the full professional fee and designs were to be sold on a multiple basis with a limit of fifty (increased from twelve) on any single one (9). Not more than 25 of these were to be in Melbourne and 25 elsewhere in Victoria. The houses were to be limited in

4. Ibid., p.178.
9. Further committee discussions recommended reducing the proposed sum of £10.00 per plan to £5.00 considering £10.00 too high. For each plan then, £5.00 would be received, £2.00 would go to the author of the design, £2.00 to the Service and £1.00 for co-operative distribution, the author of any one design being able to receive up to £25.00 per plan. See Memo of a Committee Meeting re: Small Homes Service, 17th December 1946, p.2.
area to 1000 square feet as the scheme was designed to assist the prospective owner of the small house.

Progress in initiation was slow. In 1945, the incoming President of the R.V.I.A., Robert S. Demaine revived interest in the project and further reports and discussions ensued once again under Mewton's enthusiastic supervision (10). It was becoming increasingly clear to the Institute at the time, that amongst the public there was an insufficient recognition of the necessity for restrictions on house area and economy in the use of building materials. The public needed explanation of the problems confronting the building industry and the design of the small home. The idea arose of regular newspaper articles containing information and advice by architects on aspects of site selection, materials, furnishing and the building of small homes accompanied by plans, in some publication at least once a week.

Details of the scheme were developed and offered virtually unchanged from the 1944 proposals to The Age newspaper in October 1946. A crucial part of the small house proposal was the inclusion of a weekly article in the newspaper so that country people could be reached as well as Melbourne readers and sales need not be conducted through direct contact with the Service rooms which would be located in the city close to The Age buildings. The Age swiftly acquiesced and agreed to sponsor the proposal.

The full-time position as director of the Service required an architect with a broad knowledge of domestic design and construction and the ability to write stimulating weekly articles. Robin Boyd was appointed as the first Director of the Small Homes Service in February 1947 (11).

On Wednesday, July 2nd 1947, the first "Small Homes Section" article by Robin Boyd of the Small Homes Service of the Royal Victorian Institute of Architects was published on page 5 of The Age. The article covered almost an entire page and was surrounded by advertisements for building materials, furnishings and insulation. The article dealt with a typical service plan T22 (fig.191) and ideas on planning, furnishing and costs. The division of the article into two parts, the first concentrating on the plans and forms of the service


11. Robin Boyd was appointed by the Small Homes Committee. He did not initiate the idea of a Small Homes Service as Donald Leslie Johnson would have it in his Australian Architecture 1901 - 1951, p.191. Boyd was Director between July 1947 and December 1953 and was succeeded by Neil Cleerehan.
design for the week, and the second on an architectural issue, was a pattern that was to be continued for more than 15 years. It was the first article of its kind published under the auspices of the profession in a public newspaper in Australia.

On Monday July 7th 1947, the rooms of the Small Homes Service of the R.V.I.A. at the State Electricity Commission Building, 238 Flinders Street were opened to the public. 44 sets of drawings, submitted by 24 members of the Institute were on display. In the first two weeks of opening, the number of visitors per day averaged at about 100. During the first week, 10 sets of drawings and specifications were sold at £5.00 each and in the second week 15 sets were sold. The Small Homes Service had begun.

The houses submitted by members were designed to fit on a standard 50 foot frontage. Sketches were vetted by the Small Homes Committee. Plans were rejected if they were considered to be below a progressive standard or if they were thought to be too advanced. Authorship of plans was never mentioned as it was part of R.V.I.A. policy not to advertise but to promote the Service as an autonomous design body.

Robin Boyd's appointment as director of the new Small Homes Service in 1947 coincided with the publication of his book *Victorian Modern* in July of the same year. His book demonstrated his view of modern architecture in Victoria and ideas on how the architect might reshape Victoria's domestic design. In writing for the public in *The Age*, Boyd advocated his so-called "Victorian Type" (12) in concise and easily understood terms. The Type, typically two wings of single room width, a relatively
open plan, a low roof, pergola, light colours and a plain oblong stack chimney, reflected Boyd's belief that the Modern movement was simply a continuation of a "universal tendency through history to build simply, unaffectedly, logically with commonsense and without ornament" (13). Boyd continued these broad theories through his articles; a soft functionalism, "a European prototype fitted with a low pitched gable hat for the Australian sun" (14).

Boyd's writings created a public forum for ideas on the small home, its planning, the workings of the suburb, material and finance shortages, the problems faced in Sydney and Melbourne over the use of the flat roof, the omission of parapets, the use of non-traditional materials and fighting conservative local covenants. If these articles in The Age as Conrad Hamann (15) suggests reveal a decline and disillusion in the optimism expressed by Boyd in Victorian Modern as to the future of Australian architecture and form the basis for the more sardonic and jaundiced view of Australia's Home of 1952, then it is in complete contrast to the success of the new Small Homes Service in those early years where, as Geoffrey Blainey says, his "short essays which became so popular that thousands of people began to see Melbourne through his eyes and to discuss the outer suburbs in his phrases" (16).

Despite Boyd's personal views, his articles between 1947 and 1953 remained ever enthusiastic. The sale of house plans was highly successful. The Service boomed. In 1948, the Service was selling an average of nearly 100 plans a month with approximately 500 people visiting the office weekly.

The Small Homes Service aimed to raise public awareness regarding small house design, to provoke a reaction to the creams and greens of the early 1940s, to break the monotony and mediocrity of small house design and upset the "conspiracy" (17) "hatched by some speculative builders, builder designers and real estate agents who are too set in their ways to accept the new tastes in house design which the public has apparently developed since the war." This reaction, the "new taste" against "the conspiracy" of conservatism and apathy infects all his articles which cleverly provoke and question, "Would you like this house....or maybe this?"

A "porridge shaped" house (18) is put up against an archetypal Victorian Type L-form which "may look smarter to you and me." (fig.192)

WOULD YOU LIKE THIS HOUSE?

Would you like to live in this trim "L-shaped" house, above? Or would you perhaps prefer a house looking more like the one sketched below, all other things being equal?

We do not suggest that we know which house you would choose but we do know this. If you are an average Melbourne house buyer it is 10 to one that you will prefer the low house.

This is not to suggest that you would necessarily be right and others who picked the lower house would necessarily be wrong. But it would indicate at least that you were a little more alert to current dressmaker trends.

.... OR MAYBE THIS?

Fig.192 Robin Boyd, architect. Small Homes Section article for The Age newspaper, 10th May 1950.

In an article entitled, "Fashion without Passion" marvellously cryptic and naive design principles are proposed,

What is wanted is not a return to stylism but a return to logic and first principles...The good buildings of most periods in history have been noted for two things - lightness and simplicity....The modern product in any field may be judged on its simplicity and the frankness of the expression of its structure....The better built house is plain, fine in detail and unashamedly frank about the nature of its construction. This is the fashion which we might well encourage (19).

A different outlook toward the normal heavy brick and tile, solid and secure aesthetic of the normal homebuyer was gently encouraged. A low key propaganda of soft functionalism permeated the Service throughout the late 1940s, with the architect transplanted onto centre-stage as a socially useful instrument of advice, a fund of information and new enlightened design.

18. The Age, 10.5.1950.
Boyd saw to it that not only were the houses of the Service of a progressive nature but also typography and graphics, furniture, finishes, colour, and new ways of living were all continually exposed. The articles gave the Service a media influence, a "revolution en masse" for the young Turks of the day. Young architects and student friends of the evangelist Boyd such as Peter McIntyre and Kevin Borland "gathered like young Christian soldiers ready with a vision of the new world" (20) to preach their modernism to the people of Melbourne after the strait jacket of the war had been removed. The objective was to influence public opinion, to convince the Melbourne public that modern architecture and change was their salvation.

Boyd and the next Director, Neil Clerehan, became virtual media personalities. Many people thought that every house offered by the Small Homes Service was designed by Boyd or Clerehan. Their articles were dramatic and written in gung-ho fashion with catchy titles such as "East meets West, our homes not always best", "Wright fights tight site", or one describing Le Corbusier's Marseille Unite D'Habitation, "A French fantasy in ferro-concrete." The message was always clear and precise. Flat roofs and new materials were justified on economic grounds. Clever graphics became persuasive arguments for better design (fig 193). Readers were invited to participate and question their home - "Pick the SHS roof" or "Where do you want your kitchen?" Daring thoughts on plastic skins or butterfly roofs were backed by articles giving solid advice on how to procure a home, finance, regulations, basic information close to the heart of lay people, that endeared the Service to them and allowed a potential moulding of sensibility. The Age


Fig.193 Robin Boyd, architect. Small Homes Section article for The Age newspaper, 10th September 1947.
Small Homes Section was a media success heralding new ideas and giving real advice, and indebted to the skilful writing of Boyd and Clerehan.

As Freeland suggests (21), the Small Homes Service developed into probably the best public relations venture that the architectural profession has ever had. The articles and the Service made the Victorian public aware of good domestic architecture.

"Our Victorian houses will be entirely successful only when the free approach of international modernism is regulated by our climate, our materials and our own way of life... If an appeal for more style in the external appearance of our houses seems to indicate a superficial approach to the current problems of home building then it is superficial to concern oneself with keeping the rooms neat and clean and ultimately it is a waste of time to wear clean clothes" (22).

Such rhetorical statements indicate the self-righteous enthusiasm of the authors. In a melodramatic way, these early years of the Service were heady days. "The cycle of styles on the traditional plan has run its course. It is the end of an era" (23). And so it was. A minor manifesto was under way.

Small Houses: Planning and Type
Over the next fifteen years, Boyd and Clerehan were to usher in their new era as the Service began to promote a variety of plans that determined to move away from traditional notions of small house planning. A set of standard planning solutions developed through the years, changing in form only by the replacement of a gable with a smart skillion or later "flat roof", or changing from timber to veneer construction. It is possible to categorize these standard house plans (24). The set of houses which result derive from a notion of the functional plan which is not concerned with innovation in form, detail or volume but rather in the efficient distribution of the family on a two dimensional plane. Such a conception is based on the restriction of the suburban site (except holiday houses), the notion of the plan as generator and the idea that an efficient plan necessarily leads to a "good" form or elevation.
This set of standard planning solutions was distilled from the architect-designed houses of the same period that form a vernacular created by architects. The plans become useful models for examining possible house typologies of the 1950s. A soft planimetric functionalism developed which architects repeated and builders eventually adopted. The set of standard Small Homes Service plans which developed are:

1. L-shaped, the so-called Victorian Type
2. Integrated Linear
3. Service separated
4. Separated zones
5. Courtyard, U-shape
6. True Courtyard
7. Attached zone
8. Service linked
9. Living separated
10. Linear passage

1. L-shaped, the so-called Victorian Type
The L-shaped Victorian Type is the most typical plan form promoted by the Service until the mid-1950s (fig.194). Robin Boyd's description of the "type" in *Victorian Modern* is remarkably accurate.

*Reduced to minimum proportions, this house becomes just two wings: the living room is one, the bedrooms in the other with the entrances and the services at the junction* (25).

It is the speculative builder's version of the Type with its stumpy porch nestling between two squat wings that the stretched and slim SHS Type attempts to dismiss. The

Service houses are architects' versions of the popular style with the living room thrust forward to become the "Great Asymmetrical Front" (26).

The speculative boom of the late 1950s covered Melbourne with houses like these which lack the slimness and stretched quality of the earlier designs offered by the Service. Boyd saw the Type as the indigenous form of housing, the Type that would enmesh the suburbs and that "only the architects with something personal to say about planning and structure will be able to break their houses free of the chain" (27).

2. Integrated Linear
The integrated linear house was a basic rectangle two rooms deep with the services (i.e. kitchen, bath and laundry) to the south and sleeping areas to the north. This compacted plan was tight and rational, a product of the stringent area restrictions, an attempt to achieve the maximum result with minimum form.

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Robin Boyd's T310 is perhaps most typical of this group with minimal passage, compartmented bathroom planning with separate w.c., dining alcove off the living room, and low pitched gable roof (probably in asbestos cement) with potentially blank east and west walls (fig.195). This is the prototype of the extruded type of house that was to later become the Peninsula House designed by Boyd for the speculative building firm, C. H. I. Homes. Banks of vertical mullioned windows coming right up under the eaves, exposed rafters, louvres, a flimsy entrance screen and a rectangular stack chimney are typical elements of the period. Clerehan's V232 extends this simplicity further, forecasting the Boyd designed Stegbar Window wall of 1953 (fig.196). The sparseness and frankness of
these houses was often too simple, too pared down, whose "light and freedom" (28) could only be accommodated by the more conservative plans such as T2159. V232 was an advanced house design in 1949. It was also unpopular, "some people even resent it" (29). To change this apparent resentment, the policy of the Service was to expose this unpopularity and explain the thinking behind the design to encourage a broadening of attitude toward these more advanced houses.

3. Service Separated
The service separated house, exemplified by S.C.G. McConnel's T230, represents a development of the preceding type into a stretched linear block of basically one room's depth with a service block attached (fig.197). Designed for an east or west facing block, the major side attracts the northerly aspect. The long spinal passage articulates the division between the two functional areas which may be denoted by a difference in roof structure. The glazing opens up on the north side. This long stretched quality, so different from the compact work of Seidler, is symptomatic of the flat suburban subdivision of Melbourne.
4. Separated Zone

The separated zone or "bi-nuclear" planned house (30) was a frequently advocated house plan of the 1950s, branded always as progressive. The sleeping and bathroom areas have a distinct separation from the living areas. The separation of the two zones was usually via a glazed entry gallery. As an expression of function however blatant and simple, it was the hallmark of the post-war idea of form following function. The first house published in *The Age* by the Service in 1947 employed this plan. R.W. Hodgson's T22 introduced ideas of clarity in plan to the public, suggesting that plans such as these were only normally available in the "luxurious upper strata of the community" (31) (fig.191).

T280 by Neil Clerehan, also with a bi-nuclear plan, did not receive the same favourable reaction (fig.198). Its dramatic separation of zones, skillion roofs, ceilings following roof slopes and whole structural window walls received this response from one reader,

*Having examined the drawings and read the description of T280 in the Small Homes Service Section I would be glad to know if it is just a misplaced joke. I am looking for a plan of a home and not a converted henhouse. It is an insult if such a dwelling is considered suitable for a decent community* (32).

Clerehan swiftly replied in usual sardonic style, lamenting the conservatism of the public in their appreciation of architects attempts at new forms of housing, "this generation will always be remembered by the few converted hen houses it built" (33).

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33. Ibid.
Houses such as these developed into the most typical of the progressive Small Homes Service designs with their opposing skillions and glazed entry hall, the light and simple forms, exposed rafters and wafer thin roofs. The T14, a holiday house designed by Robin Boyd is his version of Le Corbusier's Maison Citrohan, where he took the bi-nuclear house to an extreme, where the two zones of the house were entirely separate buildings (fig. 199). The roofs of the two simple blocks drained to a central water tank painted blue.

5. Courtyard, U-shape
A more acceptable form of a distinct zoning separation was offered by the courtyard house such as T357 designed by Montgomery, King and Trengove (fig. 200). These houses continued the line of zoning living and sleeping areas but connecting the two with a wing of...
services and a "gallery", "sun gallery" or "sun room" which enclosed a sun-trapping courtyard to promote the idea of outdoor living.

6. True Courtyard
A small number of fully enclosed courtyard houses were also offered by the Service, the inspiration for such houses emanating from Roy Grounds’s Hill Street house, Toorak of 1953, published on several occasions by the Service, and a house by W.H. Carr of 1952 (34). The first of these, T345 by L. Bawden, was extremely popular and was soon withdrawn (fig.201). Later plans integrated the car into the design of the courtyard house.

7. Attached Zone
An alternative mode of depicting the functional zoning of the house was the simple butting together of forms and spaces that contained a zone, each form achieving singularity by an expression of roof form. These houses eliminated the glazed connecting gallery. T292 (fig.202) and T294 express this planning division by opposing
skillions whereas T347, in a typically American manner, is divisible from the centre of the gable into living and sleeping (fig.203).

8. Service Linked
The service linked house, such as Montgomery, King and Trengove's T2126 achieves its zoning in a compacted manner with a connecting passage or gallery between services such as kitchen and bathroom (fig.204). With the conscientious compacting and rationalizing of services during these years, architects developed an ingrown mentality of "grouping the services" and the creation of living "zones". Because of economic limitations, ideas of centrality, of house as place, and phenomenological ideas of dwelling seemed to recede from reality.

9. Living Separated
The living separated house owed much to the Geoffrey Mewton House, Sandringham, 1938. This house forms the basis of T212, 213 and 259 (fig.205) where the living room forms the central open connecting space of the house. The tiles of the living room continue externally so that when the doors of the living room are opened, the
outdoor living area duplicates the area of the room. Access from the bedroom area to the kitchen is via this strip of tile, clear of furniture and the carpet of the living room.

10. Linear Passage
The linear passage or "in-line" (35) arrangement is a linear extrusion with orientation to the north, a long slim single room width house, that is perhaps the most advanced and prophetic type of the Small Homes Service, for later project homes such as the Merchant Builder Houses of the 1970s and the Landmark Houses of the 1980s. The connection to each room is via a passage to the north. The north wall is completely glazed and has a wide eaves overhang.

Robin Boyd's holiday house, T18 has this linear passage external to the house in a relaxed informal manner (fig.206). The passage moves inside with T248 by Neil Clerehan and acknowledges the car. The T372 by Neil Clerehan is perhaps the most sophisticated house of the Small Homes Service, employing many of the Service's
progressive ideas in one house (36): integration of the car under one roof; playroom which suggests the onset of the family room; northern orientation (climatic awareness); parents bedroom separated from the children's bedrooms, suggesting a more affluent zoning and with its own ensuite bathroom; formal living room; rationalized structure, gridded planning; and a monopitch flat roof (fig.207).

The houses described are a brief summary of the standard plans available through fifteen years of the Service. There are of course particular houses and particular planning features which have not been discussed here. As a basis for discussion, it is this set of post-war plans which form the basis for the architect designed house and speculative house for Melbourne of the 1950s and forms a basic catalogue of the post-war house. The forms that these houses then took were simple and direct, unprepossessing and intentionally unadorned with ornament. Issues of solar design, the integration of the car, new materials and finishes, the new kitchen, laundry, and bathroom were all incorporated in various designs. The roofs of these houses were deliberately unhipped as the vernacular house was hipped and architects' snobbery towards it was widespread. The hipped roof traditionally meant the tiled roof, hence Marseilles tiles too became, with Boyd's dislike of the so-called Queen Anne style of architecture in Melbourne, another point against the hipped roof. Titles such as "Wotta Lotta Terracotta" (37) and comments such as "nothing is more symbolic of the modern house than its lack of tiles" (38) added weight to this loaded argument.

Hence Service statistics (39) reveal over the years the almost total absence of the hip, the dominance of the low

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36. V354 is the brick veneer version of the Neil Clerehan's T372.
37. The Age, 30.1.1951.
38. The Age, 8.6.1953.
39. See Appendix D, Goad, op. cit.
pitched gable (usually 15 degrees) and SHS encouragement of the flat or skillion roof. The battle for the flat roof (one article was entitled "Flat roof vs. Tiled Roof" (40)) pinpointed as Conrad Hamann suggests, Boyd's sympathy with other architects engaged in similar struggles with Australian attitudes particularly over council covenants (41). The struggles of Harry Seidler and Sydney Ancher in New South Wales seem particularly close to Boyd's defence of the skillion and the flat roof. Argument for the flat roof was reinforced in writing by the advantages of lighter structural members and ease of house expansion and construction, elimination of redundant roof framing and rejection of the idea of the roof dictating the plan of the house also the availability of bituminous felt (42) and a.c. corrugated sheet over Marseilles tiles, for which there were supply delays of up to six and nine months. The functional break-up of the form of the house could be enhanced by the use of the skillion roof. The bi-nuclear planned house was the clearest expression of this. On the social scale, the flat roof was to be found in the most expensive architect designed houses and the lowest scale of substandard roofs, such as sleepouts and makeshift houses. In arguing for the flat roof, the SHS had the unenviable task of displacing the status quo. The hipped tiled roof form was to prove remarkably resilient.

Colour was also an important issue for the Service. To provoke immediate reaction, the rooms of the Service in 1947 were painted out in a "vile combination" (43) of yellow, red and purple as a reaction to the predominant cream and green of the depression years. Boyd's aim was to reverse the "cream Australia policy" (44) that had dampened Australian colour sense for nearly twenty years. The development of plastic paint brought strong primary colours which were part of the International Style aesthetic and were demonstrated locally by Harry Seidler in Sydney. In the late 1940s, Boyd advocated a rich Scandinavian palate of colour. In 1947, a suggested colour scheme for a boy's room with a sunny aspect was:

- walls, green blue; ceiling white (for good light reflection when studying);
- woodwork parchment white enamel;
- fabrics yellow and white stripes;
- rugs tan (45).

In addition to offering plans, the Small Homes Service published pamphlets and plan folders to advertize their

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40. The Age, 24.4.1951.
41. Conrad and Chris Hamann, loc. cit.
42. The flat roof was a built-up roof of boarding, two or three layers of bituminous felt and insulation (rockwool or aluminium foil) which enabled a free plan beneath. Steel deck with its ribs pointing upward was an Australian (on Neil Clerihan's suggestion) inversion of the U.S. tradition of having the steel ribs facing downward and placing bituminous felt over the top. By 1961, steel decking was to replace the built-up roof.
43. The Age, 8.7.1957.
44. The Age, 24.11.1952; Robin Boyd, The Australian Ugliness, p.44.
45. The Age, 15.10.1947.
range of designs and one booklet entitled *Costs and Quantities* covered virtually every facet of the cost of building a home (46). In November 1951, the Service also published *Modern Houses*, a catalogue and guide to the modern houses of Melbourne, an attempt to list nearly one hundred houses designed since 1900 as a "catalogue of endeavour in 20th century house design" (47).

The success of the R.V.I.A. Small Homes Service led to similar ventures in South Australia (1953), New South Wales (1953), Queensland (1954) and Western Australia (1959) (48). Apart from the Victorian venture, all met with mediocre success at best.

The Victorian Small Homes Service served as an example that the profession could have influence at various levels in society and provide a useful service at an affordable price. Support for the Small Homes Service came from the young design oriented couple starting a family. Robin-Boyd attempted to describe some of these clients.

*He is usually young, newly married with little capital (average about £300). He requires advice on finance and generally finishes by borrowing 80 to 90% from the War Service Homes Division, a Co-operative Housing Society or the Commonwealth Bank Credit Foncier. He has a fair income capable of weekly rent, purchase payment around £2. He wants an attractive home, appreciates the value of architectural service but realizes that he must economize at every turn in order to build at all* (49).

or another description:

*every so often one of the plans is bought by an intelligent person - the sort of person who cannot afford an original painting but buys a good reproduction, who cannot take a front seat at a concert but queues up for the gallery, who picks the good books from the lending library, the imaginative movies on the suburban circuit and the well designed items of kitchen ware. What practising architect can avoid the point?* (50)

These were astute observations by Boyd in 1948 as to the limitations of the service and the sort of people who would buy service plans, and the difficulty in bringing architectural appreciation to a wider audience. The taste market therefore tended to be the young, aspiring middle

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47. *The Age*, 27.11.1951.

48. Goad, op. cit., p.82. The R. V. I. A. Small Homes Service supplied the South Australian version with 40 plans of their own to give the new proposal a firm footing at its inception.


class, the "two bob snobs" of areas like Beaumaris and Balwyn. This sector of the market sought land which corresponded with their aspirations, and so the northern and western suburbs had few SHS examples and were almost completely excluded from participation. A study of a metropolitan map of Melbourne shows a Small Homes belt, a curving sprawl of houses of the 1950s to the east and south: Balwyn, Bulleen, Doncaster, Box Hill, Glen Waverley, Springvale, Moorabbin and Beaumaris.

It was the shadow of economizing that was to be the greatest design influence on Small Homes Service design in the late 1940s. Materials and finance were short. The designs had to appeal and consequently, lean, pared houses of simple cheap and expedient construction were to result. As Neil Clerehan suggests, much of the work of the Small Homes Service "is a direct but austere, and that is the operative adjective, version of American work of the usual five to eight years before" (51). Small Homes Service design had the ball and chain of economy. Experiment was difficult and potentially irresponsible, and consequently, incremental change was attempted by the proposed house designs.

However flimsy and temporary the Small Homes Service designs appear to have been, however naive and optimistic were the campaigns waged by Robin Boyd and Neil Clerehan for new materials and the flat roof, however difficult it was to progress under the weight of economy and an immovable complacency of the average homeseeker, the Small Homes Service of the R.V.I.A. was an unqualified success in its first decade of operation. It provided a profession backed alternative to the desperate post-war housing shortage in Melbourne. Beyond the number of houses that were built, it was the media influence of their publications, their involvement with display homes such as the "House of Tomorrow" and "The Age Dream Home", and in particular The Age "Small Homes Section" articles which made the real success of the Service. The dedication and enthusiasm of the writing of Robin Boyd and later Neil Clerehan mark them as amongst the most exemplary figures of architectural public relations ever seen in Australia (52).

The popularity of the articles, the inclusion of overseas ideas, of international architects, of thoughts that ranged
from the high brow to the laundry, were to make the Small Homes Service a household name. The articles also formed the basis to Boyd's next public relations success, *Australia's Home* in 1952. The Small Homes Service was a low key propaganda, of humour and enthusiasm about architecture, of a simplified exposure of the small house in an effort to improve it, of trying new materials and new methods, of nagging at the security of the Australian suburban householder to make them think about their surroundings and leave with them the idea that some decisions about their environment were in their hands, in their own home.
Mud Brick, Alistair Knox and The Eltham Phenomenon.

The post-war emergence of a mud-brick building tradition in Victoria owes its appearance to two major concerns. The first was the dire shortage of conventional building materials after 1945 when many prospective homeowners looked to the earth for an immediately available building material. The second centred around the colony of artists headed by Justus Jorgenson and the pise-de-terre buildings at Monsalvat in Eltham first constructed there in 1935 (fig.208). As Alistair Knox notes,

The modern earth building movement could be said to have actually started in Eltham, Victoria, at the Artists' Colony under the direction of Justus Jorgenson in the early 1930's. Australia, in common with practically every other country, was then in the depths of the great depression. The Artists' Colony at Eltham was a break away from dreary suburban living standards. It set up an "adventurous" lifestyle where socially acceptable standards gave way to a continental-style freedom that caused flutters of delight in suburban drawing rooms, as interminable tales of mistresses and orgies were discussed by those who had access to the Colony (1).

For Alistair Knox and his friends after the war, it was the qualities of insulation, solidity, and the organic freedom of mud brick which held great appeal. The accompanying sense of a liberated and co-operative community in the process of making mud bricks was to provide the catalyst for a whole tradition, both amateur and professional, in the clay abundant hills of Eltham.
In January 1946, John Harcourt, a long-time resident of Eltham wrote in the *Australian Home Beautiful* (2) about mud brick and pise-de-terre,

*the shortage of conventional building materials is so acute that building all over the place is either held up or proceeding inordinately slowly, one of the best building materials of all is lying in unlimited quantities unheeded on almost every site where a house is being built. The material is the common earth.*

Harcourt went on to comprehensively describe pise-de-terre, cob and mudbrick methods. He advised of the ease of building and the difficulties encountered in areas where local councils would not approve such construction. The exception was Eltham, where considerable amounts of pise and mud brick construction had already taken place, and the shire secretary was authorized to issue permits for the method without council consultation.

A sprinkling of mud-brick houses sprang up in the north eastern hills of Melbourne. Inspired by Harcourt’s practical guidance, the D.H. Rowe house was designed and built at Wandin, near Lilydale from 1946 by Mrs. Rowe’s artist brothers, Will and David Eager (3) (fig.209). The 10 1/2 square skillion roofed house with one foot thick walls, was half the cost of a conventionally built home, the bulk of the saving made in labour costs. At Montmorency, John Woodburn, a final year architecture student at the University of Melbourne, and his wife lived in a tent while they built their mud brick house in just over eight months from November 1948, making the bricks themselves (4). The single room width plan had unlined mud walls with windows carried right up under the eaves and handmade

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2. J. M. Harcourt, "Natural Earth as Building Material", *Australian Home Beautiful*, January 1946, p.8. John Harcourt was an Eltham resident in the 1930s and 1940s. Like Alistair Knox, he also was stimulated by the buildings of Monsalvat, started building in both pise-de-terre and adobe, and developed an automatic ramming technique for pise.


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Fig.209 Will and David Eager, artist builders. D. H. Rowe House, Wandin, Victoria, 1946-.
door and window frames of Oregon, and in the windows, adjustable louvres were fitted instead of casements or sliding sashes.

At the same time between 1947 and 1952, Robin Boyd publicized the use of mud brick and pise de terre in his "Small Homes Section" of *The Age* as part of the R.V.I.A. Small Homes Service regular articles (5). Plan No. M31 was one of the few adobe houses offered by the Service. In 1947, Anthony Merrill's *The Rammed Earth House* (6) was published in New York, and in 1953, George Middleton's *Build your house of earth: a manual of pise and adobe construction* (7) was published in Sydney. This book was the result of research done by Middleton in 1946-47 whilst Assistant Technical Officer at the Commonwealth Experimental Building Station at Ryde in New South Wales. The pamphlets published by the Experimental Building Station, "Pise or Rammed Earth" (No.17, July 1947) and "Earth Wall Construction: Adobe or Puddled earth" (No.18, 1947) were both highly influential in Eltham according to Alistair Knox (8). In 1952, these two booklets were superseded by "Earth Wall Construction" (Bulletin No.5) from the C.E.B.S. also by G.F. Middleton (9).

But it was with the circle around Alistair Knox that the mud brick building tradition came into its own. Knox had first seen the 1935 Monsalvat buildings in 1940. He was not to return to Eltham until 1946 after becoming friends with Matcham Skipper while studying building at R.M.I.T. Knox’s first house however was built of timber not mud. Noel and Bobbie Brynning’s simple low-pitched gable roofed house in Glenard Drive, Heidelberg was built in 1946 at the height of the building shortages (10) (fig.210). Built around two great red river gums, Knox enlisted the help of Wyn Roberts, the actor, David Boyd and John Yule, both painters, and the sculptor, Matcham Skipper, in building the stone retaining walls and the massive Warrandyte rubble sandstone fireplace. As makeshift doors for the Brynnings, who had waited six months for half a dozen flush panelled doors, Knox copied what Walter Burley Griffin had done in several small Knitlock houses he had built in the district. He set three 12" by 1" Oregon planks so that they overlapped each other, and fixed them together by nailing 3" by 1 1/2" pieces across as rails, using flap hinges to hang them.
Knox's second house was also on the Glenard Estate (demolished February 1988); the flat roofed and white painted timber P.G. Moore House in Glenard Drive, also of 1946 (11) (fig.211). The U-shaped plan of single room width centred on red gums and lemon-scented gums and a large spreading pine, around three sides of an open patio. The plan closely resembled that of the Lena and Mervyn Skipper House, in Outlook Drive, Eaglemont, a few streets away which had been designed by Walter Burley Griffin in 1921. The elements of the flat roofed house, the wide overlapping horizontal weatherboards, thin clerestory strip windows, block fireplace and attached horizontal pergola below the eaves level recalled the vocabulary of Frank Lloyd Wright's Usonian houses. Knox's design for the F.E. Watton House, East Brighton, c. 1948 also has the similar distilled Usonian elements of the clerestory strip window, oversailing flat roof, the wide horizontal weatherboards and the massive stone fireplace (12).

The first mud brick house which Knox designed and built with the assistance of Sonia Skipper, Laurie Mayfield, "Built around a tree", Australian Home Beautiful, July 1949, pp.20 - 23, 72.

Gordon Ford and Tony Jackson was the Frank English house at Eltham, a modest 900 square feet house at a cost of £770 in 1947 (13) (fig.212). Knox preferred the freedom inherent in adobe rather than the monolithic pise construction. Mud bricks were flexible, both in terms of modular construction, malleability and allowed greater variety of form. The simple rectangular plan had a large 40 foot long living room with the whole of one wall composed of french windows between substantial piers giving great depth and the appearance of solidity. The emphasis on mass, widespread eaves (14), massive fireplace with inglenook and the simple primitive bush timber lintel and roofing structure became trademarks of his later houses. Twenty five foot long yellowbox poles from Diamond Creek were used as beams with hardwood secondary roof beams. The walls were rendered with a mixture of cow dung and loamy soil.

In the same year, 1947, Knox built and designed the Phyllis Busst House, at Eltham (15). Miss Busst was an amateur artist who had been a member of the Jorgenson Artists Colony. She wanted a large house, greater than the
1200 square foot limit at the time, requiring a painting studio, and a very large living room. The three level house was built on a steeply sloping site (fig.213). One entered at mid-level, ascended either to the bedroom and studio level or descended to the long open living/dining/kitchen room again banked by french doors and massive piers. At the entry, the house curved in a hairpin bend down the slope. From above the house seemed to slide into the slope, fused into the site, while the eaves sailed gracefully around the corner. On the ground floor, a concrete slab was used, a rare use of slab construction in a time without slab regulations or ready-made concrete mixers (16). The heart of the house was a vast fireplace and ingle.

The most publicised scheme of Knox's in the pre-1950 years was his "Operation Periwinkle", which resulted in a series of three articles for *Australian Home Beautiful* in 1950 (17) (fig.214). The three articles describe how a crescent shaped or "periwinkle" house was built at Eltham in mud brick. The articles emphasised the techniques of construction and the idea of self-build, self initiated solutions to the current housing problem. In this house, Knox's design philosophy is frankly organic recalling Frank Lloyd Wright's solar-hemicycle houses of the 1940s.

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Chapter 3: Mud Brick, Alistair Knox and The Eltham Phenomenon

Fig.214 Alistair Knox, builder-designer. Plan of "Operation Periwinkle", Eltham, Victoria, c.1948 - 50.

such as the Second Jacobs House, Middleton, Wisconsin, 1948-49 or the Kenneth Laurent House, Rockford, Illinois, 1949.

Mud can be moulded into any form. Why not curve the walls to form a house that follows the winter sun all day, at the same time conform to the contours of the land, conserve the trees, and appear to grow out of the hillside in gentle sweeping curves.... Solar in character it was developed on a spiral line that sprang from a core in the form of a circular garden seat round an existing tree... From its spiral simplicity to an edible shellfish the job was called "Operation Periwinkle!" (18)

The resulting plan was indeed a reappraisal in mud of Wrightian themes at Eltham as Wright's Laurent House was incised into its site. Above the central living room, a flat roof hovered slightly higher to admit a strip of clerestory lighting.

The Angus McClennan House, Eltham, c.1949 designed by Alistair Knox was also like the Busst House designed on a sloping site, with two wings set at right angles one above the other, with a circular two-storeyed section at the corner of the L (19) (figs.215, 216). A fireplace core ran through the centre of the two storeyed section providing an ingle fireplace with a completely open hearth in the living room, a smaller open fireplace in the den, and another in the bedroom overhead. The ingle was large enough to accommodate eight to ten people. Solidity, banks of french doors and the celebration of the hearth give these houses an unusual elegance for the lightweight years of the late 1940s. Ceiling beams were left exposed, and stained a

19. Roy James, "Out of this World!", Australian Home Beautiful, August 1951, pp.14 - 15,
reddish brown. The floors were terracotta-brown magnesite. All of these surfaces were linked by the warm flesh tints of the adobe walls. By contrast to the universal, industrially produced houses and wall sections of the city architects’ work, these houses have a patina of handcrafted texture and warm earth tones. The repeating levels of the flat roof give the house a sense of unity with the environment while the deep reveals of the mud walls and the wide eaves give a feeling of shelter and reinforce Knox's reverence for the cave.

The Lindsay Edward house, Lower Plenty, c.1950 was another adobe house (fig.217). The single room width house was bent to form a shallow U-shape around an outdoor patio, where the children could play under the careful supervision of their mother from the kitchen window (20). The Dorian Le Gallienne and Richard Downing weekend house on the river at Eltham was begun in 1949 and over the next fifteen years Knox designed and built four different structures for the two friends on the property. The simple shapes of the first structure on the property was to influence all that was to follow. The basis
was a simple rectangle of mud brick with a concrete plinth on top of each wall. A system of rafters was set into these concrete beams to form a series of scissor trusses. This system allowed an apparently unsupported ceiling ridge, allowing the interior of the house to be comprehended at once as the vertical divisions of the house were held down from the exposed gable roof. The internal lining walls were two thicknesses of six by one millsawn hardwood laminated and nailed together by staggering the joints.

One of Knox's major inspirations, apart from the local mudbrick techniques of Monsalvat and the Usonian houses of Frank Lloyd Wright, was a house built at Warrandyte begun in 1940 by the painter Danila Vassilieff (fig.218). Vassilieff was an art teacher at the nearby Koornong School when Knox first met him (21). The stone house, named "Stonygrad", had rugged stone walls and enormous tree trunks formed the main beams of the ceiling and roof. They ran at about seven foot intervals along the length of the rooms for about twenty-five feet. Over these beams lengths of saplings about six to nine inches in diameter were split in half and turned split downwards to form the ceilings. The roof seal was concrete spread over this structure so that the resultant building viewed from above looked rather like strangely formed concrete mushrooms of enormous size (22).

The stone had come from the site as had the roofing logs and columns which were described as "trees" by Wynn Scott in her review of the house in 1949 (23). A creek bed on site could be dammed to provide the water for mixing cement and household purposes. In the 1940s, Vassilieff's house represented the epitome of ad-hoc design and the
application of as-found materials and vernacular construction. Its primitiveness was powerful and intensely personal as it grew organically both in structure and concept.

By 1950, scarcity of labour and the high above-award premiums which had to be paid to get labourers, halted the labour intensive mudbrick programme and for a time Knox returned to building timber houses (24). Knox was to return to mudbrick building in the mid-1950s. In the 1960s and 1970s he was to become a household name for his concerns for environmental design and his intimate understanding of the Australian bush. His philosophy was an honest and simple one that delighted in primitive and unpretentious "hands-on". Nature could bring together people in the collective process of mudbrick production and the building of the house itself...His philosophy is best described by his own words,

*With earth building, beauty can be expressed simply:* natural and honest treatment of the walls so that they retain some of the primeval quality of the earth; a true sense of topography through the proper handling of the site; a strong sense of shelter by deft use of thick walls so that they cast deep shadows at the reveals; the use of simple masses, moulded or curved walls to show the pliancy of the medium; proportions that are unpretentious and fundamental, not frivolous.

No material is more responsive to human expression than mud, provided the initial objectives are not lost sight of - retention of its primeval character, and absolute avoidance of nonsense (25).
**Victorian Modern and the so-called Victorian Type**

Between 1945 and 1950 most progressive Melbourne architects were designing houses with the same palette of materials of rubble rock walls, exposed rafters, natural timbers, lightly bagged bricks, skillion roofs or low pitched gables and white painted timber window frames. These houses were invariably built in outlying Melbourne suburbs, in natural bush settings, free from the traditional encumbrances of the suburban site. They were unhindered in spread and nestled calmly into the bush extending the pre-war tradition of the "bush" expression of the modern house in Melbourne, namely the informal massing of Roy Grounds's "Lyncroft", Shoreham, 1934 and his "Chateau Tahbilk", Nagambie, 1934 and Norman Seabrook's house at Croydon, 1941. Warrandyte, Croydon, Eltham, Geelong, Beaumaris and the Mornington Peninsula had belts of these houses, built on the cheap and responding in a relaxed way to the sun and shade of the bush.

In his 1947 book, *Victorian Modern*, Robin Boyd would characterize these houses as being examples of his so-called "Victorian Type" (1). In *Australia's Home*, of 1952, Boyd was to describe these houses as part of the "Cottage Style" (2), the Irrational - Organic opposite to his "International Style", the Rational - Functional School of thought. The "Cottage Style" group was compared to the woody and warm work of the West Coast of the United States and Scandinavia, and regarded as fitting within the context of the buildings and teachings of Frank Lloyd Wright. The "International Style" centred on the theories and works of Le Corbusier and European authorities such as Walter Gropius and Marcel Breuer epitomized in Australia by the contemporary houses of Harry Seidler.

In *Australia's Home*, Boyd deliberately sets up two opposing International schools of aesthetic thought rather than describing the compositional techniques of the houses.

While the Functionalists would be square, hard, sharp, forceful, the Organicists would be less austere in line and texture. One a cube: three sides concrete, three sides glass; the other a native growth: wood, stone and woolly materials merging. One defiant, exhilarating, proud, the other symptomatic with and subservient to the landscape. One stated man's superiority, his power to build

invulnerable fortresses against the elements; the other confessed his inferiority, his ultimate dependence on nature for his existence... Both believed simplicity to be the omnipotent law of all design. Both rejected the idea of composing the facades of a building to preconceived rules. Both accepted spatial composition as the expressive field of architecture. Both believed that the buildings function was the only basis for planning and that it should (and would automatically if permitted) be expressed in the building's form. Both believed that no material should be twisted into un-natural forms or asked to perform an unsuitable task (3).

These Melbourne houses of the late 1940s are determinedly functional in plan, and expressed as boxes butted together. Each box or form is an expression of the zone or space within. Composition is additive, an assemblage of parts, an agglutination of functional forms, that unconsciously results in a picturesque outline rather than a single unified form. In virtually all cases in Melbourne, aspect to a distant landscape is not the concern. Important is the immediate ground plane and a concern for the specifics of site, such as private suntrapping courtyards. A functionalism that is expressive of parts rather than pure form is preferred allowing the expression of individuality as opposed to universality, preconceived notions of form, and the idea of type and standardization.

Thus the houses are all different but emanate from the same compositional tendency to add and assemble elements. In most cases, the strongest unifying element is the roof. The house can be characterized as having a winged plan of single room width. The wings form an L or splay at an angle to imply outdoor living space and privacy from a suburban street. The plans are open and informal. There are porches and terraces, generous sun galleries, and banks of vertical mullioned windows. The roofs are skillions or low pitched gables. The skillion is often used to gain extra height within the living rooms of the house. Timber rafters and linings are exposed inside and exploited for their beauty and texture. Floors are polished timber boards. The design philosophy is a studied artlessness comparable to the carpenter-like sophistication of Californian architects William W. Wurster and Gardner Dailey.

3. Ibid., pp.194 - 195.
Architects who designed houses in this manner were the pre-1949-50 graduating generation; John Mockridge, Ross Stahle, George Mitchell, Kevin Pethebridge, Frank Bell, J.F. Spears, Lindsay Bunnett, Robin Boyd, Robert Barrow and Lindsay Anderson in addition to the growing firms of Godfrey Spowers Hughes Mewton and Lobb; Seabrook and Fildes; and Yuncken Freeman Bros. Griffiths and Simpson.

Inspirational figures of the time were no doubt Roy Grounds, Fritz Janeba and Frederick Romberg whose mature versions of this "Cottage Style" were well publicised. They taught at the University of Melbourne. Their age lent them authority and they also continued to design houses in this carefree manner into the late 1940s.

The period 1945 - 1950, when these houses were built, is an undiscussed five years much overshadowed by the weight of publicity which accompanied Harry Seidler’s refined house designs in Sydney. The Melbourne "bush" expressions are virgially simple, stripped of the eclecticism of the late 1930s. They are innocently naive and primitive interpretations of functionalism and simultaneously an extension of a sophisticated vernacular tradition.

![Fig.219 J. F. Spears, architect. Spears House, Beaumaris, Victoria, 1946.](image)

**J.F. Spears**

The characteristic "Victorian Type" is the house which J.F. Spears designed for himself in Reid Street, Beaumaris 1946 and which Boyd illustrated in *Victorian Modern* (4) (fig.219). A long stretched linear plan has rooms strung along a sun gallery passage with the living room separating the kitchen from the sleeping zone of the house. A low pitched gable steps up, and porches are cut into an overall
prismatic form. Set against a backdrop of grassy scrub, ti-tree and manna gums, the horizontal weatherboards are stained and the window joinery is painted white. Verandahs and french doors suggest outdoor living. Siting and planning is informal and relaxed.

Godfrey Spowers Hughes Mewton and Lobb
Godfrey Spowers Hughes Mewton and Lobb in their domestic designs were also employing the same palette of materials to achieve a picturesque functionalism of interlocking forms. Houses at Moorabbin (5) (fig.220) and Box Hill (6), both c.1947 show a simple play of volumes, that is enriched by texture, repetition of elements such as exposed rafters, weatherboards or rubblerock walls that diffuse the abstract collagic composition. Flagged terraces are bound into the design suggesting once again an earth hugging approach to the landscape.

The traditional image of home has been subjected to the play of form and experimentation with large areas of glass that duplicate indoor areas with outside patios and simple cubic block-like fireplaces. In two houses at Mt. Eliza (7) (figs.221 & 222), though the massing is complex and the range of materials used is large, a comparison with houses

Fig.220 Godfrey, Spowers, Hughes, Mewton and Lobb, architects. House, Moorabbin, Victoria, c.1947.

Fig.221 Godfrey, Spowers, Hughes, Mewton and Lobb, architects. J. McDougall House, Mt. Eliza, c.1946.


on the East Coast of the United States by modernists Walter Gropius and Marcel Breuer reveals similarities and suggests that the basis for the so-called "Cottage Style" has wider roots than is acknowledged by Boyd. Gropius and Breuer's Hagerty House, Cohasset, Massachusetts, 1938-39 and the James Ford House, Lincoln, Massachusetts, 1938-39 (fig.223) bear a striking resemblance in their composition to the two Melbourne houses, in the butting of simple box forms and bands of casement windows (8). Other American architects who were also designing houses in this craftsmanlike manner included Karl Koch, Walter Bogner, and George Howe. This is not an organic architecture in the manner of Frank Lloyd Wright, but a simple functionalism of modest expression, in keeping with the austerity of the war years. The Melbourne houses, however, had eaves, exposed rafters and a more pronounced expression of texture.

Robert W. Barrow and Lindsay Anderson
Robert Barrow and Lindsay Anderson's design for "Cissbury", Ringwood, c.1949 has all the trademarks of this soft picturesque functionalism (9). The section of the
The Modern House in Melbourne 1945 - 1975

The house comprises two steep skillions with raked ceilings within. This search for a simple sculpted volume is new in contemporary domestic architecture in Melbourne.

Not only is it a search for dramatic spatial experience but an opportunity to alleviate the cramped floor areas of the post-war years. Textures are varied: oiled vertical timber boards, bagged brick work and white painted window frames. Colours are strong and earthy: light yellow, venetian red, cool grey, light varnished wood and white trims. The open plan living/dining room gives onto a terrace. Construction is light-weight timber framing, not brick veneer, nor solid brick. Simple shed-like volumes are assembled together and relieved by large panes of glass and casement windows (fig.224).

Boyd, Pethebridge and Bell

In 1945, a mutual army friend in the Survey Corps, Arthur Pettigrew commissioned Robin Boyd and Kevin Pethebridge to design his house in Redmond Street, Kew. The two young unqualified designers began working on the design and called themselves Associated Designers. On qualifying as architects, Boyd and Pethebridge set up practice in early 1946 in Boyd's flat at "Clendon" in Malvern designed by Roy Grounds. Another domestic commission, the R.M. Elliott project at Upwey also came in. A fellow Survey Corps friend, Frank Bell joined them later that year and the partnership became known as Boyd, Pethebridge and Bell (10). Between 1945 and 1947, only three designs out of 23 commissions were completed by the partnership: the Pettigrew House, Kew; Boyd's own home at Camberwell; and the factory for the Dainty Shoe Company in Church Street, Hawthorn (11).
The flat roofed Pettigrew House of 1946, illustrated in *Victorian Modern* (12) along with other flat roofed houses by Leslie Mitchell and Frank Jessup and Ross Stahle (13), was an L-shaped plan, had zoned living and sleeping wings, with banks of folding French doors to the north and east, opening the rear of the house to the garden (fig. 225). To the front, the two blocks interlocked, the roof of one continuing on to become the carport exposing the car. Though Conrad Hamann suggests this house refers to "Roy Grounds's pre-war work in its elevations", (i.e. through the use of French doors) (14) the house owes more to the Usonian houses of Frank Lloyd Wright. The wide oversailing eaves, the massive wall to the street, the roof hovering above a horizontal strip window, the cubic fireplace, the garden side opening up entirely to the sun, emphasis on the horizontal, all suggest not a reproduction of Wright's work but a local assimilation and understanding of Usonian principles. The Pettigrew House and the first Herbert Jacobs House, Westmoreland, near Madison, Wisconsin, 1937 have virtually the same parti and massing. (fig. 226)
The Pettigrew House did not have the abstract formal qualities of Boyd’s later Haddon Scholarship entry for the Mildura Art Gallery which had more in common with Marcel Breuer’s later Ferry Dormitory, Vassar College, New York, 1948-51. Boyd’s ability at this time to test diverse ideas is an indication of an eager open mind after the war. It is also an indication of a developing design philosophy which would mature in the next two decades. Any relationship to Grounds’s work is only notional. The repose and simplicity and the white window frames may be a respect for Colonial simplicity and purity. They may also be of practical necessity in a time of material shortages.

Kevin Pethebridge’s own house at Hull Road, Croydon, 1947 (fig.227) illustrates a formal philosophy that was to colour almost all his domestic commissions; namely the expression of sleeping and living areas of the house through form by butting blocks together and expressing them as such via the change in roof form. With materials, the exterior lining would be expressed differently for each function. For example, sleeping: horizontal weatherboards for a horizontal activity and for living: vertical boards alternating wide and narrow for an upright activity.

Quite different from the Pettigrew House, the Hull Road House had more in common with the shed-like simplicity of war-time competition designs (15). Built on a sloping

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site the attached-zone plan was expressed by opposing monopitched roof forms butted together and pergolas were added. Within, rafters were exposed, there was an abstract massive white fireplace and ceilings followed the line of the roof. Contrasting with the natural textures of the vertical hardwood boards, caneite and slate slabs, colour was used to accentuate planes and emphasise form and its functions. The horizontal weatherboards of the bedroom wing were painted a light warm grey. The vertical boards on the living room were oiled. Windows, rafters and pergolas were white with the front door pale mauve and the back doors a cadmium yellow. Prejudice against skillion roofs was rife at this time. Pethebridge had to argue to the Croydon Council that the skillion roofs were part of a broken gable. Boyd called Pethebridge, the "moderate modern" (16), an accurate label when one considers his work which alternated between soft functionally zoned houses and more formal conservative examples which employed shutters and tiled roofs and plans compacted to more traditional layouts. His work never earned for itself a cutting edge except a bouquet of the month in one issue of Smudges for his Hull Road house (17).


Fig.228 Robin Boyd, architect. Boyd House, Camberwell, Victoria, 1947.

Robin Boyd’s own house in Riversdale Road, Camberwell, 1947 was a long stretched linear plan of two interlocking rectangular blocks each with a low pitched gable roof (18) (fig.228). The main feature of this house which was perched on the side of a creek gully, was an angled window to the bedroom block similar to that featured on a house in Berkeley, California designed by John Ekin Dinwiddie and illustrated in The Architectural Review (19). Within Boyd’s Camberwell house, the plan was extremely open with the kitchen opening off directly from the cork tiled living room. A hanging venetian blind separated the bedroom from the living area. By day, the bed slid under the cupboard division to the dressing bay. In
1954, the house plan was described as resembling a "railway train" (20) considering its elongated sequence of interlocking rectangular spaces. The narrow plan had resulted from a buildable strip of land less than forty feet wide. The roof was built of Solomit compressed strawboard (reputed to be one of the first uses of this material in Australia) which was exposed within and covered on top with bituminous felt and gravel. The side walls of bagged brick were putty green, the front wall and trims, white. The interior walls were also bagged brick, painted yellow green while other timber lined walls were painted white. The house was extended by Boyd in 1951.

**John Mockridge**

John Mockridge graduated from the University of Melbourne architectural atelier in 1941, having spent five years between 1932 and 1937 at the Gordon Institute in Geelong before studying in Melbourne (21). At the end of the war, he was an architect who bridged the generation of Mewton and Grounds and that of the immediate post-war graduates such as Peter McIntyre and Kevin Borland who graduated in 1949. Mockridge is therefore a more mature exponent of progressive design principles combining the pre-war tendency to highly selective and conscientious eclecticism. His houses blend the Melbourne tendency towards functional expressionism with a concern for texture and a sophisticated and engineered informality based on notions of harmony and order, repose, and above all, good taste.

A brilliant student, Mockridge admired principally the work of the Northern Californian architect, William W. Wurster, which he knew from American architectural journals. He enjoyed Wurster's informality of roof line, wide overhanging eaves, his varied and sensitive use of texture and natural materials, exposed timber rafters and fair face concrete blocks (22). Mockridge's houses and projects between 1940 and 1952 demonstrate this regard for contemporary domestic work of the Bay Region of San Francisco. His Cornell House, Baxter, 1946-47; the Harold Freedman House, Bayswater, 1946; the Sannazzaro House, Mt. Eliza, 1950; the Comfort Station at Sorrento Back Beach done whilst at the Public Works, 1939-40; the Ross House, Sorrento, 1952; three houses illustrated in the *Australian Home Beautiful* in December 1947 (23); and in particular the Watts House, Sorrento, 1946-47 with its...
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spreading splayed wings, all show Mockridge's regard for the human concerns and precise informality of the so-called Bay Region Style.

In addition to Wurster, Mockridge admired the work of other American architects, Richard Neutra, Carl Koch, Hugh Stubbins, Edward Durrell Stone, the geometry of Marcel Breuer and his refined architectonic approach to the house, and in particular the Serge Chermayeff’s house at Bentley Wood, Sussex, 1938 which had been illustrated in *The Architectural Review* (24).

The Cornell House, Baxter, 1946 - 47 (25) was a long stretched linear plan, with a low slung gable, and at one end, a skillion roofed studio with an emphasis on patio living (fig.229). The overtones were Californian, reminiscent of the Church House, Pasatiempo, 1931 by William W. Wurster.

The Harold Freedman House, Bayswater, 1945 - 47 is the classic "Victorian Type", a winged plan that uses the forms of the house to create useful private outdoor spaces to duplicate internal areas of the house (26) (fig.230). It is a typical Californian method of using the house as a screen.

24. "House near Halland, Sussex", *The Architectural Review*, February 1939, pp.63 - 78. The plan of Mockridge's entry in the two storey section of *The Sun Post-war Homes Competition*, 1945 bears some resemblance to that of Chermayeff’s Bentley Wood.


wall and grouping the forms of the house around a sun-drenched courtyard. A gable of low pitch roofs the kitchen/services and sleeping block and is butted at an obtuse angle to the "living porch" block. Other Californian traits include the indoor/outdoor fireplace and the garden landscaping, a flowing flower bed surrounding a paved patio recalling contemporary landscape designs of Northern Californian Thomas Church. This patio can be entered externally from underneath a porch roof which connects to a skillion roofed studio which was to be added later. The informal blend of house with a subtly sophisticated landscape design again recalls the collaboration of William W. Wurster with Thomas Church on residence and garden commissions in Northern California. The timber framed Freedman House was clad in weatherboards painted off-white with eaves painted grey blue. When originally published in Australian Home Beautiful, August 1945, the house was to be clad with vertically laid wide boards and natural stone work to be used on the fireplace walls (27). There is no dining room and the kitchen opens off the living room and acts like a bar. Stable doors, a Wurster detail, are placed on the entrance to the studio. Waxed hardwood boards line the walls and fibreboard ceilings soften the simple forms.

The idea of winged enclosing forms is extended in the Watts House, Sorrento, 1946 - 47 (28) (fig.231). The plan is bi-partite and predates the appearance of Seidler's "H" plans in Sydney. The Watts House plan draws much from Mockridge's Third Prize design for a £720 house in 1944, a bi-partite arrangement of living and sleeping zones connected by a sun gallery (29). Protected outdoor living areas, and simple single room width wings of butted boxes and sliding glass doors characterize this house. The


horizontally laid Baltic weatherboards are stained brown, the roof is corrugated asbestos cement, the floors are polished hardwood, the internal linings are tongue and groove jointed vertical boards with a rubbed paint finish. Each wing has a very low pitched gable, casement windows painted white and an oversailing gable to form a porch to the living room. The windows are broken up with slim white timber members giving the appearance of overscaled Georgian windows. The house is restful, informal and unpretentious, and on closer examination, its sophistication and soft functionalism is revealed.

The Sannazzaro House, Mt. Eliza, 1950 is a flat-roofed box clad in vertical timbers with generous glazing in overscaled mullions and pane sizes, with a gentle skillion and elegantly modulated exposed rafters (30) (fig.232). The box hovers over a dark painted timber plinth. The box was a response to the sloping site and dramatic level change, and hence the opportunity for the exploration of vertical space. The Sannazzaro House reflects a move towards abstraction not previously apparent in earlier house designs and experiment with non-gravitational hovering forms.
Frederick Romberg

Frederick Romberg’s design for the C. Short House at “Ventura”, Upwey, c.1947 extended his interests in texture and dynamic form-making (fig.233). Sited on a steep hillside, the house is built off a huge retaining wall forming the backbone of the house (31). A massive fireplace, wall in local natural stone is the functional pivot and divider between the living and sleeping-zones of the house which are expressed on either side of the mass with simple skillions having generous overhangs and cut-outs. Rafters are exposed within, the walls are timber panelled, the stair winds up around the fireplace which is the centre of the house and the dividing element of the plan. An open dowel screen marks the passage to the bedrooms. The living block is split level and below on the ground floor sits a carport, entry and garden space beneath the house.

The composition juxtaposes massive rubble rock construction against lightweight materials to reinforce the dynamism of the two butted skillion-roofed blocks. The cantilever of the eaves and balcony echo Romberg’s preferences for aerial forms. Romberg’s houses are consequently more animated than local exponents of this bush expression of the modern house (32).
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Roy Grounds

Between 1947 and 1950, Roy Grounds also contributed to the development of the post-war Victorian Type. The two houses at Barwon Heads for Lady Rutherford, 1947, the G.W. Goodes House, Frankston, 1948, the Oberhansli House, Centre Road, Vermont, 1949, the R.P. Neale House, Carlyle Crescent, Mont Albert, 1949 and "Iluka" for Roy Ashton at Mornington 1950 are the prominent houses of these years.

All the houses are dominated by strong gently sloping skillions with wide generous overhangs to the north, exposed eaves and a bold fascia running horizontally around the house. Banks of french doors are topped by highlights. East and west walls are blank. Fireplaces are located centrally on end walls. The houses are collections of very simple prismatic forms. The plans are simply zoned into rectangular spaces, massed into simple cubic blocks and butted together according to site and orientation with the desire for controlled outdoor space. The compositions are consistently prismatic forms grouped into simple linear blocks, staggered blocks, or L-shaped blocks. There are wide balconies, generous pergolas, and the suggestion of outdoor rooms.
The skillion roofed Goodes House is a linear block clad in vertical board and batten timbers, left rough and oiled, with window joinery painted white (33) (fig.234). The timber construction of the house was left revealed and extended out to the front to form a two metre wide pergola/outdoor gallery running its whole length to the north. The design of this north facade was based on a 2 foot 6 inch module. Within the house, the prism is simply zoned across the glazed north face into living and sleeping zones, with bites taken out of the prism for terrace and porch spaces which double as rooms.

The Walter Oberhansli House is a set of three staggered prisms each with a separate function, with solid west walls of stone and low pitch skillions and a gable roof over the central block (34) (fig.235). The south side of the house contains carport and drying yard in the courtyards formed by the stepped blocks. To the north, with its deep roof overhangs, the fully glazed living room and studio open onto flagged terraces. In the large central block, a free-standing stone fireplace separates the living from the dining area.


34. (Walter Oberhansli House, Centre Road, Vermont) "He Really Shapes His Houses", Australian Home Beautiful, February 1954, p.24.
The R.P. Neale House is an L-shaped block, with flat roof, wide eaves and banks of full height French windows (35) (fig.236). The L-shaped plan hinges around the placement of the kitchen at the corner of the L, so that direct access was available to the living area in one wing and the wide sun gallery in the other, as well as overlooking the private north facing court. Walls are bagged brick and there is a block fireplace centred on the end wall of the simple rectangular space of the living room.

"Iluka", the Roy Ashton House is sited high up above the water at Mornington (36) (fig.237). Sheathed in timber with white painted timber posts, exposed eaves and the familiar banks of French doors and vertical balusters, the house is a play of sticks, of structure logically expressed with simple rectangular spaces within. The module of construction is the guiding aesthetic. A kitchen and laundry block is attached perpendicular to the main three storey linear block of the house, forming a protected courtyard at the rear of the house away from the spectacular views of the Bay. The trapezoidal planned Owens House Sausalito, 1939 in the Bay Region of San Francisco, designed by Gardner Dailey has virtually the same spatial layout, massing and bold skillion opening up to the sky (37) (fig.238).
What these houses have in common are the traditional construction techniques and domestic elements of Grounds's pre-war houses but with simplified plan forms and a spare elegance gained from the nature of construction. At this stage there is amongst these architects no fear of making reference to traditional housing forms and elements such as pergolas, skillion roofs, low pitch gables, multi-paned windows (through circumstance more than desire) and informal plans. There is little or no specific reference to International Style motifs and expression. Materials are exposed, structure is craftsmanlike and unassuming. This was a simple warm domestic architecture that had much in common with New Empiricist houses of Scandinavia and England, and the woodsy houses of the Bay Region of San Francisco. A house at Gentofte, Copenhagen, c.1946 by Karen-Margrethe and M. Black-Petersen (38) (fig.239) with its exposed rafters, white painted joinery and timber shutters has the same low key blocked massing and low pitched skillion roofs as a house proposed for North Balwyn in 1947 by Melbourne architects, Yuncken, Freeman Bros., Griffiths and Simpson (39) (fig.240).

38. (House at Gentofte, Copenhagen) "3 Houses in Copenhagen", The Architectural Review, December 1946, p.171.

The development of this bush expression of the modern house was a modest local development that would change in the 1950s. Importantly, the houses built at this time were given some recognition with the coining of the phrase, the "Victorian Type" by Robin Boyd in his first book, *Victorian Modern*. For Boyd it was an opportune moment to attempt to unify aims in domestic design, to encourage a common goal for the architect-designed house.

*Victorian Modern* and after.

*Victorian Modern: One hundred and eleven years of modern architecture in Victoria, Australia* was published in July 1947. It was written by 26 year old Robin Boyd and commissioned by the Architectural Students Society of the Royal Victorian Institute of Architects (40). Neil Clerehan was Boyd's research assistant for the book. *Victorian Modern* was a seminal work, being Australia's first history of twentieth century architecture. Throughout the book, Boyd emphasised the idea of Australian architects designing for Australian conditions and the idea of a primitive functionalism. His postulating of the Victorian Type (41) was preceded by a calculated historic development in much the same way as Nikolaus Pevsner, J.M. Richards and Sigfried Giedion had developed their architectural histories with emphasized peaks and troughs of aesthetic development (42). In *Victorian Modern*, Boyd's highs were the works of the pioneer moderns such as Robert Haddon and Desbrowe Annear and the lows occurred during Federation, Queen Anne and the Jazz Age, all seen as aberrations and rampant stylistism.

The line of historic development was depicted using the house. Boyd constructed a selective typology over the years, which he later developed in *Australia's Home* of
1952. In this book of five years later, Boyd neatly described an end result of a double fronted house with a stubby L-shape plan, projecting bay, a porch, street facade which implied an ornamental and decorative approach and a rear facade that was ignored and bore no relation to the rear garden. It was depicted as a mean and crude if adequate vernacular (43). In the earlier Victorian Modern, the chapter headings, "The Primitives", "The Pioneers", "The Opulents", "The Decadents", and "The Prophets" show Boyd's selected view of Australian architecture and his depiction of an apparently common compositional tendency amongst architects towards the eventual development of the "Victorian Type". Vague notions of simplicity, abolition of ornament, rigorous structural and material truths were emphasized, carefully sidestepping the complexities of the suburb, the street and the traditional domestic language as well as the pervasive influence of the speculatively built bungalow.

Boyd made connections between John Mockridge's Freedman House, Croydon, 1946, and a house designed by a disciple of Griffin, thirdly an abandoned hotel and finally the single room width wings of an old homestead south of Geelong with a narrow verandah giving access to the rooms within (44). Boyd noted that the basic plan had not changed from its basis in single room width wings. The roof eased its pitch without ever completely going flat. Below the acceptable pitch for the traditional Marseilles tile, roofing was now light inexpensive corrugated asbestos cement sheet or corrugated iron. The sun gallery, generously glazed, replaced the communicating verandah. Robin Boyd's "Victorian Type" was depicted as the logical outcome of progressive design, rather than as a circumstantial result of building materials shortages, building restrictions and outer suburban or country sites allowing sprawling winged plans and lightweight timber construction.

Boyd had selected a post-war house form and constructed its history, much of which seems reasonable but highly selective nevertheless. The pre-war houses of Geoffrey Mewton and Roy Grounds, Buchan Laird and Buchan, Scarborough Robertson and Love, Martin and Tribe, Billson and Mewton, and John Mockridge are seen as predecessors of this logical mode of design. Yet as has been shown in previous chapters, the basis for their design

44. Boyd, Victorian Modern, p.60.
45. See Chapter 1, Eclectic synthesis and the emergence of the so-called Victorian Type. See also Philip Goad, "This is not a Type: Robin Boyd's 'Victorian Type' and the expression of the modern house c.1933 - 1942", Architecture Australia (Discourse V), June 1988, pp.56 - 64.
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was eclecticism rather than an idea of a universal type (45). Boyd depicted a changing eaves detail which gradually widened in response to an understanding of climate and to reduction in ornament. The profile becomes softer, cleaner, and gutters become simplified. The roof pitch gets lower and lower.

The importance of Boyd's labelling of the Victorian Type is that it is the first attempt by an Australian architect to demarcate a line of historical development in residential design. The Victorian Type is optimistically promoted by Boyd as the heir to an apparently developed typology. In his acute description of the so-called "Type", his logic seems convincing.

A long, low, light house spreads over the lot. It is made up of wings of single room width. The living room has a wall of French windows facing north; the double-light bedroom windows face east. An open fire in the living room with a stubby chimney exposed on an outside wall provides all the winter warmth. The roof is gabled and pitched as low as the selected material will allow, and the rafters are extended in one place as a pergola. The entrance door nestles in an angle of the wings and is screened by a porch formed of an extension of the roof. In the screen to the porch the designer's fancy takes modest flight. Reduced to minimum proportions this house becomes just two wings; the living room in one, the bedrooms in the other, with the entrance and services at the junction. Expanded by a more liberal budget it spreads its wings in all directions and often, near the centre, sprouts another floor of bedrooms.

Thus the Victorian house has developed with something inherited from a century of Victorian living, something borrowed from the more sophisticated experience of California, and a great deal learned from the world-wide modern movement. Its birth in Melbourne early this century is wrapped in mystery. No-one can say where it was born or who was the father (46).

In all of these houses, the house form is broken up. Function is expressed in block form; materials and textures are mixed, glazing quantity reflects room function, and climate is religiously observed. Effort is taken to reduce the mass of the wall with large areas of glass. Form is not singular, rather it becomes an aggregation of parts. The
planning rationale is hard and realistic. In three dimensions, the house form becomes picturesque. Response is therefore specific and individual, rather than universal. The post-war so-called Victorian Type is in actual fact an extension of the tradition of the bush expression of the modern house.

Boyd follows up his concise description in later articles for *The Age* newspaper and *Architecture* (47). He describes no methodology of design nor attitude to living but rather a common set of elements, materials and planning techniques. The program of the family is not mentioned. The fact of a complexity of sources is not entertained. His use of the word "type" is flawed, but the intention is clear: to create a universally applicable housing type (developed by architects) that could conceivably be copied by speculative builders and raise the general standard of the vernacular.

In his article "Mornington Peninsula" in *Architecture*, 1950, Mewton and Grounds houses of the 1930s are again cited by Boyd as important predecessors to the informal houses of the late 1940s (48). The Henty House, the Loris Pirani house, "Lyncroft" and the Rosanove House are all located on the Mornington Peninsula. All of these houses have simple skillions or low pitched gables, informally rambling compositions, French doors, outdoor rooms and stretched wings of single room width. Boyd suggests that these houses encouraged the use of timber in a light open frame and the possibilities of outdoor living.

_This was holiday land; it was holiday time for architecture. The over anxious architects had been left behind in the city. Here the plans were simple and free. Building materials were allowed to discard their stiff clothes; they went naked and unashamed and seemed to enjoy the sunshine_ (49).

Boyd suggested that these houses implied,

_a spontaneous public movement, the closest thing to an architectural renaissance to be seen this century in Australia.....here is whiteness, naturalness and simplicity suddenly accepted by the public.....collectively their significance is inescapable_ (50).

In a brief recipe for "Peninsula Planning", Boyd describes the type as follows:

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49. Ibid., p.149.

50. Ibid.

In a sample house plan provided (fig.241), a living zone butts against a sleeping block, forms are simple and imply outdoor rooms. The houses are unaffected by International motifs, colours or planning techniques. The structure is standard timber frame. Boyd's claim is that this rational approach to building and taste for logic has been accepted by the public and even by the speculative builder. In Victorian Modern, the idea of a collectively accepted type was also strongly emphasized. Boyd suggested that the speculative builder was taking the every day vernacular bungaloid type and making a shy version of the Type, extending the stubby projection into a wing, simplifying and lightening the finishes of windows and eaves, though compacting its plan (52). In 1947, the Type was favoured by builder designers, the Housing Commission of Victoria and by most prefabricators.

In a time of shortages and great demand, the Type represented the most expedient and reasonable solution and the most obvious and desirous conclusion to a book that marked the first beginnings of a continuity of architectural history for Australia.

According to Boyd, to work outside the sphere of the Type, one would necessarily be an "exhibitionist" or "only the architects with something personal to say about
planning and structure will be able to break their houses free of the chain" (53). The idealistic implication of such statements was that a satisfactory method of planning and repertoire of materials and finishes had been reached. Architects and builders could now join forces to produce houses of equality, both in terms of status and concept. A dilute socialization of design was envisaged.

Boyd's reasons for the existence of this apparent unanimity of design are phrased so that instead of the chronic shortage of materials, labour and finance, the creative urge of present day architects is highlighted. "The simple, direct approach is universally accepted: Period styling is utterly discredited" (54). At the time, traditional domestic ornament and decoration were simply unaffordable in a time of rationing and austerity. Regardless of this apparently positive tendency toward universality however, Boyd warned of no great improvement in domestic design "as long as one family, one building remains the only acceptable ratio to Australians" (55), i.e. if the program of the single family house was not to develop and change to multiples, then domestic design would not improve. The 1950s and early 1960s confirm Boyd's prediction, as the program for the Melbourne detached house stabilized and architects veered towards aesthetic and structural experiment and the celebration of a new post-war lifestyle rather than a search for a new housing program. It was only in the mid-1960s with cluster housing and new interest in flats that the single family home came to be questioned.

However where Boyd did see the architect pushing forward new boundaries was with prefabrication, though he conceded that prefabricated homes were thwarted by the tendency to fall back on traditional materials and techniques at every turn or bear the brunt of political prejudices such as that encountered by the Beaufort House project. Boyd was to advocate,

The architects must become the builders, or the builders must become architects. Only when sound design becomes automatic and inherent in the building operation will it be able to compete on the open market with the familiar bad design (56).
Not a new hope, yet one which Boyd was to push with his Small Homes Service articles. In 1947, Boyd also saw hope and optimism in the planning ideas and proposals for country towns such as Swan Hill (Frank Heath), Shepparton (Stephenson and Turner) and Cobram (Bates, Smart and McCutcheon), i.e. residential planning on a large scale. At the same time he warned that design leadership from planners lacked advanced aesthetic philosophy. In his view, a great deal of energy and foresight was henceforth going to waste. Boyd concluded his first book with a command that architects exercise their efforts to go beyond politeness and etiquette:

*Virile constructional exploration is needed and artistic integrity, if the current modern movement is not to degenerate into a sterile gentility* (57).

It was a call that Boyd was to echo continually, encouraging the architect to move beyond being simply a polite commentator on society's ultimately reactionary whims.

By November 1952, when Robin Boyd's article, "Port Phillip Idiom" appeared in *The Architectural Review*, it seemed that such an article would describe the development and consolidation of the so-called Victorian Type. That was not to be. There was no insistence on the Type. There was however this statement from Boyd.

*The family quality is indubitably on the organic side. It is also woody, essentially framed and modular. Even the brick buildings are seldom crustacean; the brick skin is usually backed by a frame....The immediate international sympathies are with California (for broad and open planning, but Melbourne's unpleasant winds limits outdoor living) and Scandinavia (for lightness and the free use of traditional materials)* (58).

But Boyd's words belie the houses he illustrates with the article, which depict a diversity which was not present in the late 1940s. Not only is there a simple Victorian Type, but there is a long stretched truly open-planned house, a house in the shape of an equilateral triangle, a house elevated on stilts, and a crisply planned and detailed brick veneer box. There is diversity rather than uniformity, and the faintest hint of a decade of rich complexity to come.

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57. Ibid., p.70.

A New Generation of Architects and The University of Melbourne

Between 1948 and 1951, the most progressive designers of Melbourne houses of the 1950s graduated from the University of Melbourne. This group of architects was the third generation of modern designers, which had begun with the era of Geoffrey Mewton, Roy Grounds, Norman Seabrook, and Best Overend, and bridged by that of John Mockridge, Robin Boyd, Kevin Pethebridge, J.F. Spears, Frank Bell and Frederick Romberg. The war had caused an unusual pause in graduate output. The post-war graduates were to enter a field oozing with optimism, change and experiment. Between 1948 and 1951 young graduates included John Hipwell, Douglas Alexandra, James Earle, Peter McIntyre, Neil Clerehan, Phyllis Slater, Don Hendry Fulton, Barry Patten, John Murphy, W.H. Carr, Kenneth McDonald, James Birrell, Theo Bischoff, Lionel King; Kevin Borland, David Saunders, Donald Crone, Robert Trengove and Neil Montgomery, David Chancellor and Rex Patrick (1).

The teaching atmosphere of the late 1940s was an exciting and colourful one. In March 1947, ex-atelier student Brian Lewis returned from England to take up the newly created Age Chair of Architecture at the University of Melbourne (2). Lewis had been greatly impressed with two overseas Schools of Architecture, Liverpool and Zurich and wished to distil the best from both and incorporate their superior qualities into his own school (3). He had been impressed by the co-operative studio set-up at Liverpool, where students worked long hours in the studio, helped each other and learnt from their colleagues. The Zurich Technical Universities Course, with its aim of integrating the different subjects from design to construction into the same object or building, and the continual acquisition of both practical and theoretical knowledge became the basis for a new Melbourne course instituted in 1948 (4).

The list of staff was an exciting one. Roy Grounds began teaching in 1948, having been offered a lectureship in architecture by Brian Lewis, who was departing on a year's sabbatical to study university architecture overseas as he had just been commissioned to design the Australian National University (5). He gathered around him a distinguished band of part-time lecturers and tutors, all engaged in private practice. The list included Raymond Berg, Keith Mackay, Frederick Romberg, Robin Boyd,

1. The list of B.Arch. graduates was obtained from the University of Melbourne Calendar, 1949, 1950, 1951, 1952.
Chapter 3: A New Generation of Architects and The University of Melbourne

Fritz Janeba and Hubert Waugh. Grounds did not lecture but organized his students into discussion groups, setting them projects to be completed in two or three days, followed by critical seminars located under trees in sunny weather or the closest pub if it was raining (6).

Student work appeared at the 1949 Red Cross Modern Homes Exhibition at the Exhibition Buildings (7). Ten models by final year students for a "house for the immediate tomorrow" confidently showed bold skillions, generous floor to ceiling glazing, white painted timber mullions, paved terraces and modulating verticals (fig.242), all reflecting a post-war lifestyle of outdoor living and Californian informality both in program and softened images of the International Style. Lightweight panel materials and structural window mullions, and fresh zoning ideas abound. These students were about to be unleashed onto Melbourne's domestic scene which was hungry for talented young architects.

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6. Ibid. It was not until late 1951 that Grounds and Lewis were to come in lengthy conflict over the teaching directions at the University. Grounds, who had not felt that he was "standing - in" for Lewis, believed that he had built up the faculty from virtually nothing. Lewis had no intention of sharing authority with Grounds and a personal feud developed between the two resulting in Grounds being relieved of virtually all his teaching duties.

CHAPTER FOUR:

THE 1950S AND THE MODERN HOUSE
The House and the Post-war Family

Australia is the small house. Ownership of one in a fenced allotment is as inevitable and unquestionable a goal of the average Australian as marriage (1).

The 1950s confirmed Robin Boyd's words in his foreword to Australia's Home. Home ownership soared during the decade. Happiness and a home on a quarter-acre block were inseparable and compulsory goals for the post-war couple. Over the 25 years to 1947, only 45% of Australians owned their own homes. By 1954 the balance had changed dramatically and 63% of the population owned their own home (2).

In 1949, the Liberal Party came to power bringing with it liberal capitalism, powerful fuel for the transformation of Australia into a modern society along with the exploitation of a middle class neurosis, the fear of Communism (3). Economically and politically, the single family house was an essential ingredient of liberal values, a symbol of optimism and economic prosperity for the decade, of security after the straitened circumstances of war, and the indomitable symbol of stable family life. As the Menzies regime took up "the remaking of Australia according to the American recipe for a modern industrial society" (4), a house and a car were the first on the shopping list for the young hopeful couple in the 1950s.

Here's a happy, warm hearted kind of picture. It's a picture that has something particularly Australian about it - the neat suburban home, the well kept garden, the family just about to go out on a week-end jaunt in the family car (5).

2. Stella Lees and June Senyard, The 1950s: How Australia became a modern society and everyone got a house and a car, p.22.
3. Tony Griffiths, Contemporary Australia, p.43.
4. Lees and Senyard, op. cit., p.5.
5. Advertisement for General Motors Holden.
That car was the Holden (fig.243). Sundays were taken up with driving to new estates in Balwyn and Doncaster to look at the new display homes in the new car. The dream house was set in its dream suburb. The expansion of the suburbs relied on the motor car as the basic form of transport. Hence at the heart of the rapid expansion of Melbourne was the unquestioned inclusion of the motor car in each family. The garage or the "carport" became an integral feature of the house and added considerably to the look of the house, increasing its apparent size. By 1960 the double carport often became the major public face of the house to the street. The 1950s were the years of the "drive-in" - the drive-in cinema, the drive-in bank and now the drive-in house. The garage or carport was frequently incorporated under the main roof of the house and adjacent to the front door. The carport was the solution to the garage and its fire separation regulations and the logical development from the many pergolas around Melbourne which had mysteriously acquired light roofs and become homes for the new car.

In *The New Australian Home* of 1954, Kenneth McDonald echoes Le Corbusier's words in *Towards a New Architecture*,

*The car connects the life of the house with the Town and the place where it is housed is just as important to the successful working of the plan as the kitchen's relation to the dining area....The car stall is an essential part of the house* (6).

As the carport came to the front of the house, often roofing the way to the front door, the major living areas retreated from the street. Blank walls obtained privacy and showed off the Holden or the new two-tone Falcon. The car in the 1950s became an integral part of a new Americanized lifestyle. In most cases it represented the largest single item of expenditure for a family apart from the house itself.

The car was just one part of the material changes of 1950s consumer society. Home and family were now moulded to meet American standards of contemporary living rather than the traditional standards of the British whose living standards had been battered by the effects of war. The brilliant success of post-war America was irresistible to the Australian homemaker. The image of an ultra-modern
America dominated advertising and all forms of the media. With glossy publications on home decorating and furnishing and annuals of dream homes, American

*Another Frigidaire release!

FRIGIDAIRE

WALL OVENS, COOKING TOPS
FOLD-BACK UNITS

bring the "American look" to Australian kitchens!

Fig. 244. Advertisement for Frigidaire Wall Ovens and Cooktops, from Architecture Today, August 1959.

standards outshone the dull and sparsely illustrated scientific analyses of post-war living emanating from British housing experts. The idea of America was associated with optimism, success and the freshness of movies like "Oklahoma" and "High Society", the lively and light musicals of the 1950s offering release and definitive stamps of youthful happiness after the seriousness of the previous decade. Australia, understandably, was swept blithely and innocently into a modern industrialized nation by this enthusiasm for all things American.

After the restrictions of war, of food and clothes rationing, of penny pinching and getting by, release came in the form of an eager consumer-driven society. America was always the example with its wealth of modern conveniences, cars, household appliances and television. Australian newspapers, home journals and women's magazines featured pages of advertisements for refrigerators, washing machines, stoves, vitamisers, vacuum cleaners, toasters and kettles and the double bowl stainless steel sink. The
whiteness of the new washing machine, fridge and oven (fig. 244) dazzled the 1950s housewife and signalled the downturn of the "Cream Australia" policy to bring the "American look" (7) to Australian kitchens. The cult of domestic consumerism had begun.

The housewife as consumer became a prime target of the advertising industry. Shopping for the home, decorating the home, furniture and appliances for the home were targeted by industry and the housewife was the key to success. The excitement engendered in the material acquisitions of the home outshone changes to the planning of the house during the decade. By 1960, changes to the house were superficial rather than basic. The kitchen, the laundry and the bathroom featured heavily as the areas of greatest technological change.

The focus of this consumer excitement was the kitchen, the "mechanized centre of the house, like the engine of a car" (8). The positioning of the "housewife and her control centre" (9) was considered crucial to the efficient operation of the home. The kitchen became the most important room of the house for the family and also financially, as the repository for consumer excitement and the week's earnings.

In the late 1940s, area restrictions had eliminated the dining room and replaced it with a small alcove off the living room and most meals were taken in a tight built-in "nook" of table and benches in the kitchen or a small table pushed against the kitchen wall. As the house grew smaller, the "kitchen arrived with some families in the sitting room" (10) and there was no space in the kitchen to accommodate a table and chairs. The kitchen was then separated from the dining space by a serving counter with stools provided on the dining side for breakfasts at the laminex sheeted "breakfast bar" (11).

Photographs and plans of a model kitchen prepared by the Bureau of Home Nutrition and Home Economics of the U.S. Department of Agriculture on display at the R.V.I.A. Small Homes Service in August 1951 with its efficient "vegetable preparation centre" and "functional U-kitchen" (12) caused hundreds of people to buy copies of its plan. Small Homes Service articles constantly lamented the lack

10. The Age, 17.11.1948.
11. Boyd, Australia's Home, p.120.
of good industrial design for kitchen equipment in Australia and the gap between American and Australian standards.

By 1958 refrigerators were white and square edged instead of streamlined cream; ovens and hotplates could be built in and the stainless steel double bowl sink (fig. 245) and dishwasher were readily available but not always affordable.

For the Home of TODAY

This New SOUNDPROOF Stainless Steel SINK

ONLY MYTTON'S give you the Sounproof Sink.

NEW SHAPED BOWL — with wide STREAMLINED BEAUTY — in every radius corners and curved sides. Make and dishes fit to the full depth of the bowl. Makes washing-up easier.

HYGIENIC — EASIER TO CLEAN.

EXTRA-DEEP SPILLPROOF SIDES. GUARANTEED.

DON'T BE SOLD AN OUTDATED SINK — Make Yours a MYTTON Kitchen!

WHAT AUSTRALIA MAKES — MAKES AUSTRALIA

The dining room became part of the kitchen area along with the breakfast bar, dining now separate from the living room. By 1960, the dining room was once again a separate alcove or room and the kitchen encompassed a breakfast bar and second living room, the family room, and everything in the kitchen was determinedly built-in.

Similarly in the bathroom, the bath once standing on claw feet was now set against the wall. New white basins were now supported at the front corners by slim steel posts, a change from the porcelain pedestal of preceding years. Some basins were inset and were now called vanity units.

After the war, the bathroom had contracted and split into three compartments. The depth of the compartment was
The Modern House in Melbourne 1945 - 1975

The Modern House in Melbourne 1945 - 1975
governed by the length of the bath (5' 6") and for the next ten years the Victorian bathroom carried a bath and basin in one compartment, next was the toilet, and then the shower room, all in separate rooms off the passage. The location of the w.c. was often dependent on the cost of the house and land. In the lower price range, an external w.c. in the early 1950s was still usual, located on an external rear wall or porch, this position often a sociological choice rather than one of economics. New taps were available; the words hot and cold were replaced by pink and ice blue. New laminated plastic finishes and wall tiles in the latest fashion colours appeared in the bathroom. Vinyl tiles spread in jazzy checks across the floor (fig.246). The position of the bathroom drifted towards the bedrooms, often separating the main bedroom from the children's, or else the services were all grouped near the kitchen.

By 1957, experiments were being made with an internal service core of a bathroom in the centre of the house and adjoining the kitchen which received its light from external walls. The skylight was a "glamorous plastic dome" (13) which many councils would simply not accept. To counter

But the last word in Floor Tiles is Vinyl

VINYL

Fig.246 Advertisement for Vinyl Tiles, Architecture and Arts, November 1957.

this a stilted wall was built up in the middle of the flat roof and a clerestory window installed, an external wall being achieved.

The automatic washing machine also now arrived from England via America. It was fully enclosed and glistening white. The days of the copper and concrete troughs of the old laundry were over. Before the war, the agitator type washer had been standard equipment in many homes and this in itself was the first advance in clothes washing techniques since the corrugated glass scrubbing board.

Implicit in the trumpeted arrival of these new appliances were their qualities of labour-saving efficiency for the post-war housewife. Surfaces were artificial, non-slip, non-tear, "hard wearing and easy work", "fresh and smart".

Nylex stays new! ....... A quick wipe with a damp cloth - that's all you have to do to keep it new! (14) (fig.247)
The housewife of the 1950s was to be given more and more time saving and maintenance-free finishes and appliances. The virtues of Laminex were legion in this bright clean new consumer age but little comment however was made of the result that the housewife was expected to do more and more work. Not only was she required to be the perfect mother and hostess but also be cleaner, launderer and cook. The absence of hired help now meant that the house had to be tailored for efficiency and optimum maintenance of personal hygiene. As Adrian Forty points out, this need (not a new one) engendered a heightened sense of domestic responsibility (15). Pressure to accede to seductive advertising of consumerable aids for the home mounted dramatically.

Adding to the media onslaught on the home was the arrival of television in Australia in 1957 which in content and message promoted America as the centre of the universe. Television forced the premature arrival of the family room. It made the open planned living/dining and kitchen arrangement unbearable and retreat from the television required a second living room. Only in the 1960s however did such a room gain the label of Family Room.

The house and its 1950s family were moulded by the material changes to suburban living. The car, the television, and the new revitalized consumerism diluted the traditional spatial notions of the suburban home. The fireplace, the street, the dining table and the front garden receded from prominence as the sacred symbols of the home. Dwelling took on the new face of material acquisition and the pleasures of private living in Box Hill or Moorabbin. The ritualistic spaces of the family changed to the breakfast bar, the TV room, the kitchen and the "new casual living" (16), and washing the Holden on Sundays. Simply to speak of the Semak vitamizer, the Hills hoist, flecked laminex, the gothic bra, canned spaghetti bolognaise, ramekins and the kidney shaped coffee table is enough to conjure up the faster faddish world of the 1950s suburban home. The increasing emphasis on the consumer item in the home was nowhere more marked than in the concept of the exhibition house which encapsulated the most current changes in Australian home life. The era of the house as commodity was about to begin.

16. According to architect Dione McIntyre, "the new casual living" was a contemporary term in the 1950s to describe the ambience of the post-war domestic lifestyle.
Chapter 4: Exhibition Houses: The State of the Modern Melbourne House or Just a Bad Dream?

Exhibition Houses: The State of the Modern Melbourne House or Just a Bad Dream?
The exhibition house came into its own in the post-war decade. The house built specially for a home show or as a display home formed part of an extremely persuasive marketing strategy for architects as well as the building industry. As a public relations vehicle, exhibition houses attempted to perform the difficult task of appearing to appeal to the public and advance apparently progressive architectural ideas simultaneously. Unlike the exhibition house program run by the Museum of Modern Art in New York where houses by Gregory Ain and Marcel Breuer sat as art pieces temporarily erected within the hallowed halls of the art world (1), and which were viewed as art objects, the exhibition house at an Ideal Homes Show was an item of immediate potential possession. There was no better way to display the features of a house than to build it, have the public visit it and appraise it. However, the critical distance available to an art object was not an issue. These houses would be thoroughly examined by the keen average homebuyer as realistic alternatives to everyday living.

To examine exhibition houses built between 1945 and 1961 in Melbourne is to see a different quality of house, an odd house compared to those of either architect or speculative builder. In many ways, the exhibition house is an idiosyncratic design which is invariably concerned with features rather than with site, location or ideas about architecture. By looking at the houses shown, one sees the progressive decline of the IDEA of the house, in favour of consumerable surfaces, forms and veneers, elements which Robin Boyd was to label as "featurism" and to heatedly condemn in his 1960 book, The Australian Ugliness (2).

The House of Tomorrow
For 11 days in October and November, 1949, the highlight of the Red Cross Modern Homes Exhibition was the "House of Tomorrow" designed by Robin Boyd, director of the R.V.I.A. Small Homes Service. The house was not only intended to jolt standard perceptions regarding the nature of the post-war home, but also to illustrate available potentials in small home design and promote the progressive image of the Small Homes Service.

The architectural aims of Boyd's exhibition house were straightforward: to demonstrate principles of free planning,


light timber construction, and simplified finishes and materials; and to attempt to show that in the field of modern domestic architecture, Australia was equal to anywhere in the world.

The House of Tomorrow was built at full scale (fig.248). It was a two storey house of nearly 13 squares planned on a modular system with a precut frame. Its furnishings donated by leading Australian suppliers of domestic equipment, were to make it a "gallery of modern Australian design in everyday things" (3). The design of the house was a bold bi-nuclear plan of two interlocking rectangles. The intersection was a glazed gallery roofed in perspex. To one side, there was a living room with a fully glazed window wall with the glass fixed into the studwork. On the other side of the house there was a two storey block, zoned into living and sleeping by floor separation, the upper floor cantilevering dramatically overhead forming a sunshade for the dining room below. Above there was a wafer thin flat roof with exposed rafters that projected yet further beyond the line of the building.

The plan of rectangles of single room depth and specific function owed much to Boyd's prize-winning entry for the

[Image: Fig.248 Robin Boyd, architect. "The House of Tomorrow", Red Cross Modern Homes Exhibition, Exhibition Buildings, Melbourne, Victoria, 1949.]
Chapter 4: Exhibition Houses: The State of the Modern Melbourne House or Just a Bad Dream?

1947 Haddon Scholarship, a design for Mildura Art Gallery. Slim lines and a frail insubstantial quality permeated this fresh post-war design. The title of "House of Tomorrow" was played down by Boyd who abnegated this "Jules Verne" title (4). The furniture for the house was specially designed by Grant Featherston, the parabolic bullet reflector light fittings supplied by Brown, Evans and Co. and the curtain fabric designed by Francis Burke (5). For many the colours were a shock, walls of purple and blue green. It was a determined move away from the pre-war cream and greens. In the children's bedroom there was a light yellow rubber floor, grey and white vertically striped wallpaper and a dark blue ceiling. In every aspect, the house was aimed to present a total package of assured good taste. All the objects on display were available through the normal retail outlets but in this House of Tomorrow, all items were selected to project a totally designed image to the public view. The house was a Gesamtkunstwerk, a total work of art, analogous to Arts and Crafts principles of individually designed objects integrated within an individually designed environment. In retrospect, Boyd decided that the outcome was "too revolutionary a change in people's ideas all at once. The pill should have had a much thicker coating" (6). The 8'3" ceiling, 9" below the 9' regulation minimum was hardly noticed by the public. Boyd noted this and advocated publicly that Victoria should reduce its minimum ceiling height to 8 feet.

If the House of Tomorrow was considered too advanced by Boyd at the time, his ideas were however prophetic and were to permeate architect designed houses for much of the following decade. In 1949, the exhibition house was one that accurately embodied architects' ideals and made no concessions to popular taste.

The Sunshine House

In September 1951, the R.V.I.A. Small Homes Service was asked to provide the Sponsors of the Jubilee Homes and Better Housekeeping Exhibition for a "Sunshine House" which was to be raffled off at the exhibition and built on a donated block of land in Mt. Waverley.

Robin Boyd designed the T2103, a flexible bi-nuclear plan with a sun room and hall as the separating wing between the living and sleeping blocks of the house. For simplicity

4/11
of construction, the wings were made of standard 14 feet sections, able to be extended in any direction without radically effecting the line of the roof (fig.249). The partially prefabricated house was erected under the supervision of Peter McIntyre.

The two major wings of the house enclosed a sun-court or sun-trap paved in stone slabs. The court was opened up by the skewed placement of the bedroom wing. The splayed plan repeats a plan used by John Mockridge at his Freedman House, Bayswater, 1945 - 47 and the Watts House, Sorrento, 1946-47. Generous amounts of glass, but low pitched gables, show Boyd attempting a more sedate house of tomorrow at this exhibition. The Sunshine House was designed to arouse and stimulate and it did shock though not in a formal way as the House of Tomorrow had done. The big copper hood over the chimney and the strong interior colours brought more response than any other features of the building, and though architecturally tame, this house was to earn the title of the "most criticized house of the year" (7).

Fig.249 Robin Boyd, architect. "The Sunshine House", Jubilee Homes and Better Housekeeping Exhibition, Exhibition Buildings, Melbourne, Victoria, 1951.
The Age Dream Home

The R.V.I.A. Small Homes Service prepared plans in April 1955 for The Age Dream Home which was to be awarded as first prize in a competition conducted by the newspaper. Neil Clerehan was the designer of the house which was built at 45 Union Road, Surrey Hills (fig.250). Between March and August 1955, publicity for the house was cultivated by Clerehan's Small Homes Section articles in The Age where virtually every feature in the house was discussed, from furniture to wall cladding to the brand of the bath.

Fig.250 Neil Clerehan, architect. The Age Dream Home, Surrey Hills, Victoria, 1955.

The Age Dream Home did not embody dreams but was rather a period specimen of current trends in furnishing and small house design. Built on a sloping site, the simple rectangular form was laid diagonally across the site to increase its street presence. The main bulk of the house sat dramatically over a carport supported on thin steel columns. A simple compact plan under a shallow pitched gable, the zoning of the house centred around the open living area off which led doors to bedroom and service areas. The plan and form of the house were by no means advanced yet the major impact of the Dream Home was its use of new materials and equipment now available to homemakers. A gleaming white Cannon gas cooker, a pressed metal bath and shower base of stainless steel, 20 power points instead of the regular 7 or 8, an automatic central heating plant, new "Beco" light fittings, a Bruce Anderson designed ladder frame to contain books, drink cupboard and radio gram unit designed by Clement Meadmore; all reflected the increasing consumer interest in the house rather than as an architectural design. The Dream Home was not a radical attempt to shift planning and formal perceptions of the home.
In short, by 1955, *The Age* Dream Home does not bring with it an architectural revolution. That was not the aim for the Dream Home anyway. Rather it is the consolidation into one house of many of the ideas that younger architects had been preaching and practising for several years. It was an unspectacular house with spectacular materials and fittings.

A Stegbar window wall and vertical boarding form the facade. The ceiling follows the slope of the roof. The external walls had a polythene insulation and sarking called "Visqueen". Corrugated reinforced plastic was used in the form of a translucent eave. It was brilliant yellow and the asbestos cement roof was brick red. Laminated plastic was used on a wall surface in the bathroom which was floored in magnesite flooring. The tiles in the living room were vinyl of a specially mixed dull peacock green, a colour also used on this room's wall and ceiling. The vertical boarding of the exterior wall folded back inside to form the feature wall of the living room (fig.251). Rugs were laid on a waxed hardwood floor.

If architecturally the Dream Home was not a landmark, as a public relations exercise it was an unprecedented success. In the four week period of inspection, a total of 40,000 people passed through the house. More than 3000 people inspected the house on the first weekend of opening. Cars were parked bumper to bumper for almost 400 yards while crowds waited patiently to file through the house (9). The Dream Home was a misnomer for architects but for the Melbourne public, its name had the obvious appeal to make it undeniably desirable and something to dream about.

![Fig.251 Neil Clerehan, architect. Interior of *The Age* Dream Home, Surrey Hills, Victoria, 1955.](image)

Chapter 4: Exhibition Houses: The State of the Modern Melbourne House or Just a Bad Dream?

The House of the Future
At the Ideal Homes Show in 1956, a free-form “House of the Future” was designed by architect Best Overend (10) (fig.252). Complete with its own “flying saucer”, the house with free form base floor and roof and indeterminate glass walls, this house of the future resembled Oscar Niemeyer’s own house, Rio de Janeiro, Brazil, 1953 or Robin Boyd’s satirical designs in his Insulwool advertisements for Smudges in the late 1940s (11). Overend’s scheme was unashamedly futuristic with a panoramic TV screen, visiphone, sunken bath, circular bed, suspended dining table and centralized service core. This was an extreme vision for the house and one which was truly in the dream category.

Demonstration Houses

Far more down to earth were the exhibition houses built by sponsors of building products and materials. In November 1955, the "Fibrolite House", T2143 sponsored by James
Hardie and Co. and designed by Neil Clerehan was opened in Whitehorse Road, Blackburn to illustrate the use of fibrolite (asbestos cement) in the building of a house (12) (fig.253). Asbestos cement was used not only for the roof but also for eaves, gutters, downpipes, internal and external walls. A few blocks down Whitehorse Road, the Victor Insulwool Show House was designed, again by Neil Clerehan, and built in November of 1957 to demonstrate the new Victor Plasterboard wall, and ceiling linings on timber frame construction, with Perfotile acoustic tiles, Insulwool insulation plus plaster cornices as well (13) (fig.254). This flat roofed house had a modular plan and was cleverly sited on its quarter acre block to provide northerly aspect for as many rooms as possible with a series of floating squares adjusted to provide open court spaces.

The National Heart Foundation Dream Home
In January 1961, a £70,000 "dream house" sprang up overnight in the centre of Melbourne. The house was "armourplated" with a specially developed clear finish to preserve it and prevent the risk of damage. During the next six months, the sponsors expected that more than one million visitors would inspect the house, built by the Master Builders Association of Victoria for the National Heart Foundation. The aim of such a venture was to help raise money for the Australia-wide campaign to help control heart disease (14).

The designer of the house which was called "Heart's Desire" (15) was architect, Trevor Bain, of the Lord Mayor of Melbourne, Cr. Bernard Evans's firm, Bernard Evans
and Partners. The 30 square timber and plywood house was erected on a vacant block in Collins Street (fig.255). The description of the house is revealing as to the mixed intentions of the architect.

**Built in a distinctive style described by the architect as "a mixture of modern American and Hawaiian", the eight roomed double storey house combines the graceful curved lines of ancient Polynesia with the precise straightness of the modern contemporary of the Occident.** Apart from the one retaining wall on the lower section which is in strato stone, the whole structure is natural timber and plywood (16).

The journal *Architecture Today* was dismayed at this "Hodge-Podge-House". Although the magazine acknowledged the good intentions of all those who had generously donated time, energy and materials, the journal considered that "it is frightening to consider the adverse effect the house could have on the public" and baulked at the description of the style, "Contemporary Pacific....a house the like of which you have not seen in Australia." The journal asked quite appropriately "Is it any wonder why?" (17). The interior decor was to be changed at various intervals from contemporary to period. Intended to

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**Fig.255 Trevor Bain, architect of Bernard Evans and Partners, architects. The National Heart Foundation Dream Home, Collins Street, Melbourne, Victoria, 1961.**


display Australian timbers both in the interior and exterior, the floors, walls, ceilings and roof consisted of selected plywood, largely rotary cut myrtle with mountain ash for essential hardwood. The roof form was a series of repeated folded gables which formed a concertina like roof section. The rumpus room was fitted with a 16mm projector for home movies. The three bedroom house had ensuite and bathroom and powder room and a vast living room, a den, a separate dining room and two outdoor decks upstairs. There was a double carport adjoining the front entrance and at the rear a swimming pool with cabana.

This house epitomized the glamorous aspirations and acquisitions available in the home at the turn of the decade. Here was a house upon which Robin Boyd would have poured forth vituperative scorn. The house was a prime example of the house reduced to a collection of consumerable parts and glamorous veneers. This house was about an attainable lifestyle and not about architectural theory or new ideas. It was about a Dream that was bound up with attaining status rather than positing a new way to live in 1961. The house was a direct lifting of contemporary American notions of living and their love of exotica. A wave of "Pacifica" had run through American popular home journals in the early 1950s (18). This was the consumerable house at its most changeable, a fashion object altering at will with the rise and fall of popular taste.

The change between 1949 and 1961 was considerable. Whereas in 1949, Boyd was pleading for a new plan, a new structure, a new colour scheme, by 1961, those planning techniques and structural innovations had become accepted and taken for granted. The issue was now one of surface and veneer, and the search for visible stylistic allusion and decoration. Surface elaboration was desired and demanded by the popular palate. It was a phenomenon little understood by architects at the time and one which would plague architects right through until the mid-1970s. The modern house was a complex object, but few architects were prepared to recognise this, nor could they take up the challenge of constraints, given their upbringing in the rigours of modernism.

18. For example, "You can learn a lot about indoor/outdoor living from Hawaii", House and Garden, October 1951, pp.132 - 135; "Pacifica", House and Garden, April 1952, p.83.
CHAPTER FIVE:

1950 - 1960 - THE MELBOURNE HOUSE LOOKS MODERN
The House 1950 - 1960: A Decade of Concealed Complexity

Today, any house that looks like a packing-case with glass where the wood should be, or that is stuck up on sticks like a Tahitian fisherman’s hut or a New Guinea cannibal’s tree-house, is 100 per cent contemporary, and as modern as tomorrow’s milk....

from a speech entitled "Whither Contemporary? or Will Contemporary Wither?" by architect, Vertigo Jones from Cyril Pearl’s, So You Want to Buy a House...and live in it! (1961) (1)

If the architect-designed single family house between 1950 and 1960 can be satirically presented as a dull series of flat roofed boxes with generous amounts of glazing and little humanity, a thorough examination of the period negates this typical view and reveals quite the opposite (2). Two distinct phenomena influence the development of the house in this decade. The first is the limited means and materials of the early 1950s which give the range of houses built over the decade a superficial sameness, concealing the true complexity of domestic design that was to be more fully exposed in the more affluent 1960s. The second is the desired cultivation of difference (on the part of architects) between the image of the architect-designed house and that of the speculatively built house. It was proposed that architects be seen as prophets of progressive thinking. Their house designs were to be vital experiments from which the speculative builder would apparently take his cue, and curb the evils of both jerry-builder and speculative builder who had been merged imperceptibly into one person by the writings of Robin Boyd (3).

The apparent sameness of 1950s domestic design owed much to the material and financial restrictions still in force in 1950. It was not until August 1952 that all restrictions were lifted and even then bricks, tiles and timber continued to be in short supply (4). Inflation and credit restrictions, coupled with the unchecked rise in prices in 1952-53 continued to keep house sizes down and materials scarce. The desperate struggle for materials was not only a difficult challenge but an irresistible opportunity for the young Melbourne architect eager to propose change after the austerity of the immediate post-war years. Rather than impede the appetite for the new language of modern
architecture, shortages diverted architects into local and resourceful responses to the creation of a new image for the home.

As soon as World War 2 ended, the traditional language of domestic architecture was swept aside. Reference to a historical style in form or detail was anathema to the tenets of the prevailing desire for the International Style. Consequently the gable, the elaborated entry porch, the window and its differentiated frame and architraves, ceiling cornices, the representation of traditional domestic materials such as terracotta tiles, weatherboards, traditional brick patterning and textural relief, where possible, were largely ignored by the architect.

Unlike the free eclecticism and open minded stylistic experiment of the 1930s, the rejection of historical reference in the 1950s was complete. Reference and association were apparently untrue, unoriginal, unnecessary and smothered the true nature of materials, structure and function. For the young Australian and American architect, the task of discarding the traditional language of domestic architecture was undertaken with unbridled enthusiasm.

Instead of the specific domestic response, the search for a universal language was paramount. The house was now a solution, a container of functionally satisfied spaces enclosed by a rational no-frills structure. The language was one of planes, both vertical and horizontal, screens and window walls. Fireplaces were now abstract cubic blocks not hearths. The roof was a plane containing space and not a sheltering, watershedding symbol of protection.

Abstraction and reduction were part of a quest for universal truths, not just of the house but of architecture as a whole. Structural, material and formal experiment replaced the domestic image. The house became a bridge, a tunnel, a collection of planes or boxes, an object and artefact of truthful structural invention but not a house. It was a metaphorical expression (5) of anything other than the nostalgic image of the picturesque home.

The eclectic styles of Tudor, Old English, Spanish Mission, and the Georgian, had by 1950 been thoroughly exorcized from the architect's and the public psyche for two reasons. The first was the rise and rapid acceptance

5. The idea of metaphor and the conception of new architectural forms is noted by David Dunster in *Key Buildings of the 20th Century: Houses 1900 - 1944*, p.3.
amongst architects of the reductive theories of the International Style and its various offshoots. Secondly, the productive desert of World War 2 and its aftermath of shortages and restrictions forbade any realistic renewal of an eclectic style for some time. For the architect, it was an opportunity not to be missed. The removal of ornament, the hipped roof and the elaborated entry could occur with economic justification. The flat roof, the window wall, minimal finishes, and the carport were aesthetic choices for the architect, but pragmatic choices for the homeowner in the penny pinching days of the post-war years. Architects capitalized on their circumstantial good fortune and experimented relentlessly. Though accusations of "hen houses" ran thick and fast (6), and despite the loss of traditional domestic elements, the variety of the progressive eclecticism of the 1930s was still present in the 1950s but disguised by superficial similarity of appearance and the lack of obvious stylistic labels. Limited means meant the natural rise of the pragmatic expressions of structure in honest and unpretentious ways, replacing the role of ornament and the role of traditional domestic elements. What now became significant were essential building elements: posts, window frames, beams and beam ends, low pitched gables which deferred to no time and no place, how to save space, how to build repetitively and how to live with the minimum. Structure and its component parts replaced the familiar symbolic images of home to become the dominant expressive element of the building. Finding diversity therefore amongst a range of frugal, reduced designs is a subtle activity but crucial to an accurate understanding of the decade.

The most obvious difference in the design approach to the post-war modern home was cultivated by Robin Boyd early in the decade in his seminal work of 1952, Australia's Home. He proposed the traditional dichotomy of the Rational-Functional versus the Irrational-Organic, characterized in contemporary terms by the apparently opposing camps of Walter Gropius versus Frank Lloyd Wright. The warm, woody and woolly houses of the 'Organicists' were contrasted with the sleek planar compositions of the Functionalists.

While the Functionalists' would be square, hard, sharp, forceful, the Organicists' would be less austere in line and texture. One a cube: three sides concrete, three sides glass; the other a native growth: wood stone and woolly materials.
merging. One defiant, exhilarating, proud; the other sympathetic with and subservient to the landscape (7).

The Melbourne journal, *Architecture and Arts* fostered this simplistic dichotomy. One perfect example occurs with a picture of the "world's greatest architect", Frank Lloyd Wright juxtaposed against an editorial text by Walter Gropius on the opposing page (8). The range of approaches to design in the 1950s was however not so clear cut. And Boyd himself was well aware of it. Before the publication of *Australia’s Home*, Boyd's first article for *The Architectural Review* entitled "A New Eclecticism?" in September 1951 (9) compared two Australian houses, the Rose Seidler House, Turramurra, 1948-50 designed by Harry Seidler (fig.256) and the Goodes House, Mt. Eliza, 1948 designed by Roy Grounds (fig.257). He examined the two recently built houses with a view to discovering how far their great and obvious difference of appearance could be explained in terms of the expressed aims and beliefs of the opposing camps. He reached the conclusion that "not one of the elements which add up to the strong visual contrast of these buildings seems to be profoundly in disagreement with the other side" (10) and that their differences could ultimately be traced to nothing more than a difference of mood. Boyd proposed that the choice of one side or the other - Functional or Organic need not be final and binding as most architects considered it.

Fig.256 Harry Seidler, architect. Rose Seidler House, Turramurra, N. S. W., 1948 - 50.

*Could an architect be accused justifiably of muddle-headed vacillation if he felt himself free to draw upon different parts of the scale according to the emotional impulse of the occasion? Although the buildings under discussion express the different personalities and backgrounds of their designers, is it conceivable that two such different but competent buildings could have been produced by the one*


10. Ibid., p.152.
man? Might not an architect select, in a new era of vital eclecticism, the mood best suited to the time, the place and the purpose? (11)

In proposing this Boyd was supporting Sigfried Giedion's insistence upon the ability "to leap from the rational-functional to the irrational-organic" (12) and J.M. Richards's call for "the logical next step, the functionalism of the particular" where he stated "There is no call to abandon functionalism...but to (relate) it ever more closely to the essential particulars of time and place and purpose" (13). Indeed Boyd's designs for houses between 1950 and 1960 exhibit an extraordinary diversity of themes (14). It is this phrase, a "vital eclecticism" therefore, which needs to be generously born in mind when attempting to describe the breadth of image which exists among modern houses of the 1950s.

The post-war flight from traditional domestic language was to manifest itself in five directions, each of which were to frequently overlap and intertwine not only with common details and materials but also with attempted resolutions of the much discussed dichotomy of the Rational versus the Organic. The five directions were:

1. structure and experiment - the expressionistic emphasis on the role of structure in the design of the house, characterized by two approaches: either by an all encompassing structural idea or the search for a reproducible house via the module or repetitive structure.
2. planimetric geometry - a resolution of the geometric planning and siting ideas of Frank Lloyd Wright with the fundamental necessities of structure and materials at hand rather than an abstract idea of geometry for its own sake.
3. the transformation of style, the vocabularies of Harry Seidler and the East Coast International Style - the Melbourne assimilation and transformation of a given set of stylistic devices.

4. the transformation of the style and principles of Frank Lloyd Wright - the Melbourne distillation and reinterpretation of Wrightian themes.

5. the moderate "modern" - the specific and appropriate functional solution in the language of the post-war International Style.

The decade also produced such idiosyncratic designers as Peter Burns who believed that "perceptive people can recognise the emotion in the basic forms from which his houses are evolved" (15) (fig.258).

Crucial to the flight from traditional styles was the acceptance of the original codification of the International Style house by authors such as Henry-Russell Hitchcock and Philip Johnson, F.R.S. Yorke, and Raymond McGrath (16). Post-war architectural journals simply no longer published the period house and a wave of books advocating modernist design such as The Modern House in America and Tomorrow's House continued to appear steadily after 1945 (17). In the late 1940s a worldwide

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15. Eric Wilson, "Emotional Houses Arrive", Australian Home Beautiful, December 1957, p.34. Two houses by Peter Burns which illustrate his principles are the Greenaway House, Glen Iris and the Cassidy House, Beaumaris, both c.1957. Ibid., pp.32-37, 86-88.


mistrust of the softness and cosiness of the craftsmanlike and essentially domestic New Empiricism of Sweden and Britain developed (18). Yet the heavily published duality of Walter Gropius's rational solutions and Frank Lloyd Wright's organic naturalism invariably resulted in a stylistic rather than a methodological following of the two architects. The rise of the teaching methods of the East Coast Bauhaus (i.e. the Graduate School of Design at Harvard University), and the energetic flights into structural virtuosity by Mexican and Spanish engineers such as Felix Candela and Eduardo Torroja and the Italian master, Pier Luigi Nervi inspired further departure from traditional house forms. Also contributing to the surge away from the tradition of stylistic eclecticism was the maturing domestic work of modernist architects such as Marcel Breuer with the Geller House, Lawrence, Long Island, New York, 1945 (fig.259) and Richard Neutra with the Kaufmann House, Palm Springs, Ca., 1946 - 47 (fig.260). These houses were now regarded as the apotheosis of elegant post-war living.
For many architects, bereft of the obvious stylistic choices, the house became an object of technical perfection to be honed like a machine with little understanding of the nuances, thermal consequences and living patterns engendered by the open plan. For others it meant the desperate embracing of the ornament and stylistic kitsch of the 1950s to produce what Boyd in *The Australian Ugliness* of 1960 was to label "featurism" (19). Both the house of studied reduction and that of a plethora of fashionable butterfly roofs, splayed columns and primary colours were immediate anathema to the layman. Their effect on the acceptability of modern architecture as the home was debilitating despite the massive onslaught of publicity for the modern and the glamorous images surrounding contemporary living proposed by the popular home journals. The richness of complexity could so easily be bypassed by a poor understanding and application of the principles of functionalism.

Robin Boyd was one of the many critics worldwide in the 1950s to understand this dilemma but possibly the only one to propose it to an Australian audience and actually practice what he believed, with an impressive range of diverse house designs. First with his article in *The Architectural Review*, "A New Eclecticism?" and then later in the same magazine but in 1956, "The Functional Neurosis", Boyd was to propose,

"As a technique and a philosophical basis for design, functionalism still holds the promise to direct and unite all the useful arts. The tragedy is that it is dying while still young and inexperienced. It is being discarded while virtually only one application of its principle has been investigated conscientiously, and even this one application is still so unfamiliar in the streets of most countries that the layman has not had sufficient opportunity to evaluate it. ....The basis of our present uncertainty is the fundamental error in identifying the functional method with the glass cube and in contrasting it with the cosy cottage (20).

Boyd is already aware of the tendency to renounce functionalism, and the dangers of travelling too far along the same path,

"Architecture has accepted a sort of Hays Office emotional standard, a sophisticated but essentially chocolate-box ideal of prettiness, a timorous, sedate desire for conformity of


the soul of the building. Even while the architect is planning a novel shape, or devising a new tensile structure, we can be pretty certain what the final quality will be - light, clean, simple; with an atmosphere fresh, open, uncluttered. And while this is a charming and delightful character for numerous occasions, a world of it - which is presumably the present ideal - suggests a decline which would carry architecture eventually to unplumbed depths of ennui (21).

The difficulty that architects would have to face in the 1960s, despite Boyd's call for diversity, was that the fresh reductive aesthetic of lightweight structure, stripped of domestic association could be seen as being all too similar. The differences were too subtle and hence decidedly unpopular.

Complicating this further was the architect's intention to make the firm visual distinction between the architect-designed house and the speculatively built house. Ideas of progress, modernity, contemporary social and living patterns were to be seen to be embodied in the architect designed home. Again it was Boyd who was instrumental in setting up the idealistic cause for the public to see the architect's service as desirable and potentially able to benefit society as a whole. First in Victorian Modern, Boyd described the development of the Victorian house as one on the brink of mediocrity rescued by the so-called Victorian Type which had been developed by Victoria's best architects since the "1934 Revolution" of modern architecture in Melbourne (22). The so-called Victorian Type had become the positive role model for the speculative builder. The idea of the benefit of good design through architectural services available to the layman was the linchpin of the R.V.I.A. Small Homes Service begun in 1947 and expounded in regular weekly articles in The Age newspaper by Boyd and later Neil Clerhan from 1953 (23). Then in Australia's Home, Boyd's description of the development of the vernacular home proceeded as the tragic rise and fall of the Colonial tradition, a dialogue of architectural purity stained by the degeneracy of the vernacular type, graphically described in half mocking, sardonic tones. The architect-designed home was to be seen as the desired alternative to lift the jerry built morass of housing out of the depths of badly designed and ill-conceived bad taste into the more acceptable ways of living proposed by architects.
The status of the architect had changed from responsible servant to social programmer; from the sought after artist able to deal with the difficult site for the wealthy client to a more powerful and distant arbiter of taste; from the justification of experiment as a means of extending the breadth of functionalism in times of material and financial shortage to the sincerely held belief that there was a responsibility to forge new boundaries in the realms of family living and domestic form. It was the heyday of the private home as architectural experiment.

Oddly enough, the variety in approach was not extended to the house type. The program of the single family house was rarely questioned in architectural circles and the idea of the multiple unit or flat was rarely published in the years 1950 - 1960. One suspects that it was more out of snobbery than ignorance. In the 1950s, the common ideal was always the detached house. The flat or apartment was seen as an itinerant and undesirable step to the detached house, a step to be avoided if at all possible. As well, the relatively unlimited space of Melbourne encouraged the rapid unplanned spread of the single storey single family suburban sprawl. There were not the desirable views to capture via height, nor was there the problem faced by the
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Fig.262 J. W. Rivett, architect. "Caringal" Flats, Toorak, Victoria, 1948 - 51.

British and Europeans on how to alleviate the housing shortage with medium to high density housing. Though many flats were built in the 1950s, few schemes were published and few were carried out by prominent architects. Frederick Romberg's large linear highrise block "Stanhill", Queens Road, 1945 - 49 (fig.261) and the low rise interpretation of the Melbourne terrace house "Hilstan", Nepean Highway, Brighton, 1946 - 51 are unique highlights in Melbourne before 1960 (24). Other notable multiple housing complexes include the Frederick Romberg design of 1955, the Harris maisonettes above the Victoria Street Bridge, Hawthorn, with a long west wall of glazing overlooking the Yarra, which appeared frequently in advertisements for the legendary Stegbar windowwall; the flats attached to Roy Grounds's Hill Street house, Toorak, 1953; and a block of flats in Darling Street, South Yarra by Yuncken Freeman, Griffiths and Simpson, c.1949 (25). Along with Stanhill, the other major block of flats in Melbourne was "Caringal", Tahara Road, Toorak, 1948 - 51 designed by J.W. Rivett, a tour de force of high rise living in reinforced concrete with its tower of one flat per floor and adjacent curved block accessed by dynamic flyover bridge walkways (26) (fig.262).

24. Frederick Romberg also designed the imposing Gloucester Flats, corner of Spring and Latrobe Streets, Melbourne, 1946. In Sydney, Aaron Bolot's 17 Wylde Street Flats, Sydney, 1948 - 51 were a major flat-building achievement for the early 1950's. For a description see Guy Morrison, "An Image of Modernity: 17 Wylde Street and Early Sydney Modernism", Transition, September 1987, pp.23 - 29.


The Modern House in Melbourne 1945 - 1975

The tradition of the single family house and the quarter acre block was assumed and unquestioned. Though Boyd was to castigate suburbia and provide its harshest commentary in his 1960 book, *The Australian Ugliness*, little had been done to check its spread, let alone any attempt to understand its unquestionable and undoubtable desirability in the hearts of the average Australian family.

By 1960, the year of a credit squeeze, change was imminent. Boyd's predictions had come true. The architect designed house was plumbing the depths of the modernist vocabulary of functionalism with little to show for it. There had been however several positive signs in the last few years of the decade. The first was the tendency towards a new aesthetic typified by Robin-Boyd's Black Dolphin Motor Inn, Merimbula, 1958 with its log columns and exposed brick walls and exotic hints of Japan. The second was the definitive and strong directions of an emerging generation of young designers such as Geoffrey Woodfall, David McGlashan, John Adam and Bernard Joyce, and the new directions of older architects Neil Clerehan, Guilford Bell, Chancellor and Patrick, and Kevin Borland. The economic upturn in the 1960s allowed the variety that had been suppressed in the 1950s to emerge. The third was the rise of the humanistic natural materials and earth tones of the well publicized so-called "Sydney School" houses, which was matched by similar developments in Melbourne (though less publicized and spread across a range of differing architectural philosophies) (27). The fourth was the rapidly changing international scene where the response to the apparent sameness of functionalism was also undergoing a major reassessment.

Between 1950 and 1960, the house was rapidly transported into an other status. Notions of the street, propriety and urbanity were dismissed. Insularity and the cult of the individual were hungered for and encouraged in the context of experiment. The house entered a new architectural era, transported into the realm of laboratory research vigorously devoid of association and self-conscious sentiment. What resulted were some of the most original expressions for the contemporary dwelling. Some of the houses however were less successful in terms of long-term liveability and as prototypes for the future. It was an exciting era but also a flushing out period for the workings of the Australian house. The complexity of the house in the 1950s therefore needs to be understood and judged carefully.

27. The so-called Sydney School centres around the work of architects such as Ken Woolley, Michael Dysart, Russell Jack, John James, Peter Johnson and others, and was formally labelled by Jennifer Taylor in *An Australian Identity: Houses for Sydney 1953 - 1963*, Sydney, 1972. Stanislaus Fung has since noted the dangers in such a label in his analysis, "The Sydney School?", Conference paper, Society of Architectural Historians, U. N. S. W., 15th - 16th June 1985. Winsome Callister is currently researching Melbourne architecture to highlight similar developments that compare with the heavily publicized architecture of the so-called Sydney School.
Structure and Experiment in the 1950s

The move away from the literal and traditional domestic images for the house was linked to a 1950s understanding of functionalism, fostered by a naive, enthusiastic and largely uncritical architectural press in Australia and America. After 1945 in the United States and c.1950 in Australia, avant-garde architects aimed at a lightness of expression which was inherent in tensile structure and synthetic materials, two of the major technological innovations of the early twentieth century and World War 2. Together with the apparent social virtues of the new architecture of the International Style, a powerful "functionalist" architecture was propounded by the avant-garde. As Alan Colquhoun points out,

The "functionalist" building was, in fact, a pure work of art, freed from the arbitrary rules of craft and of individual fantasy and raised to the level of Platonic form by means of the machine - a work of pure exactitude..........the new technology was an idea rather than a fact. It became part of its content as a work of art and not merely or principally a means to its construction (1).

Bereft of an accepted linguistic tradition and with an arch reverence for technique, architects of the 1950s were forced into a new realm of experimentation as exciting as it was dangerous, and ideologically pragmatic as it was in fact impractical!

The structure of the house took two main directions. In one, the house became a structural functional idea, a unique work of art, the creation of individual sensitivity, where technique became divorced from an idea of universal application yet the form itself was the result of a new machine or tensile technology. Technology became the content of the building form. In the other direction, the house became the product of the application of a structural module, where a component designed for the public sphere dictated the private response by the universal application of technique. Technology became the means to construction. The house in each case became an engineered solution, where the art of the house was its truthful and exact response to the problem. And this, its symbolic expression of truth and structural rationality, was important to architects at the time not its domesticity or association.

The house as structural - functional idea
The house as structural-functional idea stemmed from a desire to express the essence of a problem in solely technological terms. Despite the minimal success of prefabricated housing in the immediate post-war years, the attraction of an economic industrially produced solution still held sway in the early 1950s. Experiment across the world in new structural techniques and new materials in all types of buildings gave the promise of exciting new forms.

The house, by its very nature is a small scale building and a perfect laboratory for the one-line scientific solution. A container of space, related to an all encompassing structural idea could be relatively easily realised. Just as Charles Eames innovations in plywood furniture design were based on wartime technological developments (2), so too were several innovations in architectural structure. Paul Rudolph and Ralph Twitchell's W.R. Healey Guest House, Sarasota, Florida, 1950 was an elegant pavilion combining post and lintel timber construction with a draped roof of weathertight plastic that could move and stretch (fig.263). The roof was made of steel flat bars suspended in a catenary curve, supporting fibre boards and flexible insulation, sprayed top and bottom with "cocoon" (a vinyl plastic used by the U.S. Navy to protect equipment in storage). Beneath the draped rectangle of roof, rooms were now "spaces" arranged at will (3).

The use of a dominant structural functional idea invariably led to a metaphorical conception of the house form. Amancio Williams' Country House at Mar del Plata, 1944 is a small house. Yet as David Dunster points out, it achieves large scale because it is conceived as a bridge of reinforced concrete over a small stream (4). The curve of

Fig.263 Paul Rudolph and Ralph Twitchell, architects. W. R. Healey Guest House, Sarasota, Florida, U. S. A., 1950.

Chapter 5: Structure and Experiment in the 1950s

Fig.264 Amancio Williams, architect. Country house, Mar del Plata, Argentina, 1944.

The bridge contains two staircases which connect to a long rectangular block which contains the major spaces of the house (5) (fig.264).

In Melbourne, similar structural-functional ideas are found in houses designed by a small number of young architects, eager to experiment in the new forms. As with Melbourne architects of the 1930s, these houses numbered but a few amongst each architect's own repertoire. However the number of houses and major non-residential commissions are great enough to mark Melbourne as a significant contributor to experiment in such design in world terms. Architects in Melbourne who practised in this way included Robin Boyd, Kevin Borland, Peter and Dione McIntyre, Chancellor and Patrick, and S.C.G. McConnel. Robin Boyd was to go so far and describe the existence of a "Melbourne School".

...The Melbourne School was forward looking, daring all and damning all aesthetic rules....The two climactic buildings of the period (in parkland) on opposite sides of the Yarra River at Swan Street Bridge: the Olympic Pools Building (1952-1956) and the Sidney Myer Music Bowl (1956-1959) - symbolically popular palaces of sport and culture respectively. These buildings had in common two elements: tensile construction and Bill Irwin, an engineer with the courage of his architects' convictions. As well they had the ingredients of the Melbourne School: a great structural-functional idea carried out with an enforced austerity and a voluntarily cavalier technique (6).

It was this dominant structural-functional idea that was to inform the domestic designs of this so-called Melbourne School.


In 1952, Robin Boyd designed and built the W. Wood House and adjacent shop at Jordanville (fig.265). The shop and house were each contained within twin "Ctesiphon" concrete arches. The "Ctesiphon" arch, a new concrete expression in Australia had been patented by the local builders, McDougall and Ireland (7). The arches were constructed by forming timber arches at 4ft. centres with hessian suspended between and 3 inches of concrete over. The arches therefore became corrugated in the lateral direction providing structural stability across the surface of the roof. Sections were poured 16ft. wide at a time. The concrete was waterproofed with non-porite and vinyl plastic was used for the expansion joint. The beauty of the technique lay in the fact that a single structural element acted as both roof and walls. Within, the house was zoned into a large living/dining area under the two arches with the sleeping area and bathroom behind.

Conrad Hamann suggests that the inspiration for the arched form and the surrounding landscaping derived from contemporary Brazilian architecture (8). In the late 1940s, The Architectural Review frequently published work by architects such as Oscar Niemeyer and Affonso Reidy who were experimenting with the new plastic forms available in


Fig.266 Oscar Niemeyer, architect. Church of St. Francis of Assisi, Pampulha, Brazil, 1943.

Fig.267 Burrough and Hannam, architects. Church, Lawrence Weston, Gloucestershire, England, c.1950.

reinforced concrete (9). In 1950 Stamo Papadaki published his book, *The Work of Oscar Niemeyer*, and it was reprinted in 1951 (10). In 1943, Philip L. Goodwin had published *Brazil Builds* (11). Buildings such as Oscar Niemeyer's Church of St. Francis of Assisi, Pampulha, 1943 (fig.266) and the Boat House at the Lake Rodrigo de Freitas, Rio de Janeiro, 1944 both employ arched concrete vaults. Yet Boyd's Wood House and his use of the term "Ctesiphon" in the house description seems to derive more directly from an account of the "Ctesiphon" system of construction published in the 30th November 1950 issue of the *The Architects' Journal* (12). The article described a Church built at Lawrence Weston, Gloucestershire (fig.267), designed by architects Burrough and Hannam, and almost certainly inspired by Niemeyer’s St. Francis (which did not employ the "Ctesiphon" system) (13). The church was followed by a comprehensive description of the "Ctesiphon" technique, its structural and economic virtues.

The catenary arch is the ideal theoretical form for concrete construction, the concrete being entirely in compression. Taking advantage of the stiffening effect of corrugation, the
"Ctesiphon" system of construction developed by J. H. de Waller, makes possible the spanning of large areas with a very large thin shell of concrete (14).

Boyd's Jordanville house follows exactly this system unlike the Niemeyer buildings which are arched flat planes.

In the same year, Kevin Borland designed and built the Rice House at Eltham, which also used the Ctesiphon system to create a house beneath four concrete arches and with a suspended catenary arched covered entry way (15) (fig.268). McDougall and Ireland were again the builders. Borland's prize-winning entry in the R. V. I .A. Small Homes Service house design competition of 1953 also used a series of draped reinforced concrete catenaries and in form resembled Rudolph's Healey Guest House (16) (fig.269). In 1953, Peter McIntyre and Kevin Borland designed the Bellfield Community Centre at Heidelberg which consisted of a Ctesiphon arched hall with a skillion-roofed service block attached (17). Upon graduating in 1950, Borland had worked briefly for Harry Seidler in Sydney. Seidler had reputedly worked for Oscar Niemeyer.
in Brazil (18), and in 1951, Seidler used a double concrete arch (not Ctesiphon) as the carport above a frankly Corbusian box (the Williamson House at Mosman) perched on a cliff overlooking the sea. In an interview, Borland is quoted as having suggested the Ctesiphon method to Robin Boyd for the Jordanville designs (19).

The catenary roof was to reappear in later houses by both Boyd and Borland. In each case the draped roof became the significant raison d'être of the design with an open plan and free-flowing space beneath. Robin Boyd's second house for himself in Walsh Street, South Yarra, 1957 is a long rectangle roofed by a sweeping catenary of planks, suspended on wire cables (20) (fig.270). Beneath the all-encompassing roof, there are no longer rooms but platforms. The catenary sweeps the length of the sloping site containing within it a central courtyard, a living and parents' zone at one end and the children's block at the other. The horizontal break-up of the window mullions, the refined built-in furniture and the obscure glass side walls of the courtyard suggest an interest in Japanese design, allusions which enrich the enforced structural-functional idea. In 1954, Oscar Niemeyer used a catenary of hung curving steel girders in the Cavanelas House, Pedre de Rio, Brazil (fig.271). In Boyd's design however, the

Fig.270 Robin Boyd, architect. Boyd House, South Yarra, Victoria, 1957.

19. Evans, op. cit.
purity of the structural idea is retained as at the street side a band of highlight windows emphasises the floating roof and the space is virtually transparent from front to back. Boyd's catenary takes structural advantage of the wedge shape and butterfly roof forms of houses such as Niemeyer's Weekend House for Juscelino Kubitscheck at Pampulha, 1943 and Harry Seidler's T. Meller House, Castlecrag, N.S.W., 1950. Boyd oriented the spaces inward on this tight inner suburban site to create a private courtyard house. At the same time in 1957, the broad sheet *Cross Section* noted that Yuncken Freeman Bros., Griffiths and Simpson's structure for the Sidney Myer Music Bowl was to be "a saddleback back of thin pre-cast concrete on a net of steel cables suspended from two 60 foot masts 100 feet apart" (21).

In 1965, Kevin Borland's Freedman House, Mt. Eliza employed a draped catenary ceiling of solomit over a double storey modular plan (22) (fig.272). A ten-foot module of timber log columns and linings of rough hewn timbers both internally and externally shows the

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development away from the lightness and industrially innovative use of material and structure to one of continuing interest in the expression of dominant structure.

An encompassing roof and wall structure was also explored by Boyd in the form of the arched bridge house. The excitement of this one-line solution was used in the first Foy House scheme, Beaumaris, 1953 where an arch formed by two steel lattice girders swept over a small sandy hill, as the rooms of the house stepped up and over it (23) (fig.273). In 1954, the reverse siting problem confronted Boyd, a tight triangular site cut through by a creek bed which was also a drainage easement. Building was not permitted on the easement but permission was given to build across it if the ground was kept free. The first scheme for the G. A. Richardson House, Blackfriars Close, 1953 was a flat roofed brick pier and glazed infill solution with a deck built out over the easement (24). In 1954, this was replaced by a wedge shaped house suspended between arches, spanning 93 feet between concrete buttresses set on the high ground on either side (fig.274). A steel frame was hung between two lattice steel arches. The long sides were fully glazed in wooden frames set between steel members with deep blue spandrel panels for privacy where required. The solid end walls were grey-silica lime brick (25). The house was a pure example of the structural-functional idea. The house had been "solved" by experiment with the latest marvels of engineering. In 1944, Amancio Williams and Delfina G. de Williams' Country House at Mar del Plata, Argentina, 1944 had been published by The Architectural Review in 1949 (26). Similar suspended bridge buildings had been designed and built by Oscar Niemeyer in Brazil; the "Sul America" Hospital, Rio de Janeiro, 1952, the rooftop of the projected Hotel Regente Gavea, Rio, 1949 and more particularly the


Youth Centre, Diamantina, 1950 where the major part of the building was contained within a reinforced concrete arch (27) (fig.275). Yet Boyd's Richardson House predates Marcel Breuer's 1959 Vacation House Project, Aspen Colorado and the Geller House II, Lawrence, Long Island, New York, of 1967 - 69 which like Niemeyer's projects employ heavy concrete vaults rather than the lean and spindly steel structure of the Melbourne structural-functionalists. Elizabeth Mock's book, The Architecture of Bridges appeared in 1949 (28) and offered a feast of seductive bridge images for budding structural-functionalists with a penchant for bridges. In her introduction, the notion of the primacy of structure is clearly stated.

Since a bridge does not define space, but cuts through it, it is free of all the intricate psychological considerations that must be taken into account when space is molded or enclosed. Thus, paradoxically, a bridge is at once the most tangible and most abstract of architectural problems. As such it is capable of extraordinary purity, though it may

27. "Exhibition of Architecture in Brazil", Architects' Journal, 9th July 1953, p.44.

Two of the more inventive and uncompromising interpretations in Melbourne of the structural-functional idea were Peter McIntyre's 1953 entry in the R. V. I. A. Small Homes Service Competition (fig.276) and his own house at Kew of 1955. The Small Homes Service design, T343, has a central and determining idea, a circle of roofing hung from a central tank stand (30). This was a principle McIntyre had used previously for his Beulah Hospital, 1953 (31). Specifically designed for the hot arid north-east of Victoria, heat was designed to be countered by sunshades hung on the steel rods which supported the outer ends of the radial spars of the roof. Bedrooms and bathrooms formed the perimeter of the house. The inner area was a cool living space, with a tank in the centre, catching water from the dished roof. Termites were to be controlled by the complete elimination of timber in structure and finishes. Prefabricated panels were to fit between the steel members. The structure, dependent entirely on the tensile strength of steel was therefore extremely light. In the initial design process, the problem was one of "active participation" with the elements (32). The house was a
functional response to climate and not to the various client and spatial requirements of the home. Water collection was the guiding force behind the structure. The shortest distance for water to run to a single point from a maximized area is the radius of a circle. The shape of the building, a 16-sided polygon, reached its shape via function rather than choice of a shape based on the geometry of the site that say Roy Grounds may have happened upon with the cylinder of the second Henty House, Frankston, 1952. There is no strict abstract preoccupation with geometry. The memorable image and functional dynamism is a product of the "directness with which functional problems are solved with inventive structure" (33). The house is a diagram of a functional and structural idea.

To understand the apparent incisiveness of McIntyre's solutions, the experiments of Buckminster Fuller must be given credit. Perhaps the most extreme image of the engineered house immediately after World War 2 was Buckminster Fuller's widely publicized and updated version of his 1927 Dymaxion House (fig. 277) produced at-Wichita, Kansas in 1946 (34). The Fuller House was a round aluminium structure, thirty-six feet in diameter (fig. 278). At its centre was a mast, anchored in the ground. From it radiated cables on which walls and floor were hung and around the outside ran a horizontal strip window. On the roof was a streamlined revolving ventilator, and inside were four wedge shaped rooms. Built by the Beech Aircraft Corporation, few changes were needed on aircraft tools to convert them to housemaking production. The original 1927 conception for the Dymaxion House had a central mast which contained the septic and fuel tanks. The plan was made up of a cellular network of triangles. Both

Fig.277 R. Buckminster Fuller, architect. Project for the Dymaxion House, 1927.

34. "Fuller House", Life, 1st April 1946, pp. 73 - 76.
McIntyre's Beulah hospital and the 1953 House project seem to derive a great deal from Fuller's vision for the universal house.

Fuller's geometry and ideas of essential space and structure revolved around the triangle and the tetrahedron. The triangle is the most economic way to create space on the horizontal plane and the tetrahedron is the minimum method of creating volume.

"The tetrahedron is the lowest common rational denominator of the universe. The four unique quanta numbers of each and every fundamental "particle" are the four unique and minimum "stars" of every tetrahedron (35).

In Peter McIntyre's own house at Kew, 1955, a giant triangle as a structural and spatial delineator is the guiding idea and content of the design. Built on a steeply sloping bank of the Yarra, the McIntyre House is suspended above a 14ft. square concrete base at the flood level mark, between two triangular steel frames with 40 feet cantilevers to either side and with two floor levels within (36) (fig.279). The steel frame was exposed internally and externally. The dominant use of the triangle is a logical expression of the lightness and tensile qualities of steel structure. Triangular compressed strawboard infill panels were painted tomato red and cadmium yellow, bright new colours on the new Tip-Top Paints range. Contemporary descriptions likened it to a "Paul Klee butterfly" (37). The absence of traditional domestic sensations and its subsequent alterations due to its eventual unliveability are forgiven in the face of an exuberant expressionistic gesture of structural simplicity and rationality. One entered from

35. John McHale, Buckminster Fuller, p.115.
below, through a front door that slid upwards into the ceiling. One then ascended a central spiral steel staircase to each of the hovering platforms of space with open balconies at either end high above in the trees. At the end of each cantilever, the floor could bounce.

Another house which made use of the triangle in steel was the Mc Craith House, Arthur's Seat, Dromana, 1956, by architects Chancellor and Patrick (fig.280). The Mc Craith House was a small elevated weekend house, the basis of which was the inversion of four triangular frames so that
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the house was supported on just four points. The structure was 3" diameter steel tube and 6"x3" steel channels, with timber infill panels (38). Four triangles were then hung off either end at first floor level to extend the available area of the suspended first floor. The McCraith House is a rare venture for Chancellor and Patrick away from their more characteristic abstract blends of Frank Lloyd Wright, Richard Neutra and Mies van der Rohe in their residential designs.

The triangle received attention also from S.C.G. McConnell in his 1953 R.V.I.A. Small Homes Service competition entry, T120, which was also a holiday house (fig.281). For T120, a modular structure of five triangulated timber frames was used, infilled with vertical timbers and projecting timber sunshades (39). Another house which made use of the triangle was designed by Keith Lodge of Chas. H. Lacey and Associates for himself, at the corner of Lister and McCubbin Streets, East Kew, c.1959 (fig.282). To overcome flood level easements, the house was elevated some 10 feet above ground level. An exposed light steel frame structure was employed to eliminate heavy base walls at floor level and


minimize foundations. The theme of the triangle was carried throughout with three bold diagonal crosses exposed on two facades and outside, the fenestration repeated the triangle. To enter the house one travelled up a steel framed ramp. A deck cantilevered out toward the view. It was an horizontally extended version of the McIntyre House (40).

The idea of dominant structure invariably involved the roofing of a space to provide a free arrangement of the plan beneath. Perhaps the strongest expression of the dominant roof is another Boyd experiment with structure, this time with 55 feet long plywood covered steel truss beams supported on slim pipe columns. "Pelican", the Kenneth Myer House at Davey's Bay, 1955 was an arrangement of spaces beneath a vast 120 x 55ft emphatic expression of roof as trabeated structure (41) (fig.283). The enclosing of the lightweight truss beams and the exposure of the steel columns heightened the hovering quality of the apparent weight of shelter. The roof became a massive umbrella. In the centre of this vast house between two bedroom zones was a central 30ft x 30ft living space enclosed by sliding glass screens on either side and giving the feeling of shelter underneath an overscaled beach lean-to. Beneath the roof each zoned block was staggered to offer the living space the greatest view of the sea. The inspiration for such a plan derived perhaps from the "solar" house, "Crackers", nearby designed by Bates, Smart & McCutcheon in 1951 with central living space and outdoor breezeway beneath a strongly expressed skillion roof with exposed and painted rafters to generous eaves facing the sea-view (42). But in "Pelican", Boyd in an expressionistic gesture threw an emphatic roof over the space beneath and enforced the overriding primacy of structure as the basis of the conception of the building. It is not so much a house as an expression of the elemental essentials of roofing a space on the ground and inhabiting the space beneath.

In all of these houses, structure and its expression have rendered traditional domestic images subservient to a truthful and frank expression of the structure of the building. In doing so, the heightening of the structural expression has often required a deterministic form, which is not open-ended and adjustable but fixed and openly describes the structure as the content of the conception. In its rigour, such designs were exciting and exuding vitality

but demanding on the occupants whose life was moulded by the foibles of the structural sculptural container in which they were required to live.

**Structure and the module.**

The most widespread use of structural expression in the 1950s house was the module. The post-war architect found in the module, a grammar of structure, a means of designing that retained a functionalist credibility of economy and efficiency, and which lent itself to the problem of expansion and infinite producibility, the reverse of the all-encompassing structural one-liner.

The structural module whether the timber post and beam or steel frame in the structured economy of the early 1950s was an attractive economic solution to the idea of the engineered house. Architects quickly felt the need to push beyond the stylistic rules of the Harvard School exemplified by the houses of Marcel Breuer and the individualistic expression and excesses of Frank Lloyd Wright or Bruce Goff. The sloping site and the advantages of an uninterrupted landscape also were not available to all designers.
A search for order began, as if to discipline and justify the new found freedom of functional design. Developed from the structural reason of post and beam construction, the ordering system of the module was explored. The use of the module offered long spans and a free plan beneath. The module also justified the rational enclosure of space. The Cartesian grid of reference, the order of mathematical authority gave an easy and unquestioned starting point. The ability to insert lightweight non-structural panels between, meant the use of new materials, thinner walls, all contributing to a paring down of the building process in an effort to speed up production. The order of the module was rigorously investigated rather than the abstract spatial notions of Mies van der Rohe and his dematerialization of architecture (43). In Melbourne, numerous architects employed the module, the modulated space and its enclosure. The module as a form of external expression dominated student designs at the Modern Home Exhibition, Melbourne of 1949 (44). The idea of the module was of course not new but its heightened expression as a design tool, replacing the grammars of style, is particular to the 1950s.

Robin Boyd was again at the forefront of such structural experiments. The Douglas Gillison House, Balwyn 1950 - 51 (built 1952) was designed on a principal grid of 8'6" timber posts (45) (fig.284). Between these, glass was held in square wooden frames in which the light members were set diagonally, providing bracing to the skeleton wall. The house became a description of stress and support. The whole north face of the house with the exception of the first floor studio with its Ned Kelly slit window was an emphatic diagram of structure, a structural frame through which sunlight must travel. There was a clear distinction between the exterior and interior. The plan was split into

Fig.284 Robin Boyd, architect.
Gillison House, Balwyn, Victoria,
1950 - 51.


two functional zones by an open entrance court. A circulation spine of stair, passage and storage space to each of the bedrooms split two zoned lines of 8'6" square modules - living and bedrooms to the north, garage, kitchen and utility to the south. A bridge from an upstairs living room for the children above the main living room, led across the entrance court to the study, isolated for quietness and privacy. Where the window wall was not expressed as a diagonal grille, walls were sheeted externally with painted asbestos cement panels and internally with masonite and vertical hardwoods, and with natural caneite ceilings.

A similar externally exposed diagram of structure based on modular construction is found in the Keith Finlay House, Warrandyte, 1952 (fig.285). The one bedroom house has a square plan of 34 foot sides subdivided into 16 smaller squares by room partitions and roof supports (46). Two butterfly roofs form a w-shape with the internal gutters leading directly to two rainwater tanks at the rear of the house. The whole north side is a sitting porch, entirely fly-screened, accessible by big sliding glass doors which open from the living and bed room to the porch. The concrete slab floor was copper sulphate stained green and waxed.

46. The Finlay House, Ibid., pp.24 - 25.
Peter and Dione McIntyre extended their interest in the triangle to the module in the horizontal layering of non-structural triangular grids over a square grid of steel pipe and beam frame. In the Stephenson House, Ivanhoe, 1955 the potential of lightweight and tensile properties of construction in steel and the inherent forces associated with the triangle are explored (47) (fig. 286). The triangle and the diagonal are expressed either in elevation with steel tension rods and a tie-ring or in plan with pergola triangles which give a crystalline puncturing of the prismatic form. Built on an 11-foot grid of steel frame with masonry veneer infill panels and stramit board internal partitions, the simple box forms of the house are heightened by the diagonal bracing and tie rods, and the pergolas which project like weightless wings. The pergolas express themselves internally across the diagonal of the module and are reflected again in the break up of the living room window wall into four triangular panels of glass and solid. The house resembles an elaborate kite softened at the edges to provide specific areas for shade. The house could be extended at will according to the module. The present owners have done this and over the twenty years of habitation by them, the integrity of structural expression of house has not suffered.

A similar theme was continued in the McCarthy (later Rouquine) House in McKennel Street, Heidelberg (48) where the steel pipe frame, masonry veneer and triangular pergolas were again employed to enrich the modular prism (fig. 287). A horizontal plane of shading was superimposed onto an opposing set of perpendicular points rather than applied as appendages to a fixed solid.
Steel modular construction was also used by the McIntyres in the Shaw House, Kew, 1958 where lightweight steel trusses were inverted to become beams as well as truss members for the roof (49) (fig.288). The house sat within a structural skeleton of steel lally columns, trusses and tie-rods. Built for an engineer who was keenly interested in its special construction, this house was intended as an experiment for repetitive housing as were the Stephenson and McCarthy Houses.

Fig.287 Peter and Dione McIntyre, architects. McCarthy House, Heidelberg, Victoria, 1955.

Fig.288 Peter and Dione McIntyre, architects. Shaw House, Kew, Victoria, 1958.

The idea of repetition was explored in another set of houses by these two architects, a group of eight arch houses (fig.289). Peter & Dione McIntyre designed the houses based on a flexible plan roofed by 27 foot softly arched timber trusses supported on timber posts with the internal walls designed as panels of a standard size which could be taken away without affecting the structure. The owners were then not only able to change the size of the rooms but also the arrangement of bed and living areas. At £200 per

49. Goad, "Peter McIntyre: Early Work 1950 - 1961".
square, this economic system was open-ended, allowing for growth and change within the basic theme of the gently curved timber trusses (50).

The more frequent expression of the frame appeared in houses such as one designed in Kew by Donald Fulton with a timber post and beam frame defined in white with external wall panels of vertical boards painted deep brown, braced by timber diagonals and interspersed with huge sliding glass panels. The house became an expression of the frame, with volumes of the house formed according to the functional zoning of the plan (51) (fig.290).

John and Phyllis Murphy's 1953 entry in the R.V.I.A. Small Homes Service was also the natural expression of the post and beam, with the flat roof and glazing filling the space between structural verticals, creating a minimal expression and essential reduction (52) (fig.291). Douglas Alexandra's own house in Burwood of 1950 (53) was built on a 3'4" module and in his second house in Ivanhoe, 1959 - 60, the house was based on a line of structural portal frames hovering above a sloping site. Eight steel

50. Ibid. One of the eight timber arch houses, the Sierakowski House was published in "House at Bairnsdale", Architecture and Arts, November 1955, p.28.


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Fig. 291 John and Phyllis Murphy, architect. Entry, R. V. I. A. Small Homes Service House design competition, 1953.

Fig. 292 Douglas Alexandra, architect. Alexandra House, Ivanhoe, Victoria, 1959 - 60.

54. Alexandra Archives, Albert Road, Melbourne.

portals set on concrete stumps, each shaped into a five sided polygon formed the sectional profile of the house (fig.292). Bondwood infill panels and vast sheets of glass were used to enclose the spaces of this six bedroom house (54).

The development of the module was a means to update the vernacular stud frame. In the search for more open plans and lower costs, the virtues of the regulated post and beam seemed the logical answer to the industrialized production of the 1950s house. Architecture and Arts encouraged this approach.
No architect in his right mind could go on indefinitely building one-storey houses with a stud frame designed to hold up two-storey houses. And no architect or builder in his right mind would go on indefinitely building houses with large glass walls, using a stud frame designed for houses with peep-hole windows (55).

The idea of the house was to be found in the search for production. Liveability was not discussed. That was not the issue.

In November 1958, Robin Boyd was to describe in *The Architectural Review*, the "engineering of excitement", as practised worldwide by architects such as Matthew Nowicki, Eero Saarinen, Felix Candela and Hugh Stubbins. He attributed the gymnastic use of concrete shells and tensile structures to

the urge of the second generation of modern architects to find something to say...a pendulum swing against the idea of universality in modern architectural theory and a hankering after the particular, the individual poetic expression (56).

Boyd was careful not to associate these architects with Googie architecture (57) but he was also uncertain as to the relevance of these new expressions of structure. His words focus on the growing dilemma facing post-war modern architecture.

....today architecture's main weakness is not in the science of design practice, but in the belief that this is all there is to architecture. The record of the structural-shape buildings is packed with brilliant short cuts, and still is unsatisfying. The lack is not of technique or technology or science of design, but of heart in the centre of design. The modern building tends either to be numb or to be self conscious in its selection of the motive on which all else is built (58).

By 1971, Boyd was to satirize the dominant structural functional idea in his posthumously published *The Great Great Australian Dream* (1972) (59) with his descriptions of the disastrous exploits of the young cavalier architect of the 1950s, Gordon Hope, an amalgam of Boyd himself, Roy Grounds, Peter McIntyre and Kevin Borland. His satire suggests that the totality of those visions for the house were bound to fail: not only because of the enforced


rigour and blinkered vision of their conception, but also because of their innate impracticability in terms of living and building. Boyd describes Scheme A for the Collings', the ill-fated couple who were to endure this Australian genius,

The extant documents of Scheme A are not extensive. There is, nonetheless, a quite explicit plan bearing the initials G. K. (George Koe). It shows a duodecagonal ring of rooms surrounding a large black dot, against which is the notation: Oolonga Tree. Unfortunately the drawing is not dated.

As might be expected with anyone familiar with Hope's work, all the rooms in this house-plan face inwards to the tree. What is less predictable, and characteristic of Hope's originality and creativity, is the structural method. There are no elevational or perspective drawings on the sketch plan, but a sectional drawing exists which almost certainly was done for Scheme A, though probably it was done for Hope's own satisfaction and may not have been shown to Mr. Collings. This sectional drawing shows that Hope's intention was to make the tree more than merely the visual centre of the house. It was to be actually the very heart of the structure, the mast on which the whole house hung, by a double system of suspension cables from a steel band fixed high up on the trunk. Two notes in red pencil, believed to be in Hope's handwriting, are on the print sighted by the present writer. Both are significant. One is "The shaft of life". The other is "Bolted to the living wood" (60).

The house was doomed to an ignominious fate; the tree was lopped by a tree-removalist by mistake before any construction had actually begun. In his book, Boyd had observed the inherent fragility of the one-line structural-functional answer to the house. Take away the guiding premise and the scheme is nothing. It must have been with some anguish that Boyd was to write in such mocking tones of an era in which he had been one of the most energetic and vocal protagonists. The dominant structural-functional idea had by 1960 run its course. Ideas of extendibility, change, a return to natural materials, traditional building techniques and a questioning of the chaotic and exciting experimental years of the 1950s posited a return to the sheltering and primitive aspects of dwelling rather than a technological mastering of dwelling.

60. Ibid., p.61.
Instrumental in the swing away from a techno-functional idea of progress was the rise of British theory, the New Brutalism of Alison and Peter Smithson which had been permeating *The Architectural Review* since 1952, the return of a preoccupation with traditional domestic materials such as brick, tile and timber and the gradual architectural publication discovery of the archaism of Louis Kahn.

Perhaps what is the most poignant quality of these structural-functional Melbourne houses is the pervasive optimism of their conception. The raw enthusiasm that was to bring these houses to fruition also infected other attempts at the modern house in Melbourne. Though the number of these structural-functional houses was quite small their number and publicity was such to ensure Melbourne’s title as "Australia’s cradle of twentieth century design" (61) in the post-war decade. Many of these houses were to become icons of Melbourne modernism. As houses they would remain startling anomalies.

Form and the so-called Melbourne Geometric School

The word geometric is often bandied about with reference to houses in Melbourne in the mid-1950s. In 1962, Robin Boyd wrote in *The Walls Around Us*,

*That post-war period might be called the alphabetical period in Australian domestic architecture...The traditional rectangular plan shape was thrown to the winds as houses shaped themselves to fit their land or a special structural system or a geometrical pattern...L-shaped houses, T shaped and U-shaped houses were common, but S-shaped, O-shaped and even Z and W-shaped were not unknown* (1).

There has also been the suggestion of a Melbourne "geometric movement". J.M. Freeland describes the phenomenon as,

*In that city (Melbourne) during the fifties a small school of thought developed which resulted in a number of houses of originality and depth in which geometry was paramount. The movement was restricted to Melbourne and found virtually no response or echo in other cities probably because, in essence, it was highly individualistic and intensely personal and, belonging to one man could not be transmitted or imitated satisfactorily* (2).

Freeland credits Roy Grounds with the origin of this local preoccupation with geometry. Yet the occurrence of a number of geometrically derived houses should not be seen as a "movement" emanating solely from the work of Grounds but as one of several approaches to the search for an appropriate image for the post-war house. In Grounds's domestic oeuvre c.1945 - 1955, pure geometries do not exclusively rule his designs (3). Rather, there is a small number of houses which have powerful images which result from the use of geometry. It is this small number of houses which have attracted publicity and labelled his work as having a geometric predilection. It is a predilection which has curiously remained unquestioned.

**Geometry in architecture**

Two ideas of geometry occur in architecture. The first is related to the use of Platonic shapes derived from Euclidean mathematics such as the circle, square and triangle. Their use in architecture, whether in plan, elevation or volume, as

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3. Other houses designed by Roy Grounds which do not involve the overt use of geometry include the Falkiner Flats, Toorak, 1950 and "Iluka", the Roy Ashton House, Mornington, 1950.
an ordering system is an intellectual decision related to Renaissance theory whereby the use of such absolute geometries indicates the harmony and perfection of nature. The Renaissance theorist and architect, Alberti advocated these shapes in his treatise, *De re aedificatoria* (c.1450).

Alberti's survey of desirable shapes for temples...begins with a eulogy of the circle. Nature herself, he declares, enjoys the round form above all others as is proved by her own creations such as the globe, the stars, the trees, ...apart from the circle, he lists the square, the hexagon, the octagon, the decagon, and the dodecagon...All these figures are determined by the circle... (4).

Though the eventual object may be one of geometric perfection, and even though its eventual siting may result in a harmonious bond between object and landscape, there is necessarily a difference between the real nature and the object defined by natural laws. The building is a cerebral creation placed upon the site. It is necessarily detached.

The second use of geometry evolves from an intimate engagement between site and program. The result is the house being of the site. It is an organic response where quite literally, the geometry grows out of the functional interaction between site and program. The geometry may be loose and accommodating. Its purity is determined by the ease with which the program fits the site and how the site fits the suggested shape. It is this organic idea of geometry which Frank Lloyd Wright was to use in his house designs between c.1936 and 1958. In the Hanna House, Palo Alto, California, 1936, Wright used what he believed to be the natural module of a hexagon, to control spatial layout and mould the house to the site. In his series of solar-hemicycle

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*Fig.293 Raymond McGrath, architect. House, St. Ann's Hill, Chertsey, Surrey, England, 1936.*

houses, an overall formal gesture specifically related to contour and aspect was adopted to create crescent-shaped houses. It is this idea of geometry which informs the domestic designs of Roy Grounds and other Melbourne architects such as Robin Boyd, Peter McIntyre, Douglas Alexandra and Rae Featherstone. The interaction between house and site is an intimate one and their response is similar to that of Wright's. Geometry, whether as a module or an overall form, derived from and was dependent on the specifics of site.

Geometry can be a neat method of describing the house. As with the notion of dominant structure, the idea of dominant geometry was a search for order, for a guiding rule that eschewed the grammars of style and carried with it an idea that could be followed through, regardless of all else. Pure geometry could, as with the one-line structural system be used to describe a one-line solution into which the program of the house was slotted. It was a solution that was often deterministic and closed.

The so-called Melbourne Geometric School
In 1940, Roy Grounds returned to Melbourne from his second trip to Europe. Whilst in England, he had worked for the Australian expatriate, Raymond McGrath, well known modernist and author of the book, *Twentieth Century Houses* (5). Several of McGrath's buildings involved geometry. The vast white modernist villa at St. Ann's Hill, Chertsey, Surrey, 1936 was a decomposed cylinder with low wings attached (fig.293). His project for the Hyde Park Court apartments, Knightsbridge, 1932 consisted of four blocks linked by glazed cylindrical vertical access cores. Grounds's "Moonbria" flats, Mathoura Road, Toorak, 1940 had a glazed cylinder of
stairs and lift recalling the Knightsbridge scheme and also, in its resolution of detail and fenestration, the circular stair appendages to Bijvoet and Duiker's Sanatorium "Sonnestraal", Hilversum, 1927. Grounds' strongest pre-war use of geometry is found in the Quamby flats, Glover Court, Toorak, 1941, a set of six flats with a penthouse attached, set out on an arc with a radius from the centre of the circular cul-de-sac at the end of Glover Court (fig.294). As with McGrath's St. Ann's Hill house, the entry to Quamby is from a circular court with the front door bound to the ground by a planar screen wall adjacent to a large gridded expanse of glass. McGrath's fenestration pattern of french doors with fanlight above is also adopted by Grounds and reused frequently in the ensuing years. Attached wings, block chimneys and screen-walls indicate additive composition rather than a unitary notion of form. Grounds' geometry is based on a response to the steep cliff on which the flats sit overlooking the Yarra. The flats fan out in much the same way that Alvar Aalto's Row Houses for Senior Staff at Sunila, 1936 - 39 spread according to the contours. As well as citing the moderating functionalism and humanism of Alvar Aalto, a 1941 article in Art in Australia concludes in its description of Quamby by saying,

*High technological skill wedded to cultural understanding has produced a design that has the quality of inevitability, and one that becomes part of the landscape rather than a mere addition to it* (6).

Though pre-1942 visual features such as fenestration and the concern for soft and accommodating textures continues after 1945, Grounds's site induced geometry becomes obsessive and powerful in a heightened response to the problems of location, at times to the detriment of the spaces within. The tendency to adopt unitary primary shapes by Grounds is paralleled by the increasing appearance of primary planimetric geometries in the work of Frank Lloyd Wright (7).

In 1951, Roy Grounds designed the Leyser House in Studley Street, Kew. The plan was an equilateral triangle with its apex pointing to a spectacular view over the Yarra Valley (fig.295). Rather than dig into the steeply sloping site, Grounds decided to leave the site alone as the best views and the simplest format for living could all be found on the one level. The eastern base of the triangle of the 6. "Flats on the Yarra at Toorak", Art in Australia, December 1941, p.74.

7. The special issue of Architectural Forum, January 1948 which is devoted to the work of Frank Lloyd Wright highlights the use of pure geometry.
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Frank Lloyd Wright had in the years previous to the Leyser House also been active with the use of the triangle as a planimetric generator of design. Vincent Scully describes Wright's use of the triangle or hexagon module as,

Certainly from the time of the Jacobs and Hanna Houses, Wright's use of the module as a form creator, always
implicit in his work became more obsessive, but extraordinarily supple. The Vigo Sundt project of 1942 (fig. 296), as well as many others, used the hexagonal system to create a spatial envelope essentially triangular and thereby more compact than the running hexagons of the Hanna House (10).

The Architectural Forum special Wright issue in January 1948 carried projects which had plans of circles and triangles (11). Grounds's houses from this period also tend to increase their use of geometry though without the decorative or spatial flair of Wright. The spaces in the Leyser House are small and cramped, the module has not been used to free the space, rather it has compromised it.

Architecture and Arts were to note Frank Lloyd Wright's use of the triangle in a 1954 article where triangular houses by Bruce Goff, Roy Grounds and Ray Berg were illustrated and it was claimed that "the imprint of this man's hand (Wright's) can be traced to places as remote from the U. S. A. as Melbourne" (12). Bruce Goff's "Triaero", the Irma Bartman House, Fern Creek, Kentucky, U. S. A., 1941 (fig. 297) built on a flat site, was constructionally

Fig. 296 Frank Lloyd Wright, architect. Vigo Sundt House Project, 1942.

Fig. 297 Bruce Goff, architect. "Triaero", Irma Bartman House, Fern Creek, Kentucky, U. S. A., 1941.

10. Vincent Scully, Frank Lloyd Wright, p. 27.


more experimental than the two Melbourne examples. Its roof was supported by three interior pipe columns with exterior bracing that carried the theme of the triangle right through from structure to cladding (13). Both Grounds's and Berg's houses were built in timber using traditional constructional methods.

Ray Berg's asbestos cement sheeted S.J. Hall House, at the corner of Dandenong and May Road, Clayton, c.1954 though a triangle in plan, developed originally from a cube (14) (fig.298). One corner of the cube was removed and two triangular balconies were added. The conception is quite different from that of Grounds where the division of the plan reinforces the triangle as the primary inspiration. In both houses the fireplace is treated as a focal point of the house plan.

Grounds's interest in geometry extended to the triangle, the cylinder and the square. The second Henty House, Frankston, 1952 built below the first Henty House, "Portland Lodge", was a double storey cylinder built on a sloping site overlooking Port Phillip Bay (15) (fig.299). Once again, to take advantage of the view and not wishing to disturb the site, the house was edged into the slope. At the centre of the circular plan (actually a 48 sided polygon) a brick cylinder housed the fireplace, an internal gutter for the inward sloping roof, a central core for services and the support for the slate-paved curved concrete stair. The circular plan is the confluence of the desire for a simple geometric solution and an economical container of space for the tight brief of considerable accommodation requiring maximum radial views. Colours were black with accents of white to window frames and balustrade. The vertical lining boards were treated and left to show their natural grain wherever possible. Bricks were local grey sand-lime. The
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house is a blend of the subtle textures and demure taste of William Wurster's houses and the bold organic analogies of Frank Lloyd Wright's house designs of the period. A more literal interpretation of Frank Lloyd Wright's circular house schemes such as his Sol Friedman House, Pleasantville, New York, 1949 (16) (fig.300), can be found in Sydney architect Peter Muller's spiky expressionistic scheme for the F.A. Molinari House at Forestville, N.S.W., c.1954 (17). By contrast Grounds's Henty House has a shibui (18) sense of material restraint reminiscent of his own houses of the 1930s such as the shingled Ramsay House, Mt. Eliza, 1937 and the grey logs of "Lyncroft", 1934. Apart from providing driveway access and undercover parking, the site of the Henty House was left undisturbed and materials were left in as near to their natural state as possible. Grounds was to use the theme of the circle again in 1958 in his design for the addition to the vice-master's house at Ormond College, University of Melbourne. Here, the substantial house addition was formed from three-quarters of a circle attached to the corner of a 19th century stone villa. At the centre of the circle was a clerestory

Fig.299 Roy Grounds, architect. Henty House, Frankston, Victoria, 1952.

Fig.300 Frank Lloyd Wright, architect. Sol Friedman House, Pleasantville, New York, 1949.


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18. "Something astringent, restrained and sober is shibui, the Japanese say, and reflects an austere taste informed with a certain pleasurable melancholy. Delighting in the transient and cultivating the accidental, shibui nevertheless is sustained by a furious energy, purposeful and unrelenting, and in its characteristic game of reconciling contradictions lies what may be the essence of the Japanese sensibility."


Another circular house was the Anthony Hordern House, Point Piper, Sydney, 1956 designed by Guilford Bell (19) (fig.302). The shape of the house arose from the site, a flat roughly circular plateau sloping steeply down to the water (20). Built over three levels, the house was a huge annulus with a circular courtyard as its focus. As with Grounds, Bell's use of geometry is connected to an intimate site engagement combined with a predilection for a classical parti of axial entry and distribution of spaces about a strong central axis.

Roy Grounds's most publicized use of geometry involved the square. His own house in Hill Street, Toorak, 1953 is a perfect square with a circular courtyard as its centre. Maximising a relatively narrow site so as to fit four flats at the rear of the site, the house was built close to the street (21) (fig.303). It is an urbane townhouse, similar to the Georgian mansions of the 1930s built close to the street with their emphasis on a formal and ceremonial entrance to
the house. By concealing the circular court within and providing windows only at eaves level which encircle the whole building, Grounds created a totally inward looking formal composition, almost Japanese in its introspective retreat from the outside world. The hovering roof, large oversized front door with vast ring knocker and perfect symmetry conjure up images of Frank Lloyd Wright's Winslow House or a square interpretation of his Sol Friedman House. The Hill Street house is a stripped and austere dilution of Wright with an ambience of Japanese shibui. It is interesting to note that in July 1947, The Architectural Review devoted an entire issue to China (22). This issue illustrated the monumental and geometrically pure buildings of the Forbidden City such as the circular Temple of Heaven and the vast prism of the Hall of Supreme Harmony (fig.304). In 1951, The Architectural Review published the doughnut shaped United States Pavilion at the IX Triennale in Milan designed by Belgioso, Perresutti and Rogers (23) (fig.305). This building was circular in plan with an eccentric circular courtyard, glazed all around its centre with bold vertical mullions. Though the structural system of the pavilion was a great deal more sophisticated (24), the visual similarity with Grounds's courtyard is worthy of some consideration.


The Grounds House is an open box with sliding doors that close the internal passage which circumambulates the court. All the major rooms of the house face this court. The materials and textures are soft and mellow as opposed to the boldness of the conceptual geometry. The upturned eaves float lightly above the walls. Proportion and order rule the design. The 18 by 18 modulated design (or 3 by 3 cube) has a 1 : 2 proportion of glass to wall to its facade. It has a central front door and opening onto the central court, four glass doors form the corners of an inner square much like the corner stairs of the Villa Capra by Palladio. Rather than the expressionism and repeated investigation of the square by Walter Burley Griffin in his domestic designs (25), there is the classicizing discretion of Wurster, the refined taste of Scandinavia and the shibui of Japan in the Hill Street house. As with the Henty House, if Wright is partly an inspiration for the form and plan, exotic sources explain the lightness, delicacy and subtle textures of the finished product. It is an ideal villa for the Antipodes. And the spectre of the Georgian rule of taste is never far away.
Grounds's design for the master's house at Ormond College, University of Melbourne, 1958 employed such formal themes in a square planned house with formal fenestration (26) (fig.306). This cream brick house had a centralized living room roofed by a pyramidal lantern and was located on the axis of Reed, Henderson and Smart's main 1879-81 wing of Ormond College. At the centre of the living room was a fireplace. The house is one of the rare overtly formal plans of the 1950s in Melbourne, its formality guided by the need for visual privacy and the desire to complement the distinguished collection of surrounding nineteenth century buildings.

The square was also used by other Melbourne architects, though more as the pragmatic basis of a structural grid or to ease construction. An unbuilt scheme for the H. Hughes House, Coronet Grove, Beaumaris, 1955 by Douglas Alexandra was based on a square plan divided by its diagonals with one quarter removed to become a sundeck and a south facing deck to accentuate the view to Port Phillip Bay (27) (fig.307). "Blue Peter", the Raymond House, Davey's Bay, 1956 was designed by Rae Featherstone and consisted of two zoned overlapping


squares with the corners pointing to the view and a balcony attached to the corner of the square closest to the Bay (28) (fig.308). At the overlap of the squares was a toplit kitchen. The Jensen House, Portsea, c.1954 also by Featherstone was designed as a 3 by 3 square 10 foot grid of 2” galvanized steel columns, elevated above a sloping site and turned at 45 degrees to the boundaries "to give interest to a dull square". To increase the small 1000 square feet of floor area, angled "haystack" walls were adopted with wall and roof facings of asbestos cement. The central square was a service core of top lit kitchen and bathroom (29) (fig.309).

Peter and Dione McIntyre also used the square as the basis for their ski lodge at Mt. Buller in 1960 - 61. The lodge was a hip-roofed square framed and clad in timber with a rock fireplace/wall forming the diagonal with two square
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airlocks at either end of this diagonal. The house was thus divided in two, one for the McIntyres, the other for a client. The square was a result of tight site restrictions of 4 feet to either side to the northeast and southwest and ease of construction in a difficult climate. The stone wall was built after the roof had been put on (30) (fig.310).

Two designs by Grounds, Romberg and Boyd use the square in different ways. The R.W. Ednie House, Blackburn, 1954 was a square planned house based on a module of 8'5" squares. Each face of the house was gridded according to the frame and infilled according to the internal requirements of privacy and function. Four central columns defined the space around the centrally located heater (31) (fig.311). Another house which derived its form from the primary shape of the square was "Shere", the M.R.M. Smith House, Theodore Court, Toorak, 1957 - 59 designed by Roy Grounds (fig.312). The house plan was a square sliced in half and splayed to create a central living room and to take advantage of the view and the sloping site. The bays to either side contained service block


Experiment with the triangle and its relation to site was exploited by Peter and Dione McIntyre in their 1954 design for the A. T. Brunt House at the corner of The Belvedere and Holroyd Streets, Kew, overlooking Studley Park and the Yarra River (fig.313). The plan of the house is an agglomeration of three equilateral triangles laid base point to base point and curved into an arc with a kitchen,
bathroom block, garage and half the sunroom attached (33). The apex of each triangle points to the view, and between, paved square courts duplicate the dynamics of the blade of sharp edges pointing to the view. The house unfolds like a star to the Yarra Valley beyond. One enters the house beside a curving screen wall with huge diamond cut-outs, passing a sunken court with a pool and crazy bending downpipes. The front door is at the centre of the arc which controls the layout of the double storey triangular prisms. One is centred onto the fireplace a step below and the space dissolves into three facetted rooms each with a solid apex containing either a desk or fireplace. In the courts outside cantilevered triangular pergolas hover above with hanging lamps. In one court there was a triangular barbecue, in another, storage shelves. The triangle becomes the theme for tables, fireplace, and built-in shelves. The central triangular prism was painted hortensia, a blue/purple from the latest Tip-Top catalogue, and flanked by two white prisms. The colours at the front of the house are tomato red, white and yellow, a Mondrian explosion of skew lines and planes. The site and the minimum of the triangle are the inspiration, a confluence of the specificity of location and a preoccupation with non-stylistic form, in this case, the essential triangle. Instead of the restraint and subtlety of Grounds's materials and enforced singularity of form, the McIntyres' use of colour and geometry is exuberant, playful and expressionistic.

Similarly, in the earlier Snelleman House, Keam Street, Ivanhoe, 1953 by Peter McIntyre, the use of geometry is site-induced rather than an abstract imposition of geometry upon a plan. The Snelleman house is a "coil" which curves down a steep slope and around two trees (34) (fig.314). The house becomes a spiral. The first scheme proposed by Kevin Borland and McIntyre was an elevated "tent" house


35. Interview with Peter McIntyre, 3rd September 1983.
rejected by the clients (35). McIntyre's response was to "set out" on the block by scraping a line down and around the trees with the heel of his shoe. The house is a sweeping gesture, a curved solid brick external wall with small punched openings and an interior lightweight court wall, a carousel of red, yellow and white mondrian window-walls. Diamond screens to the garage and entry porch are symbolic structural claws holding the house from sliding downhill.

Another of Peter McIntyre's site-induced geometric designs is his M. Castle House nicknamed the "Stargazer House" at Orion Street, North Balwyn, 1953 (36) (fig. 315). McIntyre proposed that his clients, instead of looking at a view of red terra cotta roofs, should look to the stars. The resulting two storey house was an unusual one. It was built on a concrete slab with a ground floor of concrete bricks and with an upper floor framed in timber. Bedrooms and bathroom were contained on this floor on a mezzanine balcony which was supported on the south wall and held with tie rods to the north wall. This cantilevered floor provided coverage for the carport and entrance terrace. The roof section was a scalene triangle with its apex centred over the cantilevered section. On the north side it was covered with corrugated aluminium sheet. The south side of the triangle was the skylight wall, almost entirely glazed. The concept was bold.

and fraught with the obvious thermal problems of large areas of roof glazing and the problem of acoustic separation between living and sleeping areas. In 1953, it was an exciting and extraordinary concept and predates the Beulah Hospital which followed similar principles of tent-like construction and enclosure. Oscar Niemeyer's staff housing, Sao Jose dos Campos, Sao Paolo, 1947 (37) (fig.316), bears comparison with the "Stargazer" house but there is not the daring structural experiment that McIntyre was attempting.

Robin Boyd also designed a number of site-induced geometric houses. One of his first experiments with shape houses involved the use of the wedge. There were two types: a skillion roof following the slope of the land with the spaces within stepping down beneath it, or a dominant longitudinal skillion running counter to the slope to form single storey spaces at the upper end of the slope and double storey at the lower end. The resultant wedge was a purely functional response to the site with an economic and all-encompassing envelope and was not a cerebral interest in geometric shapes.


Fig.316 Oscar Niemeyer, architect. Staff Housing, Sao Jose dos Campos, Brazil, 1947

Fig.317 Robin Boyd, architect. Darbyshire House, Templestowe, Victoria, 1951 - 52.
The Darbyshire House, Templestowe, 1951 - 52 was an example of the sloping roof wedge with the rooms beneath stepping down with the slope, allowing variation in room volume and ceiling height (38) (fig. 317). The long side of the wedge faced north with bedrooms and bathrooms on the upper level with an open living-dining room below opening onto a paved patio. The house resembles a Breuer bi-nuclear plan. The horizontal weatherboards, the overhanging eaves and the regulating module of the window wall mark this as an uneasy yet energized and more structurally explicit interpretation of the East Coast Bauhaus of Gropius and Breuer. The Darbyshire House is a skilful reworking of Marcel Breuer's Exhibition House at the Museum of Modern Art, New York, 1949 (39) (fig. 318), which has a similar parti although on a flat site, and was to be more fully interpreted by Harry Seidler in his T. Meller House, Castlecrag, 1950 (40). As Conrad Hamann points out, the Darbyshire House was the prototype for a whole series of Boyd's houses, seen in the later schemes for the Roche (1954), Masel (1955) and Uglow Houses (1955), and later in his career, the Purves (1966) and Hegarty Houses (1970) (41).

The Clemson House, Milfay Avenue, Kew, 1957 also made use of the sloping wedge combined with bold structural expression where the rooms of the house are stepped down the slope under an all protective butterfly roof made up of crossed roof beams. Aspect was to either side of the wedge rather than directed to one particular side of the house (42) (fig. 319).

The Troedel House, Wheeler's Hill, 1954 is the second wedge type with a large skillion dissolved by pergolas and the spaces of the house stepping back from the line of the
wedge to form covered terraces platforming down the slope (43) (fig.320). The plan itself is therefore a facetted wedge. At the single storey end of the wedge, the master bedroom and ensuite are at entry level. One steps down to living then further down to kitchen, dining and laundry, above which are the two children's bedrooms. The living room thus gains a double volume and a vast terraced verandah of colonial mansion proportions. As with Grounds's houses, colours are subtle and landscape related. Light oatmeal bricks, natural timber walls, white painted joinery and a dark green pergola double battened exclude the summer sun.
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Fig. 321 Robin Boyd, architect. R. Haughton James House, Kew, Victoria, 1955.

but admit the winter sun into the generously glazed living and dining rooms. All the openings on the faceted window wall are on the shorter return sections.

Boyd employed bolder geometry on the R. Haughton James House, Molesworth Street, Kew, 1955 (44) (fig. 321). Like Grounds’s houses, the choice of geometry, although apparently being deterministic and abstract on face value, was actually the result of the confluence of specific site and program requirements. Built on an idyllic site on the banks of the Yarra overlooking Studley Park Golf Course, the house is distinguished by an unusual eye-shaped plan of living spaces on the ground floor, surmounted by a rectilinear entry and bedroom wing on the first floor. An open tread stair descends through a circular cut-out in the ceiling to create a dramatic sculptural feature in the open planned space of the ground floor. The living area of the house was cut into the river bank, the brick back arched as a retaining wall, the glass front following the contour, and the roof a grassed sundeck for the bedroom wing.

Fig. 322 Frank Lloyd Wright, architect. Second Herbert Jacobs House, Middleton, Wisconsin, U S. A., 1948 - 49.
The design of this house represents one of Boyd's most graphic attempts to resolve the rational versus the organic, that much discussed design issue of the 1950s. On a steeply sloping bank, Boyd's house attempts to resolve the ground hugging solar hemicycle houses of Frank Lloyd Wright such as the Second Herbert Jacobs House, Middleton, Wisconsin, 1948-49 (designed 1943) (fig.322), the Kenneth Laurent House, Rockford, Illinois, 1949, and the ramped spiral of the David Wright House, Phoenix, Arizona, 1950 (45), with the simplified box forms of the International Style, in particular the houses designed by Philip Johnson such as his Glass House, New Canaan, Connecticut, 1949, and the Wiley House, New Canaan, 1953 (46) (fig.323). Wright's Second Jacobs House has a similar circular stairwell with sleeping accommodation above (47) but Wright's massive expression of materials and play of interconnecting volume is missing from the lean and lightweight elegance of Boyd's expression that has wrung the essentials from the form and the site.

Boyd's interest in the hemicycle appeared again in two other crescent-shaped houses. The Lloyd House, Newbay Crescent, Brighton, 1958 was built as a crescent around a northerly court (48) (fig.324). The later Redrup House of 1960 also is a crescent (49). Wide overhanging eaves shaded by pergolas ring the inside of the semi-circular court of the Lloyd House. At the centre of the circle there was planned a "focal piece". Full height doors and natural finishes lend this house a calm atmosphere of contemplation (50).

Another crescent shaped house was designed by Yuncken Freeman Bros., Griffiths and Simpson in Coronet Grove, Beaumaris, c.1955 (51) (fig.325). Along with a light
inward curve to this elevated house, was the dominant expression of the structural frame. The detail of eaves, windows, infill wall panels and balustrades were simplified to permit the regular structural frame to dominate the design.

Geometry for the most part occurred in these houses only in the plan. It was rarely transferred into the elevation or overall form of the house. In some cases it was an ordering device, but unlike the Palladian formalism of contemporary American examples of the 1950s (52), the geometry is subtle and used only as a spring board to inform the eventual result of the overall form. The geometry was rarely an abstract idea but invariably acted in conjunction with the specifics of the site. Consequently, the connection to the all embracing site geometries of the houses of Frank Lloyd Wright must be considered when examining these houses.

In his 1965 book, The Puzzle of Architecture, Robin Boyd attempted to define such an approach to the making of form and its potential drawbacks. He was to label it as the "monolithic" idea of form.

Starting some time about 1955 every new building of self importance sought to be a single thing. It was no longer content just to be composed, integrated, co-ordinated by a regular module, a balanced assemblage of parts. It was not content even to look like an organic growth. Suddenly every important building wanted to be a self contained, finite, closed form - to be based on a monumental and monolithic idea

The puzzle which these men set themselves was to find one form, one single idea, that fitted each practical planning

46. Charles Noble (Introd.), Philip Johnson, pp.11 - 12.

47. The Herbert Jacobs House appears in "A Portfolio of Wright Houses", Architectural Forum, January 1948 (and another special issue on Wright in January 1951) and also in Drexler and Hichcock, op. cit., pp.120 - 121.


50. One of the most advanced Small Homes design, T372 designed by Neil Clerehan in 1957 could almost be the source of this house, as its long linear plan has been curved into a crescent to focus onto a courtyard centre piece. See Philip Goad, "The Small Homes Service of the R. V. I. A. in conjunction with The Age newspaper: an analysis 1947 - 1961", Research Report, B. Arch., University of Melbourne, 1984, p.33.


52. For a brief discussion of American examples of a tendency toward Palladian formalism in domestic design, see John Johansen, "Space - Time Palladian", Architectural Forum, December 1955, pp.150 - 151 which illustrated houses designed by the author. Other American houses designers working in such a mode included Eliot Noyes, Ulrich Franzen, Craig Ellwood, Philip Johnson and Edward Larrabee Barnes. In Melbourne, such formalism was not to occur until the 1960s with houses designed by Guilford Bell, Bernard Joyce and David McGlashan.

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problem set to them. This form when found, was bound to be uncompromising, and the observer’s eye was inclined to accept or reject it immediately without need for contemplation (53).

Boyd argued that such an approach harked back to classical design concepts, back to a Platonic aim of perfection of form.

The monolithic movement was certainly not interested in expressing function. It was not necessarily keen on expressing structure, although it was interconnected with some vigorous new structural exploits....It was not always interested in expressing anything or in what was expressed, but only in the essential rule of form which made expression possible (54).

In many cases, such criticism was true for Melbourne buildings such as the Olympic Swimming Stadium or the Sidney Myer Music Bowl. But as has been shown, in the case of the house, the rationale for an apparently "monolithic" idea of form arose in most cases from the site itself and a concise expression of structural and functional needs consistent with the pragmatic and economic measures of the 1950s Australian psyche of austerity. Certainly criticism can be levelled at these houses for their inability to be extended and their often deterministic plans. That was not the goal, nor the desired end. These houses were the result of a naive and hopeful belief that problems could be solved with a single gesture. This belief would take some dismantling. Shape-architecture was an adolescent phase of growing up with the modern house.
Melbourne, Harry Seidler and the East Coast International Style

In October 1949, an article appeared in the national magazine, Architecture, entitled "Painting Toward Architecture". It was written by Harry Seidler M.Arch. (Harvard), M.R.A.I.C., A.R.A.I.A. and discussed resolving the dilemma of modern architecture which "torn between the 'respectable' historic background of styles and the new structural possibilities (was) crying out for an honest expression and a new aesthetic (1).

Seidler believed that the answer came from the world of painting. He went on to describe architecture, painting and sculpture and their interdependence on each other which had begun with the pioneering work of artists such as Theo Van Doesburg, Moholy Nagy, and Mondrian, and used words such as "transparency", "new vision", "dematerialization of space and mass", "opposition or tension", "dynamic symmetry" and "simultaneity" to describe the key words of the new architecture. The more eager reader would have recalled a similar article which had appeared a year before in the Architects' Journal by Professor Sigfried Giedion entitled "Painting, Sculpture and the Architect" (2). However, for Seidler, it was an auspicious and appropriately erudite entree into the national architectural press in Australia. Filtered throughout the article were photographs of models of Seidler houses with captions such as "H. Seidler: tensional patterns" and "H. Seidler: negative space in architecture" and "H. Seidler: masses in polarity and oppositional direction". For the Australian architect, the image of such buildings emanating from familiar shores must have been extraordinarily exciting. Indeed the anarchy of the images and their origin in Australia in the staid evolutionary environment of post-war Australia must have had an irresistible attraction.

Seidler had already infiltrated the popular press two months before with the publication of the L. Waks House, Northbridge, 1949-50 in the Australian Home Beautiful (3) and was followed swiftly in March and April 1950 in the same magazine by two further articles, one on the Rose House, Turramurra and the other on his office flat in a basement in the centre of Sydney (4). More important and even earlier than these local successes for the budding arch publicist was the international publication of houses and projects in January 1948 and January, February and June 1949 in the popular Californian journal, Arts and

Architecture (5). Here already, after just one year in Australia was an internationally published Australian architect. In 1952, when the Rose Seidler House, Turramurra, 1947-51 won the annual John Sulman Medal, it seemed that the initial onslaught of Harry Seidler was over and his accompanying baggage, what William Jordy would describe as the "domestication of modern" (6) or Paul Rudolph would label as the "the Harvard House incarnate" (7) was complete. To the contrary, Harry Seidler continued to crusade publicly for the International Style of the East Coast Bauhaus, the style which emanated from the tutelage of the Graduate School of Design at Harvard University under its professor, Walter Gropius and its star practitioner, Marcel Breuer. Seidler's personal reinterpretation of it, had only just begun.

The importance of Seidler's houses in the history of post-war domestic architecture in Australia cannot be underestimated. It must be pointed out however that his houses provided the catalyst for the surge towards the architecture of Walter Gropius and Marcel Breuer and are not the first manifestations of such in Australian architecture.

In 1938, Arthur N. Baldwinson won three prizes in the "Timber Homes" Competition (8). His simple flat roofed designs with open living areas and horizontal weatherboards and banks of full height glazing reflected his office experience in London with Walter Gropius and
Maxwell Fry before returning to Australia early in 1938 (9). Baldwinson's W. Collins House, Palm Beach, N.S.W., c.1939-40 (fig.326) and a house at Taylor's Point, Pittwater, c.1940 (10) both employ trademarks of the Gropius and Fry experience: bands of vertical mullioned windows, open floor plans and stone terraces which bind the house to the ground. Yet these are not the pristine cubes of the East Coast work of Gropius and Breuer. Baldwinson's houses are skilful regional interpretations, transplanting a humanized modernism already accomplished after being transplanted from Germany to England. John Mockridge's second prize entry in the Two Storey Section of The Sun Post War Homes Competition of 1945 (11) attempts a more exact interpretation of the East Coast vocabulary of rubble rock wing and screen walls, interlocking blocks of zoned functions and carefully studied details from the growing swathe of published material on the houses of Gropius and Breuer that was beginning to emerge from America.

In Australian publications, the East Coast International Style had already been seen before the arrival of Seidler. Walter Bognor's own house, Lincoln, Massachusetts, c.1938 had appeared in the Australian Home Beautiful in 1942 (12) (fig.327) and in 1944 Nora Cooper reviewed for the same magazine, an exhibition of American architecture and illustrated houses by Gropius and Breuer (13). In June 1947, the cover of Australian Home Beautiful was graced by the Bognor House and also the Chamberlain Cottage, Massachusetts designed by Walter Gropius and Marcel Breuer (14).

More potent though than the Australian publication of such houses was the frequent publication of the East Coast houses of not only Gropius and Breuer, but also American...
architects who had been schooled either under the two European masters or who had adopted their distinguished vocabulary. Houses by American architects such as Hugh Stubbins, George Nemeny and Karl Koch appeared in the American journals, Pencil Points, Architectural Record and Architectural Forum and the British journals, The Architectural Review and The Architects' Journal between 1939 and 1949. As leaders of the Modern Movement in Europe, Gropius and Breuer's activities in America were seen as logical pacesetters in contemporary domestic design, the prime architectural issue during and after the war. The plethora of books which appeared after the war also featured the two European emigres and their American counterparts. Books such as Tomorrow's House, The Modern House in America, If You Want to Build a House and Built in U.S.A. 1932 - 1944 all feature the work of these architects. Put alongside the warm and woody regional houses of the Bay Region of California, the East Coast houses epitomized the tempering of "modern". They suggested easy graceful informal living released from the formalities of period eclecticism and the prescriptive white International Style forms of the 1930s. Elizabeth Mock was to note the essential change to the International Style transplanted to the East Coast of the United States.

Ironically, here was a style which, more consciously than any other in history, was directed towards the improvement of the comfort and convenience, health and happiness of society as a whole, yet there has probably never been an architectural movement more deeply distrusted by the public. Some process of humanization was necessary.......Americans looked again at the stone and wood barns of Pennsylvania, the white clapboard walls of New England, the low rambling ranch houses of the West, and found them good (15).

The major change however that occurred in America was that the choice of the "modernist" image for one's home was one of taste, and not one of a commitment to a social or political vision of a new domestic existence. For,

Certainly the social commitment of European Modernism of the twenties, which had aspired to provide standardized housing for all classes consonant with the highest standards of technology, was seriously (and tragically) eroded in America, New Deal Social Reforms not withstanding (16).
Stripped of its ideological impetus, the International Style was given a suburban conditioning by the European emigres, Walter Gropius and Marcel Breuer. Their first commissions were invariably houses, concomitant with client demands for distinctive rather than conforming design. The modernist house became an art house, built largely by an intellectual elite associated with the universities where the luminaries of European modernism had been graciously invited and presided. Cambridge, Massachusetts naturally had its share of the latest in the new International Style of the East Coast. The modernist house became a desired norm in the professional magazines and provided spicy interest in the popular home journal, for those brave enough to venture into art.

The Rose Seidler House, Turramurra, 1947-50 was also one such house. To describe it is to list the characteristics of the Harvard School and the vocabulary that had become common in the architect-designed house in the United States. It was a vocabulary which was also to become common in the Australian architect-designed house. When Harry Seidler arrived in Australia in September 1948, he arrived not only with a distinguished pedigree, that of a Harvard education under Gropius and Breuer, and work experience with the great Brazilian exponent of the International Style, Oscar Niemeyer (17), but also he brought with him the unquestionable authority of a new architectural language and its accomplished use as well. In addition he was an excellent and evangelistic disciple for his mentors. His Sydney houses between 1947 and 1952 were quality exemplars of international repute as regards the style of the East Coast Bauhaus.

The Rose Seidler House was the first of a group of houses built on an extensive property of 16 acres at Turramurra. Two further houses designed by Seidler were built soon after its completion: the Marcus Seidler House, 1949-51 and the Rose House, 1950.

The form of the house is a suspended and hollowed out cube with vertical space penetrating a central open well next to the open terrace, which has one wall covered with a mural by the architect. The freely planned interior is defined by opposing solid wall surfaces at right angles to each other, joined by glass. The central play space divides living and bedrooms and can be joined to either by flexible division (18).
Vertical lining boards painted white, a Mondrian break-up of the generous fenestration, rubble rock wing walls, a sculptural ramp leading to the first floor, planar surfaces in bold primary colours, super thin steel columns supporting the floating box, the compacted box zoned into functional areas replete with Charles Eames dining chairs and Hardoy butterfly chairs and built-in furniture, and the obligatory carspace underneath were the trademarks of the house and all the others that were to follow. The house was a perfect replication of the ideals of Harvard set down in the Australian bush (fig.328). And it was to be a highly influential house. Max Freeland described its effect on Australian architecture as

"tremendous... Imitations and virtual copies in whole or in part sprang up all around Australia immediately and for five years afterwards..." (19).

Robin Boyd was to observe that

the robust conflict between this "Functionalist" work and the more "Organic" buildings of local revolutionaries could be the greatest stimulus to the future development of architecture (20).
Seidler's publicity machine was part of the success of this house. His houses continued throughout the 1950s to be regularly and lavishly published in all the Australian architectural journals, and in Californian *Arts and Architecture*. Aided by the excellent photography of Max Dupain and the occasional theoretical article, his vocabulary enjoyed unprecedented influence and architectural popularity. In 1954, his *piece de resistance* of self-publicity came with his publication of a monograph on himself entitled *Houses, Interiors and Projects* (21), a thorough and comprehensively written and pictorial display of his work in Australia since his arrival in 1948. In a review of the book in March 1955, *Arts and Architecture* commented on the book:

*It is a magnificent production, but somehow it looks like an imported book - it is not really Australian. One reason for this, perhaps, is that none of the houses featured in its 156 pages is really Australian in character.....Is the universal vision that Seidler has applied to his buildings right for Australia? It is too early to answer this question with certainty, but it is probable that the answer lies in a modification of the International Style, a modification demanded by the climate of Australia and by the Australian "way of life" itself* (22).

In Melbourne that was what was to happen, with the reinterpretation and distillation of Seidler's transplanted vocabulary, in some cases a literal copy of Seidler, in others a questioning eclecticism and return to the work of Seidler's own sources, the work of Gropius and Breuer.

In January 1950, house designs of final year students at the Melbourne University Atelier were published. Douglas Alexandratos's (later changed to Alexandra) house, a split level design reflects most clearly the influence of Breuer, in particular his Exhibition House for the Museum of Modern Art, 1949 with its wedge-shaped volume and signature horizontal rod balustrade detail for stairways (23).

Alexandra's design however emphasises the structural clarity of the timber frame - rather than the precision of Breuer's planes in "dynamic symmetry". The elevated Kotzman House, East Ringwood, 1952 (24) designed by Alexandra is likewise a two storey interpretation of the vocabulary of Seidler and the Harvard School yet this house has exposed eaves, timber balustrades instead of


steel, and an overall resolution of the new vocabulary that was less restricted, the abstraction fuzzier and woollier, and the construction more explicit (fig. 329). The materials are more revealed than concealed. The feeling was more akin to the immediate post-war Victorian Type houses of zoned boxes and explicit detailing, exposed use of materials and semi-refined cubic forms. Alexandra's W. Carrington House, East Ringwood, 1953, the Peter Butler House, East Ringwood, 1953 (25), a Beaumaris house project, c. 1955 (26) and the R. I. Harris House, Aspendale, 1952 (27) (fig. 330) also take the Gropius and Breuer

25. For the Butler and Carrington Houses, see collected file by Philip Goad on Douglas Alexandra, November 1987.


27. "Beach House at Point Nepean Road, Aspendale by Architect Douglas Alexandra", *Architecture and Arts*, July 1953, pp. 18-20; see also McDonald, op. cit., unnumbered page.

Fig. 329 Douglas Alexandra, architect. Kotzman House, East Ringwood, Victoria, 1952.

Fig. 330 Douglas Alexandra, R. I. Harris House, Aspendale, Victoria, 1952.
vocabulary, roughen it and add eaves, joint lines, and low pitched gabled roofs. In the Harris House, the colours are strong, with royal blue to the ground floor, pale plum to the first, and trims and posts white. Inside the same colours are used, as well as forest green. Typical of Alexandra’s designs, the house was planned on a three foot module to facilitate the fixing of standard asbestos cement sheet.

Ray Berg's own home in Kew, c.1953 is a typical local interpretation of the Harvard vocabulary, with a simple butted zone plan over two levels, the garage and sleeping areas connected by a wedge shaped section living-dining block (fig.331). An open stair, plywood panelling to the walls, a strip window to the street and low built-in cabinet to the living room are also typical to the period (28).

Kevin Borland was another early disciple of Harry Seidler and had worked for him in 1950 (29). His thesis scheme for row houses for low-income dwellings illustrated in Smudges, September 1951 (30) (fig.332) is a single storey rendition of Marcel Breuer's house designed for the Museum of Modern Art in New York, 1949. Beneath a butterfly roof, spaces are tightly packed.
A timber screen plane delineates external courts and a small terrace cut back underneath the roof provides shade for the fully glazed living room wall. This scheme was developed by Borland in 1952 into an R.V.I.A. Small homes Service design, T2101 and described by Robin Boyd as the house with the "fly away roof" (31) (fig.333).

Perhaps the most accomplished exponent of the East Coast Bauhaus in Melbourne was Kenneth McDonald. As editor of Architecture and Arts from 1953 and author of The New Australian Home in 1954, McDonald was acutely aware of the new language and was a prolific designer of Seidleresque houses. His most publicized house was that in Stephensons Road, Balwyn, 1951, a large house with a bold butterfly roof (32) (fig.334). The plan and form of the house could be that of the New York Exhibition House, New York, 1949 by Marcel Breuer or that of Borland's thesis design though unlike Seidler's T. Mellor House, 1950, which also has a butterfly roof, McDonald added eaves for the sunny Australian climate and built the house in brick adding considerable weight to its appearance. In an article entitled, "A Concise Case For the Butterfly Roof", Architecture and Arts, the butterfly roof is cited as "one of the most becoming roof lines to the Australian landscape,"...
and the present growing feeling towards appropriate spatial relationships for interiors" (33). The sloping ceilings enabled internal spatial divisions without the use of partitions and larger volumes without expensive structure. The butterfly roof also eliminated external downpipes and gutters reducing roof plumbing to a minimum. Other houses by McDonald reflected the success or otherwise of his translation of the Seidler style to Melbourne. The Lloyd Stanley House, Box Hill (34); the Corbett House, Mt. Waverley (35); and a projected house for North Balwyn, all of 1953 (36), reflect similar themes of spatial interpenetration, open living and dining areas, prominent block fireplaces, flat roofs and the familiar Seidler balustrade and deck details. A folio of houses published in 1956 by McDonald in his own magazine showed a strong tendency to blend the Bauhaus vocabulary with the tectonic devices of structural logic employed by Richard Neutra such as pergola outriggers and the aerial forms of Oscar Niemeyer (37). One of the houses illustrated was an aerial house at Bendigo with a dynamic plan of opposing planes and forms pinwheeling about a central stair (fig.335).
Another Melbourne firm familiar with the houses of Seidler was Montgomery, King and Trengove (38). Several houses by this firm show the familiar features, the Mondrian window break-up, the careful zoning via planes, screen walls, and designer appendages such as the Breuer stair, the cantilevered porch and the attached sunshade. The Trumble House, Templestowe, 1953 (39), Keith Mann House, North Balwyn, 1953 (40) (fig.336), the Second Prize entry in the R.V.I.A. Small Homes competition, 1953 (41) and the Hallam House, Canterbury, 1955 (42) are such examples. The Keith Mann House was unusual in that as well as being elevated and an expanded version of the Rose Seidler House, its first floor was formed of 4ft. x 2ft. concrete slabs laid on prestressed concrete beams, and finished with a thin cement screed. The Hallam House was a reduced version of Seidler's Mellor House, and on a flat site, with a long sweeping butterfly roof (fig.337).

Numerous Melbourne architects experimented with the new vocabulary. Harry Ernest (43), Winston Hall (44), Mockridge, Stahle and Mitchell (45), Eggleston, McDonald and Secomb (46) and Hipwell, Weight and Mason (47) are some of the firms who were producing accomplished designs in the manner of Breuer, Seidler and the Harvard

Fig.335 Kenneth McDonald, architect. House project, Bendigo, Victoria, c.1956.

37. "Some Architecture by the Editor, Kenneth McDonald", Architecture and Arts, May 1956, pp.22 - 34. The folio includes four unidentified houses, a weekend house at Bayswater, the butterfly roofed house at North Balwyn, a house at Bendigo and one at Vermont, and the Corbett House, Mt. Waverley.

38. For an introduction to the work of Montgomery, King and Trengove, see Rob Scott, "A brief outline and interpretation of the Montgomery King and Trengove Practice from 1952 to 1970", Investigation Project, B.Arch., University of Melbourne, 1984.


41. The Age, undated clipping, September 1954; see also Entry By Montgomery, King and Trengove, Architecture and Arts, January 1954, p.27.


44. Ibid., House 19.

Fig.336 Montgomery, King and Trengove, architects. Keith Mann House, North Balwyn, Victoria, 1953.
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Fig.337 Montgomery, King and Trengove, architects. Hallam House, Canterbury, Victoria, 1955.

Fig.338 Robin Boyd, architect. Fenner House, Red Hill, Canberra, A.C.T., 1953.

45. For example, the G. A. Johnson House, Sparks Street, cnr. Beach Road, Beaumaris, 1957. See John Hauser, "Why Timber?", Architecture Today, November 1958, p. 53 and by the same author, "Talking Timber", Architecture Today, August 1959, p.17
47. "Houses by Hipwell, Weight and Mason", Architecture and Arts, June 1960, pp. 46 - 49. The list of architects who attempted versions of this modernist vocabulary is endless. Some others included Bogle and Banfield, R. J. Bonaldi and Balwant Singh Saini

School. Robin Boyd also made numerous forays into the new language, enlarging his already impressive repertoire of experimental themes.

Perhaps the most explicit example of East Coast Bauhaus influence in Boyd's work can be seen in his design for the Fenner House, Red Hill, Canberra, A.C.T., 1953 (48) which featured the distinctive legacy of the domestic work of Marcel Breuer, that trademark of post-war domestic planning, the bi-nuclear plan (fig.338). The essence of the bi-nuclear house is the separation of the function of the house into two distinct zones, a living block and sleeping block connected by a glazed entry gallery. In the case of the Fenner House, each block is given a low pitched gable unlike the more typical opposing skillions of Seidler or Breuer.

The bi-nuclear plan was first used by Marcel Breuer in his 1943 "H - House" Project and appeared in built form with the Geller House, Lawrence, Long Island, New York in 1945 (49). The editors of Progressive Architecture described the motives behind the bi-nuclear plan:
The theory here advanced is that the privacy and apartness that usual second storey location of bedroom areas automatically produces, is a desirable factor in a house plan. To achieve it in a one floor scheme, the designer deliberately separates the entire bedroom-playroom wing from the daytime living areas of the house, connecting these two major spaces by means of a passage way which since it falls in the centre between the two halves, logically also serves as the entrance hall. Hence the bi-nuclear plan.... (50).

The bi-nuclear plan was the epitome of post-war planimetric functionalism. The T2125 submitted by R. D. Jones and Associates in the 1953 R. V. I. A. Small Homes Competition is typical of the adaption of the bi-nuclear plan to the suburban block in Melbourne (51) (fig.339). Opposing skillions are given eaves with tapering outrigger rafters and the glazed entry gallery is tiled and doubles as a general purpose room. Robin Boyd's "House of Tomorrow" for the 1949 Red Cross Homes Exhibition also had a bi-nuclear plan.

In 1952, Robin Boyd published as part of the "Small Homes Section" of *The Age* an article entitled "Houses in...
the Air", which featured one of his own designs, T2109 (52) (fig.340). This house was a floating timber box sitting on slender steel columns with a pinwheeling de-Stijl plan, emphasizing the freedom of modern construction from dependency on solid walls and heavy columns. The vertical boarding and planar cut-outs owe much to Seidler prototypes in Sydney. Boyd's article included a discussion of Le Corbusier's Villa Savoye and the elevated Queensland house as exemplars of "houses in the air". The Marriot project of 1953 also recognises, as Conrad Hamann points out, Boyd's admiration for the "aerial" forms of both Seidler and Breuer (53) and the lightwell entry of the Rose Seidler House. Yet Boyd expresses the skeletal frame within the box and the strong Corbusian cut-out windows. The explicit structural diagram pervades the Melbourne work once again. Boyd's Elizabeth Wade House, 1950 likewise is a simple aerial house, with an external stair detailed in Breuer style yet its resolution is emboldened by the use of cross bracing to the timber posts holding up the first floor and jolly striped blinds to the strip of west facing windows (54) (fig.341). Typically the finesse and exactitude of overseas models is coarsened and reworked by local techniques and materials.

Roy Grounds's houses also show the transfusion of the Gropius and Breuer aesthetic into his domestic vocabulary. The maisonettes for Mrs. Franc Falkiner in Canberra Road, Toorak, 1950 (55) are elegant transformations of the
vocabulary of Clendon Corner into an aerial design adjacent to the street though retaining the French doors, the brickwork, the steel handrail with its vertical balusters of earlier work (fig. 342). Beneath the wide overhang for the elevated verandah to the street, the roof rafters are carefully modulated to coincide with the vertical mullions of the windows. The subtlety of the frame reappears and Grounds formalizes the abstract planes of Gropius and Breuer and Seidler with a symmetrical front to the street which suggests the formality of entry rather than notions of planes, weightlessness or the aesthetic ideals of de-Stijl.

Fig. 341 Robin Boyd, architect. Elizabeth Wade House, Mt. Eliza, Victoria, 1950.

Fig. 342 Roy Grounds, architect. Maisonettes for Mrs. Franc Falkiner, Toorak, Victoria, 1950.
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The M. Givoni House in Wallace Avenue, Toorak, 1954 (56) is also an elevated house, albeit in a heavier manner than the lightweight materials and spatial gestures of either Seidler or Breuer (fig. 343). As with the Falkiner maisonettes, Grounds does not change his vocabulary of materials or details. He simply applies them to a different notion of mass, and consequently these aerial houses are not highly successful and are unusual amongst Grounds's more responsively and harmoniously sited houses.

Fig. 343 Roy Grounds, architect.
M. Givoni House, Toorak, Victoria, 1954.

The presence of Walter Gropius and Marcel Breuer in the 1950s was strong. The influence of Gropius, past master of the Dessau Bauhaus and now leader of the acclaimed Harvard Graduate School of Design was that of a fountainghead of design philosophy. His teaching and writings stressed teamwork, collaboration, the pooling of artistic resources and the general elevation of the common taste of all those involved in construction. He espoused the idea of universal principles, of mass production and standardization. In May 1954, he visited Australia for the 4th Australian Architectural Convention held in Sydney followed by a three day visit to Melbourne. He spoke on "Total Architecture" and "Is there a Science of Design?" (57). In an article entitled "The House and Walter Gropius" in Architecture and Arts, Gropius emphasized the importance of sloughing off past styles, pre-conceived ideas of form and the cult of the ego as all were damaging to the production of "a common form expression of our time":

The pioneers of the new movement in architecture developed methodically a new approach to the whole problem of "design for living". Interested in relating their work to the life of the people, they tried to see the

57. For a report of Walter Gropius' visit to Australia, see Cross Section, June 1954; see also Eva Buhrich, "Editorial: Thoughts on Professor Gropius' Visit to Sydney", Architecture and Arts, June 1954, p.21.
The Modern House in Melbourne 1945 - 1975

individual unit as a part of a greater whole. This social idea contrasts strongly with the work of the ego-centric prima donna architect who forces his personal fancy on an intimidated client, creating solitary monuments of individual significance (58).

Despite the pedagogical value of such words, the actual elements of architecture with which to compose were not so clear and the vocabulary for such a total piece of architecture was found by many architects to be simply an immersion in the personal vocabulary of Marcel Breuer.

Marcel Breuer was the master practitioner, the architect who apparently put into practice the teachings of Gropius. Yet rather than produce standardized buildings, the Breuer houses were idiosyncratic and engendered a style rather than an adherence to universal principles. He was a producer of superbly crafted and well publicized houses. Each house was consistent in its development either of Breuer detail or particular planning techniques such as the bi-nuclear plan, the elevated house, the stacked wedge or the flat roofed spreading house. His furniture-like details continually appeared in the annual Architects Details. His 1949 Exhibition House at the Museum of Modern Art, New York was widely published. In March 1950, Keith Dunstan reported from New York for the Australian Home Beautiful, describing the Exhibition House as creating a sensation after it was erected to demonstrate the new principles of modern house planning (59). In 1955, Breuer added to his frequent periodical publications with his own volume entitled Sun and Shadow (60). The title itself was of immense appeal to Australian architects. The attached sunshades of timber battens, lightweight materials and the aura of mechanical precision in these houses were deemed attractive and appropriate by the Australian architect.

The appeal of Seidler's work and writing was similar. As well as the anarchy of his domestic images, there was refreshing anarchy in his words for the young Australian architect. Robin Boyd was to quote Seidler as saying of the opposing "organic" camp,

Does not this (organic) architecture seem rather weak, subservient and not very proud of itself? (61)

Such words reflected those of Marcel Breuer in his verbal demolition of Lewis Mumford's "Bay Region Style" at the

60. Marcel Breuer: Sun and Shadow, Dodd, Mead and Company, New York, 1955. An excerpt from this book was used as the editorial for the March 1957 issue of Architecture and Arts.
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1948 Symposium at the Museum of Modern Art, New York (62). In 1949 Seidler was to offer a challenge to the young Australian architect,

*It may well be that the older generation cannot be expected to grasp the elements of the "new vision"; their antagonism can well be understood even if not tolerated. It is for the younger generation to take up the immense challenge of solidifying the already well established manifestations of the new architecture all over the world* (63).

As has been indicated, Melbourne architects took up the challenge, but the results tended to be disinclined and less stylistically rigorous than their sophisticated Sydney counterparts. The most important legacy of the Siedler manifestation of the East Coast Bauhaus was the baggage of details left to Melbourne architects and the condoned use of primary colours and aerial forms. A form of compositional grammar had been found and Melbourne architects proceeded to apply it in their own particular way. The houses of Seidler had provided the catalyst to legitimize a new architectural vocabulary, yet in Melbourne, they remained unrealistic models for exacting emulation.


The influence of Frank Lloyd Wright on the modern house in Melbourne in the fifteen years after the end of the Second World War is a complex story. Unlike Sydney, where architects such as Peter Muller and Bruce Rickard took a more literal and stylistic approach to the American architect's work, in Melbourne there was the typical idiosyncratic distillation and reformulation of external sources, which in this case, was the work of Frank Lloyd Wright.

This distillation and reformulation of Wright can be found in certain 1950s houses designed by Melbourne architects: Chancellor and Patrick; Geoffrey Woodfall; Alistair Knox; Robin Boyd; and Roy Grounds. It was not until after 1959, the year of Wright's death, that a stronger definition of a Wrightian group of practitioners in Melbourne was to emerge and a more direct interpretation of and overt reference to Wright's principles was to appear (1).

The period between 1945 and 1960 was the heyday of publications on the work and writings of Frank Lloyd Wright. During the 1950s all the American professional and popular journals published work on the ageing master. A highly influential special feature on Wright's new geometric interests appeared in the January 1948 issue of Architectural Forum. In November 1955, a special "Issue on Frank Lloyd Wright and his contribution to the Beauty of American life" appeared in the popular American journal House Beautiful. The October 1960 issue of Architectural Record was a major posthumous tribute to the work of Frank Lloyd Wright. In the Australian magazine, Architecture and Arts, a special issue on Wright appeared in January 1956 with articles by Wright, John de Koven Hill and Bruno Zevi (2). In 1946, Australian Home Beautiful ran articles on the architecture of Frank Lloyd Wright (3) and Keith Dunstan reported back from New York on Wright's architecture for the same magazine in 1951 (4). Wright was featured heavily in many books of the time as well. In 1942, one of the most comprehensive catalogues of Wright's work, Henry-Russell Hitchcock's In the Nature of Materials 1887 - 1941: The Buildings of Frank Lloyd Wright was published. Bruno Zevi's book, Toward an Organic Architecture, was published in 1950, and emphasized Wright's ideals of an organic architecture and hailed Wright as:

1. Architects involved in the 1960s Wrightian survival included from the late 1950s, Chancellor and Patrick; Geoffrey Woodfall, and from c.1960, Charles Duncan, David Godsell, Oakley and Parkes, Jorgenson and Hough, Philip Sargeant, Alex Jelinek, and John Rouse.


not only a pioneer and a master: his work today is at the head of the new architecture and it is he who is spurring that architecture forward (5).


Not only did people write about Wright, but he himself published numerous books and articles. *An Autobiography* published in 1932 was reissued in 1946 and a series of lectures given in London in 1939 were published in that year under the title, *An Organic Architecture: the Architecture of Democracy*. In May 1952, *Architectural Record* published his article "Organic Architecture Looks at Modern Architecture". Books published by Wright after 1945 included *When Democracy Builds* (1945); *The Future of Architecture* (1953); the highly influential primer, *The Natural House* (1954); *The Story of the Tower. The Tree that Escaped the Crowded Forest* (1956); *A Testament* (1957); *The Living City* (1958) and *The Solomon R. Guggenheim Museum* (1960). Further publicity came in 1949, when Wright was awarded the A.I.A. Gold Medal.

The transformation of Wright's ideas to Australia was however determined more by circumstance than a desire to follow the master. In *The Puzzle of Architecture*, Robin Boyd noted that,

*The other general guide vision presented by twentieth century architecture at its half way mark in 1950 was influenced by Frank Lloyd Wright, but it was a by-product of his humanist attitude rather than his personal style. At this time Wright's own style was too difficult for workaday architects to assume (6).*

There were two main reasons for this difficulty. One was the problem of shortages of materials and finance in the ten years immediately after 1945, where an imitative response to Wright's work required a scale of detail and finance unattainable by many Australian and American architects in

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the years of post war austerity. The other reason was the choice between the "machine and the cottage" (7). Boyd highlights this dilemma by giving the examples of Serge Chermayeff's reinforced concrete house at Rugby, England, 1934 and Wright's Robie House, Chicago, 1906 as the two extremes of machine and cottage.

......many a young architect on the threshold of his career was lost between the images. He was likely to be attracted to either, depending on circumstances, while he noted the dangers of artificiality with one and sentimentality with the other (8).

The question of the rational versus the organic appeared in Boyd's writings: in Australia's Home (9), and in his early articles for The Architectural Review, particularly his analysis of Harry Seidler's Rose Seidler House and Roy Grounds's Goodes House in his article, "A New Eclecticism?" (10). Boyd, as does Sigfried Giedion (11) and J.M. Richards (12), suggests that the two extremes could be resolved under the one banner of what Richards termed "the functionalism of the particular" (13). It is this notion of attempting to resolve the two extremes which informs the influence of Wright in 1950s Melbourne and sets it apart from the Sydney examples. The attractive intellectual rigours of functionalism adhered to by Boyd and others includes the textures and essential nature of materials (i.e. Arts and Crafts principles) as well as the sensitive siting principles of Wright's organic architecture. The internationally cultivated dichotomy of Gropius versus Wright, and the choice one had to make as a young designer was inflated to an extraordinary degree. There were some architects who recognised this and Boyd was one of them. The visible employment of Wrightian themes in Melbourne in the 1950s by several architects shows a deliberate attempt to resolve the flamboyant planning, the highly wrought detail and woodsy finishes of Wright's work into a more straightforward craftsman-like aesthetic, similar to the restrained and site specific simplicity of the early houses of Roy Grounds and the so-called Victorian Type of the late 1940s. Wright's skill in spatial manipulation and siting were admired but so were the rigours of rational construction and reduced detail and ornament of the East Coast Bauhaus and Mies van der Rohe. Consequently the resolution of machine and cottage is the story of the influence of Frank Lloyd Wright in the 1950s in Melbourne.
Chapter 5: Frank Lloyd Wright and the House in Melbourne 1945 - 1960

The process of dissemination and reformulation had begun early in Melbourne. Traces of Wright's stylistic features appeared in a handful of houses before the Second World War. Norman Seabrook's own house in Hawthorn, 1935, although described as "Real Modernism" (14) had a formally composed plan with central entry and picturesque garden elevation which resembles the plan of Wright's Winslow House, Oak Park, Ill., 1893 (fig.344). Yet Seabrook's home is a curious mix of the features of Dutch architect Willem Dudok, Frank Lloyd Wright and a de-Stijl colour scheme. The brickwork has horizontally raked joints, and the colour scheme consists of white walls, blue ventilated linings to the eaves with a brilliant red fascia board. The porch piers of selected bricks finish with a warm but neutral brown tone. A hipped roof hovering above a brick base and the formal entry seem incongruous against Seabrook's tubular steel furniture, polished timber floorboards and flush finished walls and ceilings. A similarly curious mix of Wright and Richard Neutra is also found in Seabrook's second house at Croydon, 1940 (15) with its banks of French doors and pinwheel plan, details of wide horizontal weatherboards and fireplace alcove, a reformulation of a Usonian house with touches of Neutra in the expansive plan and emphasis on the horizontal. Seabrook blends the organic and rational and the result is undeniably local. Traces of the Usonian house also appear in Geoffrey Mewton's second prize design in the Herald Ideal Home Competition 1939, another pinwheel plan pivoting around a fireplace with banks of french doors opening onto a private rear garden (16).

It is the Howard Pettigrew House, Kew 1946 designed by Robin Boyd when in partnership with Kevin Pethebridge and Francis Bell which is a more direct interpretation of Wright's Usonian houses (17) (fig.345). With a series of hovering flat roofs and banks of french doors, an L-shaped plan, each wing functionally zoned and a carport on a massive blank wall to Redmond Street, the Pettigrew House resembles the massing and planning of houses such as Wright's First Herbert Jacobs House, Westmoreland, Wisconsin, 1937 and Stanley Rosenbaum House, Florence, Alabama, 1939 (18).

In the following years, the appearance of Wright in Boyd's houses was but one of many veiled tributes to overseas sources. The Haughton James House, Kew, 1956 and the Lloyd House, Brighton, 1958 both make subtle reference...


in their curved plan forms to Wright's solar hemicycle series of houses, though in detail and resolution of structure, there is a spareness and an economic straining of the essence of Wright's initial ideas. The Haughton James House bears comparison with the Second Herbert Jacobs House, Madison, Wisconsin, 1948-49 (fig.346) and the Kenneth Laurent House, Rockford, Illinois, 1949 as well as the simplified box forms of Philip Johnson's houses such as the Wiley House, New Canaan, Connecticut, 1953 (19). Boyd attempts to resolve the rational and the organic in the one commission. It is the connection with the site that is regarded by Boyd as having priority in his interpretation of Wright's architecture.

Similarly, Roy Grounds's venture into pure geometries coincides with the January 1948 publication in Architectural Forum of an entire issue devoted to the work of Frank Lloyd Wright. What is significant about this issue is Wright's use of pure geometries such as the square, circle and the triangle in virtually every project illustrated. Projects such as the series of small chapels for Nicholas P. Dahne, San Francisco, 1947; the Sports Club for Huntington Hartford in the Hollywood Hills, Ca., 1947, the Vigo Sundt House, Madison, Wisconsin, 1941; the Ralph Jester House, Palos Verdes, Ca., 1938 and the Solomon R. Guggenheim Museum, New York, 1945 show Wright's preoccupation with primary shapes (fig.347). Consequently when Grounds's triangular Leyser House, circular Henty House and his own square house (fig.348) are seen against various projects from this issue, Grounds's switch to overt geometric planning from the late 1940s seems to take on a new perspective (20). Later non-residential projects by Grounds such as the proposed Law Building, University of Melbourne, 1953, Academy of Science, Canberra, 1957-59 and the National Gallery of Victoria complex, 1959- with its proposed spire also take on a different sense when seen against the late works of Frank Lloyd Wright (21). The obvious source as Wright however has been thoroughly distilled and reformulated within both local taste and local construction capabilities in both domestic and institutional architecture.

At the same time, in the hills of Eltham, Alistair Knox was building his own personal versions of the Usonian house in mud brick. A professed admirer of Frank Lloyd Wright (22), Knox's "Operation Periwinkle", the Jack Holmes House, Eltham, 1948 (23) was a solar hemicycle house

19. The Haughton James House and its sources is described in more detail in Chapter 5: Form and the so-called Melbourne Geometric School.

20. The Leyser House, Henty House and Grounds House and their sources are described in more detail in Chapter 5: Form and the so-called Melbourne Geometric School.

21. Late works by Frank Lloyd Wright which bear comparison with those of Roy Grounds in the late 1950s include the Annunciation Greek Orthodox Church, Wauwatosa, Wisconsin, 1956; the Museum, Crescent Opera and Civic Auditorium for Baghdad, Iraq, 1957 and the Grady Gammage Memorial Auditorium, Arizona State University, Tempe, Arizona, 1959.


Fig. 348 Roy Grounds, architect. Plans of Leyser House, Kew, Victoria, 1951; Henty House, Frankston, Victoria, 1952 and Grounds House, Toorak, Victoria, 1953.


Fig.349 Alistair Knox, designer. "Operation Periwinkle", Jack Holmes House, Eltham, Victoria, 1948.


27. In an interview (1st December 1988), Rex Patrick noted that both he and David Chancellor would pore over any publication on Frank Lloyd Wright and Richard Neutra that came their way during the early 1950s. Rex Patrick also noted that one of the great influences in looking toward Wright was the series of Frank Lloyd Wright lectures given at Melbourne Technical College by Donald Ward who had travelled to the United States and returned with a wonderful collection of slides of the master’s work.


(fig.349). Each of Knox's mud brick houses in the late 1940s had a large inglenook beside the fireplace which was the massive heart of the house. The earlier timber F.E. Watton House, East Brighton, c.1948 (24) and the P.G. Moore House, Heidelberg, 1947 (25) have the hovering flat roofs above a slim clerestory window and the massive block fireplaces of Wright's Usonian houses. In the bush at Eltham, the only remaining vestiges of Wright are the sensitive relationship between landscape and the house where architecture and bush are seen as integral and inseparable.

The partnership of David Chancellor and Rex Patrick (26) however takes Wrightian themes to more exacting conclusions. Throughout the 1950s and 60s this firm of architects was to convincingly perpetuate a transformed Wrightian tradition in a swathe of houses built mainly on the Mornington Peninsula. In addition to the respect for the earthbound forms of Wright and the parti of his planning, Chancellor and Patrick’s houses included the structural logic and expressive devices employed by the Austrian emigre architect resident in California, Richard Neutra (27). Outrigger beams, bold pergola beams, overrunning roof rafters and fascia boards which were all part of Neutra's domestic vocabulary where the expressive part of the building is its roofline, all appear in the work of Chancellor and Patrick.

This blend of lightweight economic structural logic and the massive earthbound ideals of Wright appear early in two houses by David Chancellor, a retreat for himself at Mt. Eliza, 1951 (28) and the Wallace-Mitchell House, Mt. Martha, 1953 (29) and also in Rex Patrick's own house for himself built in Cheltenham, 1951 - 56 (30). The retreat at Mt. Martha was a tiny single bedroom house with a central
rock fireplace, built of 4 inch stud framing, with "Conite" on wood tex and cement render for walls, and lined internally with masonite. The sloping backed house sat on a battered rock base, earth hugging, with a lightweight framed structure above, a verandah supported on angled 2" diameter tubular steel columns (fig.350). At the edge of the paved terrace which ran along the front of the house, there is a description of expressed structure: rock, steel, rafters, fascia beam, and ceiling lining boards held back from the edge of the eave to expose all the structural elements of shelter. A thin rainwater spout extends beyond the corner, a detail frequently used by Richard Neutra. Likewise the Wallace Mitchell House, a lightweight timber framed structure seems to rise from a rock base (fig.351). A strong structural module sets a disciplined almost Miesian order to which all other elements are related - exposed roof rafters, expressed corner studs and vertical Mullions. It is these two early houses which although not directly interpretative of Wright, are indicative of the structural expression which characterizes all the later Chancellor and Patrick reformulations of Wrightian themes.
From 1953 when the partnership of Chancellor and Patrick begins, two major house types dominate their output. The first is a linear single storey house with common elements such as the central living space splitting kitchen and dining room and the sleeping zone of the house; a shaded terrace off the living room with strongly expressed pergola beams; and outrigger post and beam members in the manner of Neutra. Upon entering, one is positioned on a spine of linear circulation which gives a strong sensation of horizontal movement and the contours of the site. A large block fireplace dominates the composition as the major massive element. The Macadie House, Mt. Eliza, 1953 is one of these sliding linear plans (31) (fig.352). The vertical lining boards, the strong expression of the roof beams of the house and carport, the dominant horizontals, and the flyscreened terrace smack of the flat roofed planar houses of Richard Neutra such as his Nesbitt House, Brentwood, Ca., 1942 or the Tremaine House, Montecito, Ca., 1948 with its strongly expressed roof beams (32). Similarly, the Lindner House, Mornington, 1954, though now with a low pitched roof has the sliding horizontal zones and the terrace indentations into the plan. The strongest line of the house is the horizontal white painted fascia. The bedrooms at the rear of the house are set within an earth berm to allow the concrete floor to be level over the entire house (33). Horizontal boards and strong pergola beams on outriggers above a generous terrace become the central feature of the L. Kiddle House, Mt. Eliza, 1955, yet another strong linear composition following the contours of the site (34) (fig.353). These long stretched plans are sophisticated extrapolations of the so-called Victorian Type of the late 1940s or almost an Australian equivalent of the contemporary Californian ranch houses of Cliff May or Clarence Mayhew in California. The allegiance to Wright is subtle in these houses in much the same way that Neutra’s debt to Wright was cleverly integrated into a rational programme. The house in all cases is firmly embedded to its site. The small flat roofed Hodgins House, Frankston, 1956 built along the contours of a gently sloping site is a perfect example of the Chancellor and Patrick linear house and resembles both the smaller houses of Richard Neutra and the Usonian houses of Frank Lloyd Wright with its carport behind, emphasized horizontality, and tiny study concealed behind the fireplace (35) (fig.354). Other linear types include the Keith Taverner House, Templestowe, 1956 (36) and Cathie House, Heathmont, 1957 (37).
Fig. 352 Chancellor and Patrick, architects. Macadie House, Mt. Eliza, Victoria, 1953.

Fig. 353 Chancellor and Patrick, architects. L. Kiddle House, Mt. Eliza, Victoria, 1955.

Fig. 354 Chancellor and Patrick, architects. Hodgins House, Frankston, Victoria, 1956.
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The second type to dominate Chancellor and Patrick’s work is a Latin cross-shaped plan, a cruciform plan, or a T-shaped plan, invariably elevated with one of the legs encapsulating a carport underneath. At the crossing of the linear wings, there occurs the entry, the vertical circulation and a point of zoning change. There are two expressions of this cruciform plan type: a flat-roofed house, often stacked to three levels and a gabled house with expressed beam ends under exposed ceilings which fly out beyond the walls and eaves of the house.

The Miller House, Frankston, 1959 is one of the flat-roofed T houses. It has a series of horizontal roofs, and is dominated structurally by two massive beams over the carport and the dining room giving a strong directional line to the house which is crossed by a bedroom and sunroom block above at the top of the cross (38) (fig.355). The vertical masses are expressed in brick piers while the horizontal roof and deck members overrun their supports and express lightness and the pieces of construction. The vast four level Iggulden House at the top of a hill in Wells Road, Beaumaris, 1956 with a wing containing a squash court, is another of these flat-roofed cruciform plans (fig.356). Three brick pylons, one at each narrow end of the living wing and one in the centre support the glass and timber building against wind loads. The centre of the intersecting wings is a core of stairs, laundry and bathroom services, with a lookout and study at the top fourth level and finished with a butterfly roof (39). A flat-roofed house in White Street, Beaumaris, 1959 (40) blends the forms of Wright’s brick cubic piers and long horizontal stretches of balcony of the Lloyd Lewis House, Libertyville, Ill., 1940 with the cruciform planning of Wright’s early Prairie School houses (41) (fig.357). This three level house has massive brick pier supports and horizontally boarded balconies and boldly cantilevering eaves.

The Freiberg House, Kew, c.1959 (42) is an example of the gable roof T type with the oversailing major internal rafters (fig.358). It has a horizontal band of windows and a low-pitched gable roof with expressed purlins and oversailing eaves recalling not only the Melbourne houses of Walter Burley Griffin but also the Ralph Johnson House, Los Angeles, 1948 and Wyle House, Ojai, Ca., 1949 by Harwell Hamilton Harris (43) where a similar technique of exposed purlin beams overrun the roof to project beyond the line of the house. One enters the

41. For a concise description of Prairie School houses see H. Allen Brooks, The Prairie School: Frank Lloyd Wright and his Mid-West Contemporaries, Buffalo, 1972.
Fig. 355 Chancellor and Patrick, architects. Miller House, Frankston, Victoria, 1959.

Fig. 356 Chancellor and Patrick, architects. Iggulden House, Beaumaris, Victoria, 1956.

Fig. 357 Chancellor and Patrick, architects. House, Beaumaris, Victoria, 1959.
Freiberg House between two square brick piers and chimney and ascends at the centre of the cruciform to the kitchen/dining wing, bedroom or living room wing or up further to the third level study which peers out over Studley Park. At each level the structure of the roof above is clearly expressed. The influence of Griffin on the work of Chancellor and Patrick is not to be discounted. Rex Patrick noted that the presence of Griffin work in the Mt. Eliza area was well understood and appreciated by both partners (44). Their Clements House, Mt. Eliza, 1956 (45) (fig.359) recalls the projecting gabled wing of Griffin's S.R. Salter

Fig.358 Chancellor and Patrick, architects. Freiberg House, Kew, Victoria, 1959.

44. Interview with Rex Patrick, 1st December 1988.


Fig.359 Chancellor and Patrick, architects. Clements House, Mt. Eliza, Victoria, 1956.
House, Toorak, 1923. It is a single storey plan with a low pitched gable roof and three major wings each zoned according to function with the roof extending on one wing to form a garage. The living room projects towards the view, with the thematic use of double roof purlins projecting beyond the house at the end of each gabled wing.

David Chancellor's second house for himself at Box Hill, 1957 (46) also develops the gable roofed cruciform plan and also has a study which pops up at the centre of the cruciform in the same manner as it does over the centre of Harwell Hamilton Harris's Wyle House (fig.360). In each of these houses, the fireplace is detailed in Wrightian style and there are also the Neutra details of the overrunning beam allowing a mitred glass corner. Subtle spatial drama is gained by the use of cathedral ceilings, glass carried up to the underside of the gable, and changes of level of a few steps that occur as one moves from one zoned wing to another at the centre of the cruciform. This level change occurs in the Clements, Chancellor and Freiberg House.

Chancellor and Patrick experimented with other forms in the 1950s. The two storey McCraith House, Dromana, 1956 was an unusual departure for the firm. The house was supported on just four points by two W-shaped 3" diameter steel tube frames with infills in timber (47). Further area was gained by cantilevering an extra bay at either end of the house at first floor level. The house sits firmly within the structural functional approach to form rather than within a tradition of regionally transformed architecture on which the firm had built its reputation. The triangle appeared again but in plan and within the context of Frank Lloyd Wright. In the E.&N. Bond House, Gulls Way, Davey's Bay, c.1955 (48) designed by Colin Jones in Chancellor and Patrick's office, a triangular structural module which is arranged to form hexagons allows the house to curve with

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the contours and order the open plan within (fig.361). The Bond House refers directly to the organic module of the hexagon used in Frank Lloyd Wright's Paul Hanna House, Palo Alto, Ca., 1937. Yet the Australian version pares away the rustic timber cladding and Japanesque screens. The diagonal roofing timbers are exposed to form a lattice of structure throughout the house with wall placement and fenestration emphasizing the structural diagram of the conception. This Melbourne interpretation is stripped back. Clarity of roofline and structure are carefully delineated and at the same time a rock terrace and fireplace binds the house to the earth.

Another Melbourne practitioner whose houses draw inspiration from those of Wright but depart in their clarity of structure and restraint in detail was Geoffrey Woodfall (49). His pre-1960 houses, the almost flat roofed Samuel House, Brighton, 1957 (50) and the low pitched gable roofed Hellier House, Beaumaris, 1958 (51) that recalls the low pitched roofs of Walter Burley Griffin's houses, are both modest interpretations of the Usonian house adjusted to fit the Melbourne suburban quarter acre block. Where

49. Geoffrey Woodfall was educated at the Royal Melbourne Institute of Technology, 1949 - 54, and in 1956 completed his architecture degree at the University of Melbourne. In 1956 he entered into an informal partnership with Basil Walker. In 1960, he went into partnership with Linton Reynolds and from 1962 - 70 practised solely under his own name.


they differ from the houses of Chancellor and Patrick is in
their increased use of and sophisticated application of brick
piers and deep brown stained fascias to suggest mass. Each
house makes use of a massive fireplace, pergolas integral
with the roof form, a square hall entry space which
separates living from sleeping and is the pivotal circulation
point for the house and a tiled meals area immediately
adjacent to the kitchen. The separation from living and
sleeping zones of the house is subtle. In the Samuel House,
a change in floor surface indicates change in function
(fig.362). In the Hellier House it is a rise of two steps to
the kitchen/dining and living areas (fig.363). The motor car
is discreetly acknowledged as Wright did, under all
encompassing eaves and en-route to the front door. In each
case, the house encompasses the whole width of the block
to ensure maximum privacy for the rear garden and also to
provide a north-south vista in the major space of the house,
the living room. These two houses inform several of
Woodfall's later houses of the 1960s: i.e. the gabled house
stepping down the site and the in-line plan running parallel
to the contour.
With a carport and screened facade to Bay Street, the Samuel House opens up to the north facing garden at the rear with a continuous bank of full height French doors. A deep fascia conceals a very low pitched roof and emphasises the horizontal. Internally the brick walls are left exposed and natural finished timbers are used in kitchen and study joinery. A massive brick core houses storage and fireplace while above the ceiling floats unhindered throughout the major spaces of the house creating spatial continuity and expanding the relatively small enclosed volume. In the 1960s Woodfall's interpretation of both Wright and Griffin was to develop and his houses of that period begin to explore a further structural interest which departs from the initial source of Wright.

Few other houses in Melbourne in the 1950s develop Wrightian themes in an overt way. Two interesting houses to note are a house designed by David Caldwell in The Outlook, Heathmont c.1958 (52) (fig.364) and one designed by Peter and Dione McIntyre, the Duncan House, East St. Kilda, 1958 (53) (fig.365). The Heathmont house is planned within a diamond shape containing a carport, deck and tiny crystalline planned cottage all sitting beneath a diamond hipped roof finished with bituminous felt and a cover of river gravel. The house resembles Wright's later work where the use of simple geometric shapes was combined with natural materials and carefully integrated siting. The Duncan House by contrast is a peculiarly idiosyncratic mix of local, Wrightian, Griffin and Bruce Goff tendencies. Sited on a busy intersection, the house had originally a faceted wall in pink besser block. The house behind was a busy composition of low pitched gables and rubble rock infills. The house was a playful
rendition of the Californian bungalow, a dramatic contrast to the structural-functional houses for which the partnership had become notorious.

By contrast to the pragmatic and functional Melbourne transformations of Wright, the planning techniques and details of Frank Lloyd Wright were more accurately tabled stylistically by Sydney architects of the 1950s. The Melbourne process of distillation and reinterpretation of disparate architectural sources can be described as a more distinctly regional assimilation than the early Sydney renditions of Wright which were used by Jennifer Taylor to bolster her argument for the regionalism of the so-called Sydney School in her 1972 book, *An Australian Identity: Houses for Sydney 1953 - 63* (54). It is worth then examining a selection of the Sydney examples to see the differences and the similarities between the two cities and their appreciation of Wright in the 1950s.

The benefits of sloping sites, enviable harbour vistas and bushy rock outcrops in Sydney has contributed to the dominance of landscape in Sydney domestic architecture. Consequently, the idea of an organic architecture such as that proposed by Frank Lloyd Wright in *The Natural House* (1954) (and expounded in fact throughout his career), seemed not only natural but inevitable amongst Sydney architects. The integration of indoor and outdoor spaces, the dominant and sheltering roof, natural finishes and exposed materials, plans that grew over the site to take in specific natural features, engaging intimately with the site, were typical of the Sydney interpretations of Frank Lloyd Wright. Wright's vocabulary and elaborate detail were more rigourously followed in 1950s Sydney than in Melbourne which may be explained by the quantity of local
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Fig. 366 Peter Muller, architect. Audette House, Castlecrag, N. S. W., 1953.

56. "House at Whale Beach, N. S. W.", Architecture in Australia, January/March 1956, pp. 6 - 9; see also "Whale Beach House and Office", Architecture and Arts, December 1955, pp. 21 - 23. Another house similar to the Muller House was his design for the T. Walcott House, Whale Beach, c. 1956 which won the Architecture and Arts House of the year award in 1957. (21) The part of the house is as with Muller's own house a cruciform of overlapping flat roofs and linear wings, stretched by solid end piers. Yet each of the spaces underneath the strong linear roofs is tilted at 45 degrees to the line of the roof to create a dynamic rhythmic opening and closing of form under an all encompassing roof. See "House of the Year", Architecture and Arts, May 1957, pp. 28 - 29; see also Architecture and Arts, August/September 1958, p. 65.

The Audette House, 1953 designed by Peter Muller was one of the first most convincingly Wrightian houses to be built in Australia after World War II (55) (fig. 366). Built on the Griffin-designed estate at Castlecrag, the Audette house was massed with battered brick walls with the mortar left to ooze out between the joints. The large multi-level house was made up of overlapping and interlocking single room width wings. Wide varnished Australian bluegum horizontal boards, floating roofs, spiky outrigger beams and emphatic horizontality recalls Wright's Taliesin West, 1938 - 59 or the earthbound forms of the Rose and Gertrude Pauson house, Phoenix, Arizona, 1939.

Muller's own house at Whale Beach, 1955 was a composition of two overlapping linear wings stretched by two massive brick piers at either end, with startlingly wide overlapping and cantilevering flat roofs (56) (fig. 367). The long low house built by the architect had large expanses of

Fig. 367 Peter Muller, architect. Muller House, Whale Beach, N. S. W., 1955.
floor to ceiling glass with a central strip of glass roof running down the centre of the living room wing, minimizing the sense of roofed enclosure and heightening the prospect from the front door to the fireplace, which had been inset into a natural rock outcrop. Interestingly this house more closely resembles a house at The Belvedere, Marin County, Ca., 1950 designed by Jack Hillmer (57).

A succession of houses by Muller between 1953 and 1960 demonstrate his ability to transplant the language and planning of Wright to the bushy steep sites of Sydney. Perhaps the boldest of Muller's Wrightian interpretations was the Richardson House, Palm Beach, 1956 perched high above the water on a cliff face (58) (fig.368). A circular foyer is the focus of the Y-shaped plan, doubling as an unfurnished circulation space and large scale entertainment area. The theme of the house is the circle. Solid 3’ 3” diameter columns ring the large foyer space which is roofed by a 25’ diameter translucent copper-green fibreglass dome. A circular swimming pool runs into the house where a double row of columns bordering the foyer extend to the floor of the pool through six feet of water. A small bridge connecting the music and dining area is suspended between these columns over the pool. From the

Fig.368 Peter Muller, architect. Richardson House, Palm Beach, N. S. W., 1956.


58. "House at Barrenjoey Road, Palm Beach, N. S. W.", Architecture and Arts, August 1956, pp.32 - 33; see also "Luxury House at Palm Beach, N. S. W.", Architecture and Arts, May 1958, pp.22 - 25.
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dais of the foyer, one looks through the columns to outside views or down into any of the three main living sections of the house. Large horizontal roof planes radiate from the central core to serve the main bedrooms and the carport. The circular columns order the sequence of spaces, radiating from the central heart of the scheme. At the cliff edge, an elevator drops down to the waterfront below. The Richardson House is a transformation of the Ralph Jester House project, Palos Verdes, California, 1938 or the Project for Raul Bailerres House, Acapulco, Mexico, 1952 or more particularly the dramatic "Seacliff", the V. C. Morris House (scheme #2), San Francisco, Ca., 1955 (59).

Muller's frankly romantic interpretation of Wright's work is distinctly organic and of the landscape as opposed to the structural logic of Chancellor and Patrick or the stripped site/geometric conclusions of Boyd or Grounds who had attempted to resolve the apparent disunity of the rational and the organic. The exploration of fluid space, and interconnecting volumes is more highly developed in Sydney whereas the Melbourne houses emphasize the horizontal layering of space with little volumetric exploration and greater concern for the exploration of structure and expression of the horizontal expanse of the site.

The other Sydney disciple of Frank Lloyd Wright, Bruce Rickard, had visited Taliesin East and acquired a Masters of Landscape Architecture from the University of Pennsylvania and returned to Sydney in 1957 (60). In Rickard's houses, two of Wright's Usonian house types influence his work. The L-shaped Usonian house, exemplified by the first Herbert Jacobs house, Madison, Wisconsin, 1937 has living and sleeping zones in each leg of the L, with a fireplace and service core at the confluence of the two wings. Horizontality is emphasized. The other type of Usonian house was a linear plan epitomized by the Goetsch Winkler House, Okemos, Michigan, 1939 where the living room formed the centre of the plan. One enters and finds oneself on the cross axis of circulation, the dominant linear service circulation to bedrooms and kitchen to either side of the living room while a major and generous axis spreads towards the landscape.

Rickard's Cohen house, Middle Cove, 1958 is of this living room separated type, with a flowing horizontal space

59. The theme of circles had appeared earlier in Muller's work with his very literal translation of Frank Lloyd Wright's Sol Friedman House, Pleasantville, New York, 1949 into his scheme for the F. A. Molinari House, Forestville, N. S. W., c.1954. The use of the square appears in a project home designed by Muller for Craftbuilt Homes in c.1960. A square plan is roofed by a pyramid. The combination of concrete block walls, slate tile roof, and creosoted timbers produced a house requiring virtually no maintenance. At the centre of the composition was a square masonry form which housed the bathroom lit by a low fibreglass pyramid forming the apex of the entire roof. Around each side of the square plan, eight masonry piers contained wardrobes and cupboards. The form and parti of the house resembles an inversion of the piers of Walter Burley Griffin's Elliot Johnson House, Castlecrag, 1921, or the tiny square planned "Pholiota", Heidelberg, 1919. See "Craftbuilt Home, French's Forest", Architecture in Australia, September 1961, pp.98 - 99.


61. Ibid., pp.49 -50.
of passage, living, dining and terrace spaces, running along the contours of a steep site (61). Long and low, and dominated by an overriding horizontality, all the major

rooms open onto a cantilevered terrace (fig.369). Exposed brick, stained timberwork, and waxed concrete floors are the typical trademarks of the Usonian houses such as the Lloyd Lewis house, Libertyville, Illinois, 1940 and the John C. Pew House, Madison, Wisconsin, 1938.

Rickard's own house at Warrawee, 1959 is the L-shaped Usonian type built of Hawkesbury sandstone and Pacific maple timbers, with polished concrete floors, spreading from the massive stone fireplace into two wings (62) (fig.370). As with the Cohen House, bedrooms are minimized to conserve space for the large open and interconnecting living space which combines kitchen, living, dining and study. Above the living room, a clerestory window rises to increase the spatial exploration of the house, denoting spatial hierarchy and emphasizing the organic growth of the house from the centre. The living room is the climax of the house spreading and opening to the landscape with its full height glazing on three sides backed by the protective mass of the fireplace.
63. The Melbourne distillation of Wrightian ideals also occurred in a small number of Sydney houses. Jennifer Taylor notes the L.G. Thorne House, St. Ives, 1959, designed by architect Ross Thorne, as blending the smooth spatial transitions of Wright with notions of internal courtyard views and a succession of open and closed spaces. Flat roofed blocks are grouped to together to form a complex composition of intricately interconnecting spaces. This house is more typical of Melbourne work where the dissemination of ideas has created original works rather than the eclectic authenticity of Muller and Rickard. See Taylor, op. cit., pp.53 - 54. Taylor describes the L.G. Thorne house as the culmination of ideas on a house suitable for Australian climatic conditions, Ross Thorne had collected on his travels in Asia, Europe and America, and the Gulf of Carpentaria and the regional qualities appropriate for each location, particularly the houses of Wright and the Spanish courtyard house.

Both Muller’s and Rickard’s houses were large and demanded a high level of craft and workmanship. They are rare and accurate transplantations of Wrightian vocabulary to Australia before 1960.

In the 1950s in Melbourne, Wright’s principles and certain of his planning techniques tempered the rigours of functionalism as architects attempted to resolve the rational and the organic. By contrast, Sydney architects had felt no compunction to do so when considering the work of Wright as a source of inspiration (63). Organic architecture was appropriate given the powerful landscape in Sydney. In Melbourne, the ideas of Wright were either distilled or used to complement another pre-existing aesthetic philosophy. After 1960, interest in the work of Wright was to increase in both cities. The aesthetic distance between the two cities and their appraisal of Wright was to blur as common interests in the earth, the vernacular and traditional building materials and the idea of escape from the suburbs, were to generally assert themselves in all capital cities of Australia.
Moderate Modern in Melbourne - the 1950s Contemporary Home

We like to think that these houses have been responsible for some remarkably lucid thinking in terms of domestic architecture. While it is true that not all have been every man's dream cottage, they have, nevertheless, had a demonstrably wide influence in the sound use of new materials and in re-use of the old, and have attempted, with considerable success, to suggest contemporary living patterns.

Editor, John Entenza, in 1956, commenting on the Arts and Architecture Case Study House programme based in Los Angeles at the end of eleven years (1).

By looking at a number of Melbourne houses between 1950 and the credit squeeze of 1961, from a period of shortages and restrictions to one of relative affluence in the early 1960s, three themes emerge to describe the changing fortune of the modern home. The first is the rapid acceptance of the language of modern architecture by the bastions of conservative Melbourne as the hallmark of good taste and aesthetic refinement. From the experiments in the bush suburbs of Warrandyte and Beaumaris to the hallowed tree-lined streets of the "right side of the river", modern architecture was conventionalized into a vocabulary for the discerning wealthy client. The second was the reverence for technique. Clarity of structure was prized and the simplicity of line and detail was revered. The house became an explicit diagram of structure, a taut tectonic masterpiece. The third theme was the aggrandisement of the concept of indoor/outdoor living accompanied by the gradual closure of the open plan. From the space saving days of the 1940s, with the compaction of the living and dining room into the one space, to a greater number of larger living spaces, the reinstatement of formal pools and axes, urbane courtyards and the subtle infusion of exotica from Japan and Hawaii, the house increased in spatial complexity. This third theme took two paths. First, the plan became formalised with a similarly formalised treatment of structure and elevation. Second, the plan was divided into discrete functional parts and separated out to spread over the site and create private courtyards.

Many of Melbourne's architects designed these frankly modern homes which displayed contemporary living patterns.
patterns of the 1950s at their most progressive. An older group of architects educated in the late 1920s, Roy Grounds; Geoffrey Mewton; Rae Featherstone; and Yuncken Freeman Brothers, Griffiths and Simpson, brought to the 1950s a maturity and respect for the Colonial tradition of repose in Australian architecture and Hardy Wilson's admiration for the gracious qualities of Oriental architecture. Post-war graduates such as Robin Boyd; Neil Clerehan; John Hipwell; John and Phyllis Murphy; Guilford Bell; Montgomery, King and Trengove; Mockridge, Stahle and Mitchell extended that respect while examining the tenets of "functionalism". A sophisticated breed of young designer such as David McGlashan began to emerge in the late 1950s and it was these architects who would try to slough off aspirations to the Georgian perceiving them as reactionary and outdated.

The modern architect designed house of the 1950s epitomized the reductive aesthetic of the post-war International Style. Included were the typical trademarks of the open plan, floor to ceiling glazing, flush door and window surrounds, open living and dining spaces, hints of the ensuite and the family room, standardized window walls and the compulsory flat roof. The house was unadorned and unpretentious, the height of elegant simplicity. At the front of the house was a capacious garage and blank screen walls to emphasize privacy. The language of the International Style, of abstraction and detail quotation from the masters such as Mies van der Rohe and Marcel Breuer, of flowing uninterrupted space, of white paint and materials stripped of traditional domestic association was composed into an aesthete's paradise of planes and glass and accompanied by the latest designer furniture - a set of Eames dining chairs or a wing-backed Featherston armchair. The clients were the wealthy of Melbourne's home makers, with the house for an occasional knight or Lady not unknown. Toorak and Mt. Eliza were the two major enclaves of these spacious modern homes.

The spectre of the "Georgian Rule of Taste pioneered in this country by Hardy Wilson" (2) was never far below the surface of these sleekly finished houses. The contemporary idiom was seen as linked to the colonial tradition through the apparent virtues of good taste, simplicity and proportion. The honesty of sun and shadow, the gracious spaces of formally planned living rooms and white painted

joinery and essential structural elements were all relished in the post-war decade; all somehow an urbane distillation of what were regarded as colonial virtues. In 1954, Morton Herman published his *The Early Australian Architects and Their Work* which now added to Hardy Wilson's highly influential *Old Colonial Architecture in New South Wales and Tasmania* of 1924 and M.H. Ellis's *Francis Greenway, his life and times* of 1949 (3). The latent interest in Colonial architecture in the 1950s was complemented by the advent of modernism as a breath of fresh air after the unforgiveable degeneration from the purity of the Colonial Georgian through the rabid eclecticism of the 1920s and 30s. The seductive an'logy of Georgian purity and honest functionalism was cultivated as the proof of a continuing tradition of the apparently unquestionable roots of modern Australian architecture. In *The Walls Around Us*, Boyd states his unashamed allegiance to this idea.

But as always there were good and bad examples of the new architecture. The good part was a continuing attempt to build sensibly for Australia, which often finished with results not radically different in their white simplicity from the plainer examples of the Old Colonial. This line of development, broken many times over the years, was as close as Australia has gone so far towards the discovery of an Australian architecture (4).

Influential in the popularization of the modern contemporary home were the numerous home publications that appeared in updated form after 1945 and which emphasized the home as a major focus of consumerism (5). The glossy books and magazines from prosperous America nourished not only the average Australian homemaker but also the Australian architect. Popular U.S. magazines such as *House Beautiful*, *House and Home* and *House and Garden* were available in Australia as were the Sunset publications such as Cliff May's *Sunset Western Ranch Houses* (6). Architectural periodicals from the U.S.A. were also immensely popular. The magazines, *Architectural Forum*, *Pencil Points*, *California Arts and Architecture* and the *Architectural Record* with its regular issue of *Record Houses*, were also supplemented by books such as *The Treasury of Contemporary Homes* (7) which featured the contemporary home replete with glass and the latest materials, in assured

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compositions by architects such as Marcel Breuer, Eliot Noyes and Philip Johnson. The period home was self-righteously banished from both popular and professional press with evangelistic fervour. Reduced versions of these lavish publications which glamorized the ever increasing size of the single family home filled with laboursaving devices and the latest in electronic appliances were also published in Australia. In 1954, Kenneth McDonald published *The New Australian Home* (8) which dissected the modern house into its constituent parts as had immediate post-war books such as James Ford and Katherine Morrow Ford's *The Modern House in America*, 1945 and George Nelson and Henry Wright's *Tomorrow's House*, 1945. McDonald proclaimed that “a true indigenous residential Australian Architecture has begun.” Issues such as the carport, the disappearance of the dining room, the use of floor to ceiling glass, the work centre of the kitchen and the maximizing of "utility and comfort" were emphasized with much seriousness. In addition, McDonald stressed the international qualities of recent domestic design.

What then gives a regional character to houses? Simply the style leadership established by the most forceful architectural "masters" in the world and its or their influence on the work of local architects. Modern house design becomes an international fashion adapted to local conditions. Of course, we like to think that we create modern houses uninfluenced by overseas architecture, but in practice this does not happen. A really beautiful and efficient house today is the result of a pooling of the best ideas and techniques throughout the world (9).

Though perhaps unintended, this is a frankly explicit advocacy of what Boyd was to term "vital eclecticism" (10). The modern home was to be seen as the culmination of the latest in modern ideas of planning, detail and finish and the sources for these elements were to be utterly contemporary and progressive. Neil Clerehan's *Best Australian Houses* of 1961 was to mark the maturation of the modern home in Australia with a selection of 22 houses from around Australia.

*If this book were about "the Australian house" it would be full of such buildings. But the aim is to show not what is done but what can be done* (11).
The debt owed by Australia is clearly spelt out by Clerehan.

After 1945 when the U.S. entered the field and most private residential building was found in the new World, it was not a question of Modern or Traditional but How Modern? The Australian homebuilder firmly believed that he had accepted modern architecture. He had gone "contemporary" (12).

Australia's popular journals also went contemporary. The *Australian Home Beautiful* and the *Australian House and Garden* exhibited an unrequited passion for the often published and much admired examples from the United States. In architectural circles, the word "modern" was not always associated with "the hideous explosions of colour and chromium in pre-war modernistic styling" (13) but a conscientious attempt to develop the complete modern home, in its vocabulary, its structure and its setting as a background to the living patterns of the 1950s. To follow the developing themes of the acceptance of "modern", the rigorous expression of technique and the increasing spatial complexity of the home, a range of houses designed by several architects will be described. These architects are a selection whose work occasionally defies the overt eclectic reference, be it to Seidler or Frank Lloyd Wright or the exaggerated structure or form of other contemporary houses of the period. It must be pointed out that these houses are not recorded as an attempt to describe the oeuvre and design philosophy of each architect, but as a description of change that is broad and non-specific. It must be noted that there is a variety of different approaches; the aim however is common - to produce a house that could not be described as anything but modern.

Fig.371 Roy Grounds, architect. "Iluka", Roy Ashton House, Mornington, Victoria, 1950.

12. Ibid., un-numbered page
In 1950, Roy Grounds, in association with Mussen, Mackay, Mirams and Potter, designed "Iluka" at Beleura Hill, Mornington (fig. 371). Designed over three levels, "Iluka" had an open ground floor plan with an attached single story kitchen block. A stair divided this open space, which opened onto a generous balcony to the north overlooking Port Phillip Bay and a wind-protected terrace to the south. Restrained formality and the symmetry of the formal living spaces were matched by the expression of regular structure, white painted timber posts and exposed beams, the generous eaves and the skeletal verticals of the handrail which give this house a stripped tectonic elegance. "Iluka" was also an elaborated version of Gardner Dailey's Owens House, Sausalito, Ca., 1939 with its exposed mill frame and protected courtyard and view side opening up generously to the view (15).

Another important post-war modern house by an older generation architect was "Crackers", a house designed by Osborn McCutcheon and built for his own use on a 20 acre site at Mt. Eliza (fig. 372). In 1951 this "solar" house...
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represented the epitome of the open plan and the generous use of glass to let the outside in (16). The house was a long slim rectangle of single room width which faced north and had this face completely sheathed in glass with huge sliding doors and banks of openable glass louvres above. The house was split by a covered open-air breeze way. Within, the north side of the house was entirely open with a generous gallery-like passage connecting all the rooms. Large sliding panels closed off the rooms as required. The house had a simple low pitch skillion roof with wide overhanging eaves and exposed rafters under the eaves. It was clad in vertical rebated boarding and painted dark plum blue. While comparisons can be made to the houses of Richard Neutra or Mies van der Rohe, this house, even with its Neutra derived fireplace, has the expressed details of construction and modulation, a concern for textures and a spatial simplicity that is more particularly Australian than derivative. This house is the epitome of what Boyd was to describe as,

_The Port Phillip Idiom, product of the Australian love of sunlight, of a bitter sou'west wind, of standardized building laws, and nearly standardized family units.... (17)._

John Hipwell's own home, Warrandyte, c.1953 is typical of the post-war generation's approach to the modern home. It is a double story rectangular box, sited on the south side of a steep hill amidst the bush and almost entirely glazed on its north face (18) (fig.373). Apart from a semi-enclosed kitchen and laundry, the entire ground floor was open, with double height voids to the north, one over the living room and part above the "gallery", a multi-purpose space used for dining and playroom. Above, a mezzanine studio/bedroom overlooked the living room. The absence of internal walls encouraged a regular construction system of 9 sets of posts and beams of 10" x 4" oregon, exposed internally and left unpainted. Joined together, the post and beam arrangement defined a set of portals into which a free arrangement of spaces could be made. The glass wall was then sheeted for the most part directly to the structural frame. Externally, walls were sheeted with double lapped vertical boarding, dyed silver grey and allowed to weather naturally. Inside, wide strips of Swedish hardboard were fixed either horizontally or vertically with a half inch gap between strips, exposing the dressed face of the studs or

16. "House by Bates, Smart and McCutcheon", _Architecture and Arts_, November 1957, p.42; McDonald, op. cit., un-numbered page; Drawings held by the office of Bates, Smart and McCutcheon.


fixing battens, exuding a Japanese air of exposed timbers and frank construction, modulated by level change and volume rather than detail. The house was an expression of structure and humble finishes, and assumed a family's compatibility for open living and noise flowing throughout the house. At night, the house glowed as a diagram of post-war living.

John and Phyllis Murphy, a husband and wife team, designed several compactly planned and finely detailed houses during the 1950s that display a respect for the textured new Empiricism of Scandinavian and post-war English domestic architecture. Their design for 3 Sowden Place, Canterbury, 1952 is a tightly planned 2 bedroom house with a spreading low-pitched gable roof over a simple rectangle (19) (fig.374). The emphasis is low-key tasteful living, orthodox construction, small and human scale in keeping with the austerity of the early 1950s. The rectangular plan with an all encompassing roof form with sections cut out of it to form a verandah and service porch is a typical planning technique of the Murphys (20). The rectangular plan is pragmatic and compact. Living and sleeping areas are separated by a service block of bathroom.
and w. c. Internal divisions were reduced to a minimum in the living areas of the house. The Murphys' Saphin House, Brighton, 1955 is an expanded version of the tightly enclosed rectangle (21) (fig.375). The changes from the Canterbury design are important to note. The parents' bedroom is separated from the children's. A separate dining/family room space is discrete and separate from the living room. Into the large spreading gable, a studio is packed. The small windows picked out in black and white, silica lime bricks and cement washed white-painted brickwork internally throughout bespeak a Scandinavian simplicity and subdued modern gestures recalling the low key versions of New Empiricism such as June Park's design for a house at Fitzroy Park, Highgate, London, c.1951 and Arne Jacobsen's terrace houses at Klampenborg near Copenhagen, 1950 (22) (fig.376).
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Geoffrey Mewton's second house for himself in Myvore Court, Toorak, 1955 (fig. 377) shows the maturing of the modern idiom in the hands of an architect reared in the 1920s as opposed to his colleague Roy Grounds's idiosyncratic design for his Hill Street house, 1952. Mewton's house, with a wafer-thin flat roof, built at the end of a cul-de-sac, expresses quiet seclusion from the street, and within, Mewton's fondness for interlocking form and planar composition recalling his masterwork, the recently demolished Stooke House, Brighton, 1935. Upon entering, one is treated to a curved vista of floor to ceiling glass with white painted structural timber mullions and slim pipe columns to the breakfast verandah (23). The fluid plan shows a mastery of spatial composition combined at the same time with an elegant sense of repose, and recalls the similar grace to be found in Sidney Ancher's houses of the late 1940s such as the W.R. Hamill House, Killara, N.S.W., 1948 - 49.


Roy Simpson's A.S. Pierce House, Trawalla Avenue, Toorak, 1954 is a large house by another older architect planned around a north-facing courtyard (fig.378). The symmetrical double storey house has a kitchen and a maidservant block attached. Symmetry and order rule the composition. When published with several other buildings by the firm, Roy Simpson commented,

So, in building for today and discarding the methods of yesterday, we are trying to carry forward something of the elegance and dignity of our colonial antecedents. We believe that modern problems and modern materials can and must be invested with the same old emotional impact that the Parthenon has carried across the centuries. We do not expect history to accord that honour to the assorted buildings in this collection, but that we should like to think that they carry contemporary design an infinitely small step in that direction (24).

Built close to the street, the Pierce house is a 1950s interpretation of a 1930s Georgian Toorak home with feature stair, formal atrium and elegantly curved porte-cochere, modern icons replacing the Georgian ornamental detail surrounds to the front door and feature window over
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the stair. Upon entering the private front street facade, one is confronted by an axial vista of the atrium and pool with views to the terrace and garden beyond. The plan within is open. Order and repose are the themes of this house. This substantial house has painted brickwork and radiant heated concrete floors. The glazed walls are framed in structural steel with aluminium window sections inserted. At the head of the U, a bridge sweeps across at first floor level.

A house such as this suggests the growing acceptance of modern architecture amongst the conservative Georgian stronghold of Toorak. Aspirations to notions of propriety and reference subsume the importance of function: function is submitted to arbitration. As Colin Rowe points out, architects at this time in the United States were reserving, judgement on function, if not on structure and materials; and while they are, conceivably, aware of an aesthetic which originated in particular places at a certain time, they are indisposed to attribute to it inordinate significance (25).

In Melbourne, it seems that the ghost of the Georgian was never far beneath the surface. Instead of the syntactical rules of classicism, the structural graces of the post and beam and the associated aesthetic of Mies van der Rohe became the springboard for a new eclectic assimilation, and brought respectability to the modern home. The outdoor room of the immediate post-war years was formalized to become an exotic atrium or entry forecourt. The structural system became a decorative modulator of space and proportion, and implied the closure of space.

Robin Boyd also ventured into the realm of the elegant classical modern house. The Brett House, Toorak, 1955
(26) was built for a client who wanted a Georgian house (fig. 379). The formal front of slim white columns, banks of french doors, and the overriding order of the house complete with symmetrically placed fireplace on the south wall, all contributed to the classical overtones overlaid on to a description of loadbearing brickwork with windows fitting between.

Boyd's McNicoll House, South Yarra, 1959, at once an expression of trabeated modern and classical formalism and preceded by earlier experiments such as the first Richardson House scheme, 1953, develops this theme in a different way from the more direct literal and planimetric interpretations of Palladio that American designers such as John Johansen and Philip Johnson were achieving in New Canaan (27). In the McNicoll house, the theme is structural formalism (fig. 380). The use of concrete block piers separated by window openings was a rational means of reduction for economy and liberated the wall from the dominating pattern of the window frame. The fenestration becomes functionally and structurally generated. The result was a structural play of mass against void, heightened by the functional role of the wall acting as part retaining wall for the hillside behind, another graphic expression of

Fig. 380 Robin Boyd, architect. McNicoll House, South Yarra, Victoria, 1959.


27. For example, the Oneto House, Irvington-on-Hudson, New York, 1951 by Philip Johnson and the Goodyear House, Fairfield County, Connecticut, 1956 by John Johansen.
Fig. 381 Don Hendry Fulton, architect. Blainey House, Ivanhoe, Victoria, 1957.

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structure elaborated by a formality that suggests the Georgian. The separation of roof from structure adds another dimension of structural expression to this house which distinguishes it from similar brick panel and glazed infill experiments such as the apparently extendible panels of a house near Cowes, The Isle of Wight, 1956 by James Stirling and James Gowan or the abstract planes of Philip Johnson's Richard Hodgson House, New Canaan, Conn., 1951. Boyd's McNicoll House is an eloquent description of the elements of construction and recalls contemporary British attempts to express the essential truthfulness and clarity of construction advocated by Brutalists such as Peter and Alison Smithson. Conrad Hamann describes Boyd's houses in this mode, the Brett, McManamny, McNicoll and later Bewley houses as part of the "urbane" mode and characterized not only by their means of construction but also by the "urbane living" devices such as striped awnings and ornamental brass knockers (28). These apparently trite symbolic devices are a gesture to propriety, and create a poignant contrast to Boyd's austere rendering of the rigours of construction.

In February 1956, Boyd had written in The Architectural Review of "The Functional Neurosis". In this article, one finds the seeds of dissatisfaction with the 1950s and the virtues of so-called functionalism called into question as potentially able to "carry architecture to unplumbed depths of ennui". Yet Boyd remained loyal to the tenets of functionalism and it is these brick pier and glass infill houses of his which suggest an overlay of reference without the renunciation of functional and structural expression or resorting to individual expression through form or shape to transcend the "ennui" of pure functionalism devoid of creative thought (29).

Another accomplished designer of the 1950s was Donald Fulton whose impeccably detailed houses were to provide the basis for a later career in prefabricated housing for outback mining towns and the award-winning BP Refinery at Westemport. One such house was the Geoffrey Blainey House, Ivanhoe, 1957 which was a perfect example of the stylish modern house in Melbourne (fig. 381) (30). Modulated structure, a south-facing open-planned living and dining room, a pagoda-like metal hood over the fireplace, and a complete wall of glass to gain a fine view over the Yarra are the ingredients of this efficiently planned


29. In Robin Boyd's article "The Functional Neurosis", The Architectural Review, February 1956, pp.85 - 88, he states, If our buildings are monotonous, it is because our ideas are generally confined within a narrow range. Structure is approved as a stimulus by our unwritten architectural morality code rule; ideas based on shell-concrete or exposed steel cantilevers are always well accepted, but ideas based simply on the enjoyment of living, or springing from a sense of humour, or gaiety, or reverence, or mystery, or awe, are suspect, because we cannot bind them into a specification. They worry us; we wonder if they can be functional. Yet the question of functionalism should not enter until after the idea is formed. Then it will never let down the idea. It is never to be questioned; only our own lack of ideas is responsible for the coldness, the monotony of atmosphere, the constancy of mood, the limited range of expression in modern architecture.

The innovative feature of the Blainey House was the large area of roof glazing over the kitchen and the study (this latter space being for its famous client the most important part of the house). Skylights were rare in the 1950s. The glass in its metal frame with a "lumenated ceiling" (as was marked on the working drawings) below was an unusual experiment. One entered this house from the carport, walking along a jarrah deck to the front door. After passing down seven steps from the west facing sun-gallery, one arrived at the full width high-ceiling open living area. Bedrooms faced east and were framed in light timber and clad in solid panels of asbestos cement. The roof was flat - a bituminous membrane laid on masonite deck.

The most refined Melbourne designer to emerge from the 1950s was Guilford Bell. His first houses hold hints of the rigorous formalism which was to appear in his later work of the 1960s. The Darling House, Mt. Eliza, 1955 is a split level house built on a steeply sloping site and designed for a family of five. A zig-zag plan of upper floor bedrooms ensured views north towards Melbourne and south-west to Daveys Bay. Set forward from the upper bedrooms, the


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open plan living dining room is shaded by a flat roof and pergola over a wide terrace. A pavilion adjoining the house serves as a playroom or as a guest suite. The Darling House is a clever response to the problem of a steep site and the provision of views to the sea (31) (fig.382).

Bell's Long House, Portsea, 1957, is perhaps more typical of this architect's stripped formalism of the 1960s. On the beach side of the house, the gracious overtones of the Georgian are echoed in a simple 1 1/2 height volume of expressed post and beams along a verandah all painted white (32) (fig.383). Within, the plan is open after a formal entry. Suggestions of formality are latent in the rigid expression of structure and the use of gracious and generous proportion rather than the "functional" minimum.

More typical of the contemporary architect designed house of 1955 was a house in Winnmallee Road, Balwyn by
architects, Mockridge, Stahle and Mitchell (designer Ross Stahle) and described as "fun with skillions" where a simple L-shaped form was formed by the simple butting together of two opposing skillions to gain maximum volume from the rather small floor plans within (33) (fig.384). Living and dining rooms were combined with the kitchen to gain space for the living area. Outside the bricks were painted dark blue, the chimney panel coral, the roof and doors black and the remaining trim white. Elements were highlighted graphically. The only remaining vestige of domesticity was a massive fireplace. Even this was painted and was itself a vast cubic block connected with a circular metal flue rising up to the ceiling, its major beams exposed and painted white.

The Grenville Spencer Residence, Red Hill, c.1959, a later Mockridge, Stahle and Mitchell design is a U-shaped house planned around a courtyard facing a spectacular view, with living spaces to the north in the base of the U and a bedroom wing to the east (34) (fig.385). The house was designed on an 8' module, and in the courtyard divided into


Neil Clerehan's first house for himself in Fawkner Street, South Yarra, 1957-58 was significant for its inner suburban siting (fig.386). Built on its side boundaries, this townhouse had a Stegbar windowwall and unusually for its time, an upstairs living room (36). The glass wall facing the garden was held off the structure of the first floor and double storey curtains could be drawn to shade this north facing side of the house. Clerehan's house was one of the first houses of the 1950s to acknowledge the spatial potential of the inner city site.

An increasing emphasis on privacy often resulted in the courtyard house. The courtyard could become an elegant interior space and oasis of privacy. Ian McHarg in 1957 in *Architectural Record* volunteered the concept of the court house as a solution to the urban form of the freestanding modern house (37). The court house was essentially
introverted, turning its back to the street to face upon a private internal court or courts. The various forms it took were,

the rectangular house with single walled court, the square house with a single internal space, the "L" house with one court, "H" and "T" plans with two courts, the "Y" plan with three courts, the cruciform house with four courts and finally the possibilities of asymmetrical plans with numerous courts. (38)

Courtyard houses in various forms were common in Melbourne during the 1950s. Robin Boyd's design for the Bridgeford House, Blackrock, 1954 occupied almost the entire block with the roof beams of the low pitch gabled roof virtually spanning the full width between brick walls built on both boundaries (fig.387). The roof covered about half of this area and the remainder shaded by a pergola of beams and louvres was a private courtyard garden. Every room overlooked this private courtyard which ran the full length of the north side of the house (39). Roy Grounds's own house in Hill Street, Toorak made use of the fully closed courtyard, a circular cut-out in plan (40). The courtyard was an implication that the extension of the house into the landscape was not always possible in a suburban or semi-urban situation. The need for a semi-enclosed outdoor space encouraged the fragmentation of the linear block plan and encouraged the spreading of houses over the entire site.

Fig.387 Robin Boyd, architect. Bridgeford House, Blackrock, Victoria, 1954.
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Fig. 388 Montgomery, King and Trengove, architects. House, Balwyn, Victoria, c. 1960.

The u-shaped house has been one of the most popular in recent decades. It can be divided easily into zones and can usually, as in this case, provide a private garden screened from the street and facing the sun (42).

The materials are a veneer of light grey silica lime bricks while the ceiling is lined with one of the then cheapest sheeting materials available, a rotary-cut maple plywood, limed. The whole house sits on a concrete slab inset with electric heating coils.

The epitome of the ultra-modern home of the late 1950s is the Waldron House on the Boulevarde, East Ivanhoe, c. 1959 by Hipwell, Weight and Mason (43) (fig. 389). This house elevated on a steel frame, sits on a sloping block looking east across the Yarra River. A simple blocked plan of a living and sleeping wing which sits on ground level includes now in 1960, a separate master bedroom complete with ensuite, and a family room adjacent to the kitchen, as well as a separate living and formal dining room. From the street, one is lower than the house and greeted by a

42. Clerehan, loc. cit
43. "Houses by Hipwell, Weight and Mason", Architecture and Arts, June 1960, p. 48. Included in this article are also the Varley House, The Boulevarde, East Ivanhoe, c. 1960 and the Aldous House, Barnard Grove, Kew, c. 1960; see also Clerehan op. cit., un-numbered pages, for more information on the Waldron House.
spectacular display of structural support: steel floor beams and columns and the clear delineation of column and roof beam flying through to form wide eaves. The window wall has large sliding plate glass panels and sliding flyscreens. The house becomes a description of lines and support.

A summer residence for Lady Angliss on Olivers Hill, Frankston, c.1960 by Leslie M. Perrott and Partners, sees the formalized modern Melbourne home, and an acknowledged return to Georgian taste and values (fig.390).

The main consideration behind the design of this project was to create a stately residence in the tradition of the old Colonial homes but with the use of contemporary materials and design (44).

Formality, symmetry, a raised paved terrace acting as a podium and with slender columns going up two storeys to separate deep eaves, the two storey Angliss House was framed in steel. Manganese brick was laid in non-structural verticals to form infill panels between the structural steel frame. Upon entering the house the imposing stair and

Fig.389 Hipwell, Weight and Mason, architects. Waldron House, Ivanhoe, Victoria, c.1959.

Fig. 390 Leslie M. Perrott and Partners, architects. Lady Angliss House, Frankston, Victoria, c. 1960

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double height hall hark back to Toorak Georgian houses of the 1930s. The house is a box with a huge canopy; it has the formal image of a classical villa and is contemporaneous with Craig Ellwood's neo-Palladian/Miesian villas in Los Angeles (45).

45. For example, the Smith House, Crestwood Hills, 1955 and the Hunt House, Malibu, 1955 designed by Craig Ellwood. See Esther McCoy, Craig Ellwood, pp. 32 - 42.


In opposition to this tendency toward formalism was the stretching apart of the plan to form private courts and expanding the size of the house with single room width wings that embraced the landscape. The house was separated into groups of rooms of strong identity or into isolated buildings. David McGlashan's holiday house for the Grimwade family at Rye, 1960 (46) (fig. 391), extended the domestic themes of Richard Neutra's expansive Californian designs into a local idiom. Five self contained wings enclosed sheltered courts and garden areas and were connected by covered ways, verandahs and screened porches. The reduction of the numbers of materials and the simplification or complete elimination of detail problems were the essence of the production of the house.

Fig. 391 David McGlashan, architect. Grimwade House, Rye, Victoria, 1960.
The flat roof, vertical western red cedar walls, wide overhanging eaves and slim fascias, flat concrete slab, banks of vertical mullions, the limestone walls used in the house and for landscaping all suggest an awareness of contemporary Californian design. The spatial themes hark back to Roy Grounds's "Lyncroft" at Shoreham or Norman Seabrook's house at Croydon, 1941 with its finger wings extending into the landscape. By means of outdoor rooms, transparency, the hint of Japanese concepts of spatial juxtaposition, spaces that enlarge and reduce, the Grimwade house of 1960 is comparable to Bryce Mortlock's Badham House, Cronulla, 1959 (47). Both employ natural finishes, a simple and expressed structural order and a minimal interruption of internal space. This is a glamorous house, spacious and relaxed, the hint of an emerging maturity in the modern house in Melbourne.

A final postscript to the decade was the emerging interest in Japanese architecture. In January 1960, *Architecture and Arts* ran an article entitled "Japanese Houses for Australia" where it was purported that "Japanese design fits today's Australian house like a glove" (48). The reasons behind such a statement were the modular quality of the house of 1960, the reliance on structural pattern for decoration in the

Fig.391 David McGlashan, architect. Grimwade House, Rye, Victoria, 1960.


same way as the darkened post and beam frame of the traditional Japanese house, the adjustable open plan with sliding screens and adjustable privacy, and the Japanese emphasis on the outdoors, again applicable to the Australian house. The article was followed by a list of available publications on Japan (49) and a beach house at Carrum designed by Professor Strizic, c.1959 (fig.392). The house was designed around a courtyard with the zones of the house discretely separated and connected by a floating deck bordering the Japanese landscaped court. The circulation was therefore external. An analogy with the Australian homestead verandah could also be made. Pergolas, the repetitive use of timber and fine modulated detailing aid the abstraction of this distilled Japanese house. The open plan had received an exotic interpretation.

The houses discussed in this section indicate distinct thematic approaches in the 1960s which would characterize the mature work of the aforementioned architects. Guilford Bell's houses were to increase in formal qualities to embrace utterly a classical parti and centralising tendency which had been foreshadowed by Colin Rowe's discussion of the American scene. David McGlashan's houses develop the theme of spatial extension into the landscape. Boyd, along with the development of other themes, nurtures not only his structural formalism but investigates more completely the courtyard house.

In the 1950s, the differences of approach to the modern house had been subtle and unnoticed. An Arts and crafts sensibility exemplified by the houses of Roy Grounds, Mockridge, Stahle and Mitchell, John Hipwell and the Murphys, could be easily matched up with the more formal
houses of Bell and Simpson. The result was always a modern house but the differences were not discussed and were presumably imperceptible in the context of a new homogeneity. In the 1960s, the question of difference became marked in the development of the modern house. The open plan was repudiated not only by theoretical issues but also by its unacceptability for family living. The spaces of the house increasingly became compartmented, discrete units of space. Structure was emphasised for its modulating qualities and ability to break up the space. The inclusion of exotic sources such as Japan also influenced domestic design. In Melbourne, the spectrum of the modern suddenly multiplied in complexity and direction.

By 1957, the methods of procuring a home in Australia were diversifying. The house was rapidly becoming yet another piece of merchandise, able to be marketed on performance, desirability and economy. The complete production or "packaging" of the house became an entire industry in itself while the older pattern of homebuying began to disappear. The traditional way of hard saving to first buy the land, pay the roadmaking costs, to negotiate for endless hours with builders, and wrestle with the complex problems of finance, mortgages and specifications, to watch anxiously the home under construction, and finally the back-breaking cost-cutting months finishing the house was soon to become less popular and less economical.

The new way meant that the young hopeful couple could see exactly what they were going to buy, sign on the dotted line, inspect the house during construction, and move into a fully finished home completely equipped with every service, including refrigerator, heating, and washing machine, with nothing to do except furnish it, plant the lawns and trees and pay for it.

An article entitled, "Houses off the Hook" which appeared in December 1957 in Australian Home Beautiful gave three reasons for the boom in merchandised housing which had begun a few years before (1). The first was the increasing tendency to buy on hire-purchase. The step from buying cars and refrigerators from private companies to buying houses on time-payment was now only a small one. The second was that the credit squeeze on the former lending authorities, mostly State banks and semi-Government agencies, had opened the way for private enterprise with business acumen, and the ability to find capital, to step in and help satisfy the demand for housing. The third was the growing number of large construction companies in each State with trained staff and big plants looking for work as the post-war construction boom had tapered off.

The range of houses offered began with the minimum-finish asbestos cement or weatherboard house on a wooden frame bought for as low as £2650 for a three bedroom dwelling erected on the customer's block, often without many of the customary items such as sewers, fireplace chimney, stove, cupboards and fencing. At the
intermediate scale were larger companies which bought tracts of land in outer suburbs or satellite areas where there were few restrictions on land subdivision. Two or three prototypes were put up, heavily publicized and sold, offered at attractive prices such as £3500 in brick veneer including land. Roadmaking costs however were invariably not included and sometimes nor were the costs for septic tank, water, gas and electricity. At the upper end of the scale were the older established firms whose policy involved a complete home service, which entailed heavy outlay on the estate before a sale was attempted. Sewers, water and gas mains went in first, roads were made and sealed, paths, trees and nature strips were planted. The houses were carefully finished, equipped and sometimes partly furnished, septic tanks if necessary were put in place, and fences were put up. Prices started at around £4500.

The package house was available in two forms. The first was the architect-designed project home where the role of the designer was seen as central to its marketability, that is the package house carried the added bonus of good design as well as being affordable. The house was marketed as the positive collaboration of builder and architect as opposed to the image of the speculative builder as jerry builder (2). In Melbourne, Grounds, Romberg and Boyd's 1955 design for the "Peninsula House" for Contemporary Homes Pty. Ltd. was one such new package that appeared in 1955 (3). The second was that offered by the building entrepreneur, more commonly called the speculative builder. This entrepreneur handled not only the building of the house but invariably its sale, perhaps its contents or part thereof, and the purchase of the land itself. The role of the designer of the house was subservient to the marketed emphasis of the all-embracing company name and the image of security and respectability that apparently went with it. The building firm of A.V. Jennings, which had begun in 1932 with housing estates at South Caulfield (Hillcrest Avenue, Caulfield South, 1932) and Murrumbeena (Beauville Estate, 1934 - 35, Murrumbeena) and designed by architect, Edgar Gurney (4), was the major entrepreneurial building force of the 1950s with such housing estates as "Mountview", Mt. Waverley and "Trentwood", North Balwyn, 1956 (5).

Critical to these "houses off the hook" and their advantage over the one-off house was the concept of the display

2. George Tibbits notes in his "Slums: Poverty and Housing Conditions in Melbourne 1835 - 1930", First Draft of Notes, Department of Architecture and Building, University of Melbourne, 1986, pp.138 - 139 that,

In the mythology of professional ethics in architecture during the 1920's and 30's, the jerry builder was to the architect as Satan is to God. The State Savings Bank, through its credit foncier housing loans and bank loans to lower income people wanting their own house, exerted an evolving and widening control over building practices which supported the architects' professional distancing from builders and provided a model of the type of control over house construction which housing reformers craved through regulations and government intervention. The private sector house builder had to project a conservative image of respectability and trust to counter the slur of jerry builder and offset the well aimed efforts to supervise and control the industry by supposedly ethical superiors.


home, a visible and accessible example of the quality and quantity expected by the prospective homebuyer. One could actually inspect the product. Although not a new idea, in the heavy demand for housing in the mid 1950s, the display home became a crucial sales pitch for any scale of builder and for any homeshow or building exhibition. The house package dispensed with the various contacts and liaisons, time and complicated commitments required with the traditional client/architect/builder relationship. All one had was buyer and vendor and the display home epitomized that phenomenon of rationalized marketing.

For the post-war architect, enamoured with a technological vision of housing large numbers of people quickly and economically, the step into mass production was difficult even when one disregarded the problem of the public appreciation of experimentation with traditional domestic imagery. In California, the contemporary experiments of Raphael Soriano's steel framed houses and his ideas of the reduction of domestic design to an idea of industrialized "process" (6), Konrad Wachsman's General Panel Corporation which prefabricated single family houses (7) and Craig Ellwood's plans for industrialized housing of steel and glass, all came to nothing on the mass market (8). As other architects had before them, they believed that they could reverse the natural dynamics of the building industry, seeing the advent of industrialization as a means to realize their vision of a new equally housed society. Yet in America, and in Australia, "the homeowner's dream preceded modern industry; as technology advanced it became a means to respond to the client's expectations. The mass produced house...was not the manifestation of a sociological vision; it was the market's attempt to keep the customer satisfied" (9).

The rise of the merchant builder and the building entrepreneur was understandably meteoric in the face of the heavy demand for housing after World War 2. In America, the scale of the rise of the merchant homebuilder was gigantic, far greater that any comparative phenomenon in Australia, with homebuilders such as William Levitt in New York, John Long in Phoenix, Henry Doelger in San Francisco and Ed Ryan in Pittsburgh changing the face of urbanized dwelling in the United States. The success of these mammoth building ventures owed much to a realistic understanding of the building process. Ned Eichler, in his book, The Merchant Builders, describes the process
embraced by his father, Joseph Eichler, one of California's most successful protagonists of the architect-designed project home:

*Merchant builders did not dramatically change either the technology or the fundamental methodology of house construction. They did not move most of the assembly line into a factory, and they accepted the use of many different trades. Yet they broke some of the trades into sub-groups, especially carpentry. Emulating an assembly line, they sought greater, not less specialization. They wanted workmen to perform the same finite task on each house* (10).

Important for the homebuyer, was the fact that the builder, in whatever role that person took, proposed no startlingly novel interpretation of the post-war dwelling based on sociological speculation, nor on any unproven structural technology nor on any personal ideology. The house as package product was built with construction means-at hand and for the most part was the pre-war home stripped of its decorative porch and chimney, given a lower pitch roof and altered slightly to meet contemporary needs. More importantly, integrated into it were the latest technological devices, those must-have items of the post-war era. The critical decision whether to experiment in living patterns or in the appearance of the contemporary house was that any change had to be market proven for the builder to proceed. Marketability was essential. This conservative situation continued to foster the delayed entry of progressive ideas proposed by architects in the custom-designed one-off home into the builder's home by at least ten years. It also assisted in perpetuating an increasing distance between the one-off architect-designed home and the package house.

In looking at the two available package house choices, the ranges in Melbourne before 1960 of the architect-designed project homes or the large scale building entrepreneur's houses is however to see a distilled and dry vernacular, for the most part quite visually similar, a useful and appropriate shell to extend and alter over time, pragmatic and affordable. For many homeowners there was simply no choice when it came to the way one's house looked; it was a matter of what one could afford. As usual, the unquestioned pattern of suburbia accompanied it. The result where community and public transport facilities were missing was a morass of uniformity and ruthlessly cleared

quarter acre blocks, ghostly subdivisions which a whole generation of architects and planners were to revolt against in the 1960s. The success of the 1950s project house builder in Melbourne was a small but an important inroad into the previous domination by the faceless jerry builder to whom design seemed not to count. The fortune of the big business counterpart was the opposite. The entrepreneurial building companies simply got bigger and bigger. In the more affluent 1960s, the concept of the project house was revitalized as a strong marketable alternative to the standard builders house. In Sydney, innovative firms such as Pettit and Sevitt and Lend Lease offered quality architect-designed project homes. Later in Melbourne, Merchant Builders and other firms began a similar and highly successful sales policy. Meanwhile the larger homebuilders such as A. V. Jennings Construction Co. grew even bigger and their exploits went Australia wide.

Several attempts at the project house were made in Melbourne in the 1950s. These predate the success of the Ken Woolley and Michael Dysart designs for Pettit and Sevitt which date from 1961 and the project house designed by Don Gazzard for the 1961 Carlingford Demonstration Village (1), both of which Jennifer Taylor (2) proposes established the project house as a marketing alternative in Australia. The Melbourne project house experiments of the 1950s were hindered by a hesitant market response but lay the basis for the later success of the project home in Sydney and Melbourne in the 1960s.

Central to the idea of the architect-designed project home were three concepts:

1. the architect-designed house was marketed as an affordable alternative to the speculative builder's house package.
2. The role of the architect was highlighted. The content of so-called good design apparently available with an architect was also highlighted, and that consequently, good design and the services of an architect were desirable and inseparable. Though in many cases, houses produced by developers such as A.V. Jennings were designed by in-house architects, the role of the architect was secondary to the all-embracing services of the building entrepreneur.
3. most important of all, the project house was a package, and potentially competitive with the house of the building entrepreneur.

As Robin Boyd in his 1968 epilogue to Australia's Home, was to comment of the project home in the 1960s and which was to apply to those in the 1950s,

Customers were allowed to vary slightly the standard plans to suit their own requirements but only with the architect's approval. Most of the houses in the range were by no means in the lowest price bracket; nevertheless any one of them was considerably cheaper than an equivalent house designed and built specially for one owner. Thus for the first time a genuine architectural circumspection was brought within the financial reach of the average owner (3).

Jennifer Taylor describes the Lend Lease Scheme in An Australian Identity: houses for Sydney 1953 - 63, p.59:
Lend Lease, a building company offering financial loans, in conjunction with the Australian Women's Weekly, invited Sydney architects to contribute designs towards a Demonstration Village in the Sydney suburb of Carlingford. Five of the houses (those designed by Lend Lease) could be built on the client's land and financed by the company. Plans for nineteen architect designed houses could be obtained from the Australian Women's Weekly Homes Plan Service.


The reality of such high ideals was minor success and minimal impact on the increasing strength of the speculative home-building company. One of the more successful Melbourne experiments however, was the series of houses of a small Beaumaris firm, managed by A.G. Crofts, which began in 1955, called Contemporary Homes Pty. Ltd. Their most popular house could be spotted in Beaumaris, Glen Waverly and Blackburn. It was the "Peninsula House" designed by the well known firm of architects, Grounds, Romberg and Boyd (4) (fig.393).

Initially the houses were prefabricated in sections up to 21 feet in length, assembled on a truck and taken to a site and erected in a matter of hours. In its most basic form, the compactly planned rectangle could be sited on a quarter-acre block, either across it or along it. The house was a linear extrusion with solid east and west walls and generously glazed north and south walls. It was framed in timber with a choice of varnished timber boards or cream bricks as the external cladding. The ceilings were caneite, mouldings were quad. Internal linings, of course, varied in price. The simplest and most inexpensive finish was bevel jointed masonite. Plasterboard cost more. The ventilators were pegboard panels set into the ceiling above the window head. The floors were Tasmanian hardwood, built first and laid as a platform on top of which the stud frames sat. Stumps were timber or the more expensive concrete. The
roof was a low-pitched gable running its longer side and roofed in corrugated iron with the major structural element of the house being an open steel girder ridge beam. The inclusion of the fireplace and the arrangement of the kitchen were variable, as was the possibility of changing the basic model by the inclusion of a sunroom and stretching the already linear plan.

The Peninsula House sold well and Contemporary Homes Pty. Ltd. released further ranges based on the same prototypical rectangle with names such as the "Sou-Easter", "California" and "Colorado" (5). The same firm also produced a model called "The Virginian" which was built at the 1959 Ideal Homes Show at the Exhibition Building and contrasted heavily with the austere and stripped rectangles previously offered (fig.394). The Virginian was pink with shutters around each front window and a low porch of scalloped beams, and plastic roses were artfully placed around the door, a classic piece of Austerica, hinting at the mean but exotic range of merchant built houses that would flood the market in the 1960s. For curiosity's sake, Neil Clerehan recommended:

*But that house alone is certainly worth one visit just to see if you prefer slipping backwards to stumbling forwards* (6).

A rash of display homes designed by architects appeared from 1955. Kenneth McDonald designed holiday houses for E. P. Wright Constructions Pty. Ltd. and project homes for Apex Realty Pty. Ltd. (7) (fig.395). In 1956, the prototype of the "Olympic House" built in Mulgrave and designed by architects, Seabrook, Hunt and Dale, was officially opened by Professor Brian Lewis, from the University of Melbourne (8) (fig.396). At the Home
exhibition of 1957, four houses were on display with names that summed up the aspirations, fears and hopes of the mid-century with titles such as "The Spaceline", "The Austranental" and "The Contemporary" (9). The house had truly become a brand name. In 1959, two displays of project homes were held simultaneously and both in Highbury Road, Tally Ho. The two exhibitions were called "Futurama" and "Parade of Homes" both titles hailing from the U.S., the title "Futurama" deriving from a series of motor shows held in New York (10). Futurama was the co-operative effort of three manufacturers of the best known brand name houses of the day - Contemporary, Spaceline and Olympia, and consisting of about 15 houses set on the south side of Highbury Road. Parade of Homes was a large selection of houses by many builders, opened twice, once by the Premier and secondly, by the Minister for Housing who arrived in a helicopter! The most notable house of the exhibition was a flat roofed Small Homes Service design T375 which featured the "revolutionary" internal service block and was built in Mt. Gambier stone (11).

11. Ibid.; see also Neil Clerehan, "Building's Best Seller", The Age, 23.3.1959, p.10.
Grounds, Romberg, and Boyd also designed other repetition housing, a gabled house for A.G. McDonald, Beaumaris; the Banksia House for A.S. L'Huillier & Co. of Moorabbin (fig. 397) and the Fler House for Fler Co. & Staff Pty. Ltd. (fig. 398), the well known makers of modern furniture (12). Each was a variation on a compactly planned rectangle and planned to begin on a modest, well-finished scale, but be capable of expansion as the family grew.

In March 1958, the Banksia Home was built in 11 days as part of the 2nd Australian Industries Fair on the lawns of the Exhibition Buildings. Despite torrential rains, the house was finished on schedule thanks to a new product, "Visqueen", a thin canopy of polythene film which was draped over the incomplete house. The two bedroom Banksia Home embodied "some traditional Australian architectural features such as verandahs (back and front) with the best in contemporary styling" which allowed for "do-it-yourself extensions" and cost in 1958 between £2525 for minimum finish and £2795 for standard fittings on the client's land (13). With the low gable roof spreading wide to cover the large verandahs, high ceilings needed

12. "Platters to Houses", Australian Home Beautiful, October 1958, p.27, 94. There was a choice of size for the Fler house, the 1000 sq.ft model cost £3000 while the 1270 sq.ft. model cost £3800; see also "Recent and Current Works of Ground, Romberg and Boyd", Architecture and Arts, October 1958, p.20.

within the house gave the impression of spaciousness at low cost. The nine-foot wide verandahs made it economical to add rooms by enclosing verandah corners. The verandah could also serve as a carport, saving the costs of built-on carport or separate garage. The name "Banksia" came from the interior use of wallpaper and colours which reproduced the design and colours of the native banksia flower.

An unusual collaboration of architect and builder came in 1958 when fourth year University of Melbourne architecture students designed a house which was produced by W. Phelan and Sons of Maryborough, builders and manufacturers of prefabricated homes, a design for a house for a resident supervisor at the Mt. Martha property owned by the University. The house which was to be mass produced by Phelans, was presented by the firm to the University for students at the Mt. Martha trades instruction centre of the School of Architecture (fig.399). The opening of the house on the 13th May was attended by the eminent British architect and townplanner, Maxwell Fry (14). The simple low-pitched rectangle was yet another variation on the compact plan, expanded and with provision for country use with its rear porch where dirt could be removed from boots.
The idea of a minimum but extendible house was attractive to the young homebuyer of limited means. Expectations were not high. Each of the project house designs dispensed with the formal dining room. Apart from the dominant module of the white painted window wall and an attempt to flatten the gable, these houses had little architectural pretensions. Yet they differed markedly from the tiled roof, doubled and triple fronted houses of A.V. Jennings and his counterparts, straining to look like their pre-war houses and determinedly resisting any gable pitch less than 17 degrees. The shortages and restrictions of the post-war years had however stripped from these traditional designs the brick porches and elaborated chimneys and in place, had established an unadorned meanness that would characterize the vernacular house well into the 1970s. The modest experiments of the 1950s did however begin the proliferation of the merchant-built house so that in the 1980s, choosing one has become the most common way of procuring a home.
Private versus Public: Large Scale Homebuilders in Melbourne 1945-1960: A.V. Jennings Construction Co. and the Housing Commission of Victoria

One does not have to be particularly "Left", or indeed politically minded at all, to appreciate that the architectural opportunities of the future are more likely to lie in the hand of administrative authorities or commercial corporations (whether publicly or privately controlled) than in the hands of any private individuals whatever; or to appreciate the many excellent reasons for such bodies having permanent architects' departments of their own... It is competence and quality we need most at the moment, not the vanity of trying to fly level with the poet innovator, Le Corbusier, or the stupidity (as it seems to me) of being more interested in getting a few exciting, immaculate, individual results than in getting the roots of architecture untangled and properly planted in the soil where they belong.........

John Summerson, Horizon, 1942 (1).

Between 1945 and 1960, the development of large scale homebuilding in Victoria was led by two major forces fulfilling two different market and societal demands. The first was the Housing Commission of Victoria, a government body erecting large villa estates and experimenting with concrete prefabrication as an alternative for public housing. The second was the emergence of the large scale commercial home building entrepreneur, the most notable being A.V. Jennings Construction Co. Pty. Ltd. who developed large and influential subdivisions in the eastern suburbs of Melbourne. Interestingly, the emergence of Jennings as the largest homebuilder in Victoria is the result of its involvement with the Housing Commission and with other government contracts in the immediate post-war years.

In both cases, the role of the architect in individual house design and estate planning was essential. However, the public role of the architect within each body differed as did the dwellings mass-produced by them. Within the Housing Commission, the design of the houses and estates was supervised by an Architects' Panel consisting of four architects appointed from private practice. The houses were essentially the same basic type with minor variations such
as entry and porch details, and internal layouts which could be rearranged to suit different orientations. Within a firm such as A. V. Jennings, the houses were designed by in-house architects who remained anonymous and subservient to the overriding paternal image of the building firm. The marketed emphasis was **variety** and visual interest, an apparent expression of individualism as opposed to the quiet anonymity and sameness of the mellow garden suburb layouts of the Housing Commission. The **public** housing represented a subtle expression of a cohesive collective community as opposed to the triumphant and individualistic expression of freehold of the **speculative** housing estate. The Commission houses were **provided** for those who could not afford to buy or rent in the private market.

The Jennings homes were to be **bought**; ordered and paid for before erection. The common factor to both institutions was the large scale on which these houses were mass produced and laid out, and the accompanying adoption of **garden city** planning ideals.

The Housing Commission of Victoria which had been created in March 1938 had been building single family houses in the metropolitan area and the country since its inception and continued to do so till Japan's entry into the war in 1942 when building came to a virtual standstill (2). The large villa estates begun before 1945 included the Spring Meadows Estate, East Coburg; the Elizabeth Street Estate, Coburg (3); the Hughesdale Estate, Oakleigh (4); the Champion Road Estate, North Williamstown (5); the Richmond Estate (6); the Ashburton Estate, and three in the country at Moe, Traralgon and East Geelong. The prime pre-war example of garden city planning ideals proposed by the Commission was Garden City, Port Melbourne begun in 1939 (7). With the sponsorship of the Commonwealth and its assistance in the allocation of priorities for supply of labour and materials, the Commission was appointed the constructing authority in Victoria for the Immediate War Housing Programme which commenced on 1st April 1944 (8). The Commission immediately re-entered the construction arena.

Over the next eleven years; 1945-56, the Victorian Housing Commission became the largest home builder in Victoria. The dire housing shortage after the war deferred the

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2. Housing Commission of Victoria, *The First 25 Years*, p.3


Commission's commitment to slum demolition and consequently extensive public housing estates based on garden suburb ideals sprang up in the outer Melbourne suburbs and Victorian country towns. These villa estates were built on undeveloped land which presented few encumbrances to planning and building operations and gave the greatest return, in terms of dwellings produced for the financial resources available (9). Housebuilding on the larger estates such as Ashburton, Coburg, Moe and Traralgon continued while new estates at Heidelberg, Oakleigh, Reservoir and Sandringham commenced in earnest immediately after 1945. In the next ten years, the major areas of housebuilding occurred at these locations as well as the Ascot Racecourse Estate, Ascot Vale; Maidstone/Braybrook, Moorabbin, Preston East and West, Jordanville, Box Hill; and in the country at Morwell, Ballarat West, Wangaratta, Shepparton, Dandenong as well as a huge development at Norlane (Corio), and another at Geelong West. By June 1957, the largest metropolitan estate was Heidelberg with 3357 dwelling units. Second largest was Maidstone with 2280. Other estates with more than 1000 included Ascot Vale, Ashburton, Broadmeadows, Jordanville South, Preston East and Reservoir East (10).

The design of the houses and the estates developed by the Commission lay in the hands of the Architects' Panel which had been established by the Commission following an architectural competition in February, 1939 for the Garden City site at Port Melbourne (11). The panel comprised four architects from private practice; Frank Heath, Arthur C. Leith, Best Overend and John F. D. Scarborough. Buchan, Laird and Buchan of Geelong were appointed to deal with work outside Melbourne. This panel provided architectural services to the Commission for 17 years before the panel was disbanded in 1956 (12).

The designs of the detached houses built by the Commission were simple, unadorned and fundamental accommodation: detached and semi-detached single storey houses with gabled and hipped tiled roofs, glazed entry porches and walls of red or cream bricks (fig.400). The houses were efficiently and compactly planned but with little relationship to the outdoors and a traditional
orientation of the main rooms of the house facing the street. Houses built in concrete were a further aesthetic reduction. Experiments with flat roofs and generous amounts of glass rarely entered house designs after the unacceptability of the flat roofs on the concrete houses built at Fishermen's Bend in the early 1940s. Two and three storey walk-up brick flats were mixed into some developments, particularly at the Ascot Estate where there were elevated roof terraces used for laundry drying areas.

One of the more innovative dwelling types developed by the Architects' Panel was a combined row house/shop block where shops at street level alternated with front gardens to double storey townhouses behind (fig.401). The whole block of house/shops was set back from the street to provide parking. The Commission had made a commitment to the erection and ownership of shopping premises as part of the development of larger housing estates. The first of these shop/house types was constructed in 1947 on the Newlands Estate, Coburg on the corner of Gaffney and Elizabeth Streets (13). A larger development of 16 shops was built in Bluff Road, Sandringham in 1948 (14). With the drastic cuts by the Commonwealth Government in loan allocations to the States for public works, the Commission in 1952 found that it could no longer guarantee to build shops on each estate (15). Shop sites were from thence onward reserved on each estate but the Commission could not always afford to provide them.

The distinctive characteristic of the villa estates was the dominating sameness of the houses despite the inclusion of parks and shopping areas and the occasional community facility such as a kindergarten or community hall. The

Fig.400 Architects Panel, Housing Commission of Victoria. Concrete house, Sandringham Estate, Victoria, c.1946.


layout of the estates was also the responsibility of the Architects' Panel. A plan of cul-de-sacs off main curving arterial streets was typical with the territorial emphasis on individual plots rather than shared communal land. Flats and elderly persons units were however clustered around communal spaces. Today these estates are identifiable by this continuity of type and the large scale of each development. They are important indicators of the substantial post-war commitment by the Commission to public housing, and the extension of the garden city ideal into the post-war decade as the perceived desire of the low-income resident.

In the early years of the Commission, a variety of construction methods had been employed for villa construction for experimental purposes. They included solid brick construction, cinder and cement blocks, brick veneer and a method known as the Fowler system, using solid 3 inch prefabricated concrete walls which had been developed by a Werribee farmer, T. W. Fowler (16). On his death in 1942, and following the advice of the Panel, the Commission took over his plant to continue the erection of concrete houses. In 1945, the Commission converted the

16. The origins and the development of the Fowler system leading eventually to the construction of the high rise towers has been investigated by Harry Bechervaise, "History of the Concrete House Project: Victorian Housing Commission", B.Arch. thesis 1972, Dept. of Architecture and Building, University of Melbourne; see also W. A. Somerset, "On the Job with the Housing Commission", Australian Home Beautiful, October 1944, pp.15 - 19, 26.
Commonwealth Government's Munitions Annexe at Holmesglen for the mass production of precast concrete building components using the Fowler System (17).

Since that time, the Concrete House Project played a major role in dwelling production and more importantly became the catalyst for major policy changes within the Commission itself. An experimental block of flats was built in the North Melbourne slum reclamation scheme in Molesworth Street in 1949 to test the practicability of extending the scope of the Holmesglen concrete house project from the production of single storey units to the production of unit panels for multi-storey flat construction (18). The success of this experiment guaranteed further experiment each following year and increased height was the goal. By June 1955 it was reported that the prefabricated form of concrete construction could be carried to ten or more storeys with safety (19). These experiments were instrumental in laying the seeds for the development of the high-rise housing projects of the early 1960s which characterize the ideals of the Commission during that period and fired the policy for major demolition of so-called slums in large areas of inner Melbourne (20). Concrete construction and high rise apartments became a major production priority. The idealistic goals of the villa estates would soon be overshadowed by the seductive figures of production available with the high rise tower block.

In 1953, the Commission learned that a portion of its large Heidelberg Estate had been selected as the site for the 1956 Olympic Village (21). Permanent houses were to be erected there for the temporary accommodation for 6000 athletes who would be competing in Melbourne. After the Olympic Games, the houses were to be occupied by the families under the Commission's normal housing programme. Building proceeded rapidly much to the chagrin of neighboring Commission residents. By June 1956, on a 118 acre site at Heidelberg, the Commission had built 841 dwelling units, dining halls, community centres, dental clinic, hospital and shopping centre and provided 50 acres of lawns and nature strips containing more than 10 000 trees and shrubs (figs.402&403). It was noted by the Commission that for the first time in the history of the Games, such a building feat would enable all competitors and officials to be housed in the one centre (22). This expanded slice of Australian suburbia had a temporary 6
foot high "girl proof" fence defending its perimeter. Occupants of neighboring Commission estates looked on enviously as roads, drains and sewers preceded buildings and as transplanted trees, grass and shrubs went in long before occupancy. For the onlookers it was a scandal of privilege. Here were services for which they had to wait years, or with which they still had not even been provided. The "girl proof" fence now not only kept people out. Local Commission residences had begun to protest and throw stones in a violent reaction to the new concrete houses being built there (23).

The immense Broadmeadows development took garden city ideals even further into the 1950s. In 1951, the Commission acquired 5800 acres in Broadmeadows. All engineering services and roads were to be completed before construction began on a site that could potentially house 45 000 people in approximately 11 000 houses (24). At the time the Broadmeadows Estate was considered by the Commission:


A unique opportunity exists to plan a city from its inception. The Commission is conscious of its responsibility and is taking every step to ensure that the outcome will be a credit to the community (25).

Construction of houses at Broadmeadows continued into the late 1960s but even by 1956, the Commission was concentrating more of its planning energy upon the concept of the high rise apartment block. The impetus behind the Broadmeadows vision faltered and the estate suffered piecemeal development over the next fifteen years. Estate building in Victoria continued throughout the 1950s though the public face of the Commission reverted more toward slum demolition and the rebuilding of inner Melbourne. In the meantime, the private building entrepreneur was finally beginning to re-emerge as the major house builder in the state.

In 1942, the Government had stopped all private housing to encourage private industry to devote itself to the war effort. The building firm begun by A.V. Jennings in 1932 was at that time the leading private homebuilder in Melbourne (26). To compensate for the loss of market, the company began working for the Government building army huts, camps and low-rise hospitals. The fortuitous purchase of the Rogers and South timber company in Burwood in 1943 and the acute perception of the potential shortage in timber supplies at the end of the war led the company to also acquire country mills with logging areas at Darnum and Healesville and the purchase of 20 acres at Springvale for a sawmill, seasoning yard and kiln-drying facilities (27). The company foresaw the huge demand for housing precipitated by the vacuum of production being created by war.

In 1944, A.V. Jennings began to build houses for the Housing Commission of Victoria. The firm had organized a fixed fee arrangement whereby the job was priced and a management fee of 5% of the original price was charged with reimbursement from the Commission for running costs. The Housing Commission therefore was able to obtain management services and A.V. Jennings could secure sources of supply and finance for forward ordering. The collaboration began with 40 homes built at Aberfeldie. In 1946, a vast project at Heidelberg was begun with construction offices in Beatty Street. 2500 homes were built for the Housing Commission, their designs emanating 25. Housing Commission of Victoria, Sixteenth Annual Report, 1953 - 54, p.11.


Chapter 5: Private versus Public: Large Scale Homebuilders in Melbourne 1945 - 1960

from the Architects' Panel of the Commission. The quantity of work carried out by Jennings for government bodies escalated in the ensuing years to include not only estates but the erection of prefabricated houses imported by the Federal and State Governments from the United Kingdom and Europe. In 1948, the Company built 1500 Housing Commission homes at Moe and Morwell. Over the following three years, 1000 homes were built for the Tasmanian Government. From 1949, Jennings won a five year contract for 1890 homes in Canberra (28). In 1950, Jennings also built the new Eildon township laid out by the architects, Bates, Smart and McCutcheon for the State Rivers and Water Supply Commission. Jennings was responsible for the supply and erection of the temporary housing and hostels, and the permanent buildings in the town centre, and was the co-ordinating contractor (29). By 1950, with projects in Western Australia and New South Wales, as well as Tasmania and the A.C.T., and the firm expanding rapidly, a public company was formed to finance this growth and A.V. Jennings Industries (Australia) Limited was formed. The heavy involvement with government contracts in 1950-51 aided expansion of the company. But there were cancellations of large scale government commissions from September 1951 (30). Jennings found itself caught with substantial stockholds of materials, commitments to forward orders and a need to seek other work at short notice. The company needed to diversify to fend off being reliant solely on government commission. The company had gained considerable experience in handling large contracts, and the control of subcontractors accompanied by sound administrative back-up meant that the move into the large scale private market was a relatively smooth one. On Vic Jennings's return from an overseas trip in 1954, as part of the Australian Building Industries team, it was decided without doubt that the Company should re-enter private housing (31).

In 1955, A.V. Jennings Construction Co. resumed entirely its own private housing operations. The firm swung into action with an energy unseen in the development of suburban Melbourne in the private sector. The major estates in Melbourne to 1960 included "Mountview", Mt. Waverley, 1956; "Trentwood", North Balwyn, 1956; "Parkwood", Mt. Waverly, 1957; "Eastern View", Syndal,

28. Ibid., p.19.
1957; "Pinewood", Glen Waverley, 1958; "Westerfield", Glen Waverley, 1960; and "Greenwood", Bundoora, 1960. These estates, large for Australia, averaged between 90 - 100 home sites. An estate such as "Trentwood", required considerable outlay of capital, the co-operation of various Government authorities and the Camberwell City Council over a period of two years to ensure that all services, including sewerage and underground telephone cables, were complete prior to the commencement of home construction. The houses could be individually designed by the Company's own architectural and engineering panel or clients could choose their own architect. Crucial to the Jennings philosophy was that the company was not to be seen as a speculative builder. The basic condition was that each house was to be sold and financed before the house had been built, i.e. the house was ordered as a specific type. The economic advantages of building a Jennings home on a Jennings site were obvious but there was an allowance to buy the land only if so desired. Jennings's wish for diversity and individuality could be further enhanced.

Each of the Jennings subdivisions made use of cul-de-sac street planning. At Trentwood, four cul-de-sacs opened onto the spine of Trentwood Avenue (32) (fig.404). The principle of a comprehensive community development at Trentwood also resulted in the building of a kindergarten, baby health care centre, a community hall (R.S.L.) and shops with off-street parking. The houses themselves all adopted the same rectangular compact plan with minor variations about the entry and carport and the arrangement of fenestration (figs.405&406). Although each house had the same floor layout, the emphasis was on distinctive

CHAPTER SIX:

CONSOLIDATION AND REASSESSMENT: THE MODERN
MELBOURNE HOUSE OF THE 1960S
Chapter 6: The Re-evaluation of Structure, Space and Texture

The Re-evaluation of Structure, Space and Texture: New and Brut Influences on the Modern Melbourne House

A reassessment of the aesthetic ideals of post-war Modernism took place in the 1960s. Nowhere more visible was this reassessment than in the design of the suburban house. The return to the compartmented plan, natural materials and vernacular methods of construction, a search for traditional symbolic references to home, truth in structure and especially expression of materials were all part of this process. The forces that instigated such a development came from a variety of sources and typically these external influences underwent a specifically Australian process of transmutation and transformation.

A crucial factor of the reassessment was the move away from the concept of uninterrupted horizontal space and the centrifugal movement to the perimeter of the building plan toward an exploration of enclosed volume and a rigorous investigation of the section. The spatial climax of the twentieth century evidenced by Mies van der Rohe's Dr. Edith Farnsworth House, Plano, Ill., 1945-50, was eschewed in favour of less modern and centripetal notions of space. The theories and architecture of Louis Kahn, Charles Moore and the deliberate avoidance of the hierarchical notions of space in British architecture ensured a pause in the search for spatial purity. In terms of the home, such a pause was eagerly welcomed. Though aesthetically ideal, the open plan and uninterrupted flat pancakes of volume had not positively triggered the domestic psyche. Mies's abstract conceptions were out of step with instinctive notions of dwelling. The 1960s saw a return to primitivist notions of space and shelter, a search for the centre, a celebration of a perceived vernacular and the investigation of sculptural volume.

A minor economic depression in 1960 - 61 in Melbourne coincided with this reassessment. A rapid recovery from this brief gap in production was climaxed in the late 1960s by the success of the project house designed by both builders and architects. The one-off architect designed house was eclipsed by an industry that understood its market and had aimed to fill a gap in its upper bracket. Meanwhile the aesthetic and political position of the architect was shifting to an increasingly anti-architectural position - an anathema to the post-war aims of architect and critic Robin Boyd who believed that the architect could be
the saviour in the plight of the poorly designed suburban home. By 1975, the dilemma of the Melbourne architect was one of politics and economic recession, with the energy and drive of the optimistic years of the Whitlam era reversed. Boyd’s death in October 1971 robbed Melbourne of its only cultured and mature architectural commentator. By chance, Peter Corrigan’s much vaunted article on the Venturis, written while he was studying in America, appeared in the same issue of *Architecture in Australia* in February 1972 as David Saunders’s posthumous tribute article "Retrospective Robin Boyd". It seemed that a new era was to be ushered in immediately (1).

But the winds of aesthetic change had begun much earlier. The writings and buildings of Louis Kahn, Paul Rudolph and Charles Moore and the continuing popularity of Scandinavian architects such as Alvar Aalto, Jorn Utzon and Reima Pietila and the humanistic scale and textures of their domestic and institutional buildings were finding influence and were encouraging a reassessment of modern architecture in Melbourne, Sydney and Brisbane well before 1972. Reyner Banham’s *The New Brutalism: Ethic or Aesthetic?* appeared in 1966 (2) but the term Brutalism had been cultivated by English periodicals ever since the term first appeared in 1952 (3) and Australian architects had already by 1960 been experimenting with brut structures and materials.

In addition to these accepted influences in the 1960s, architecture in Australia began to shake off the self conscious copying of form and style of previous decades as a generation of architects schooled in ideas dramatically different from the eclectic abilities of pre-war architects began to practice and design houses. The 1960s, far from being a trough of aesthetic thought, saw a search for an Australian architecture appropriate to the bush, local materials and structural techniques. Above all, a conscientious search for a domestic language ensued.

The emergence of so-called Brutalism in Melbourne was tentative and lacked any distinctive discourse amongst local architects, let alone discussion in local magazines. One of the first to experiment with the aesthetic was Robin Boyd. His Black Dolphin Motor Inn, Merimbula, 1958 - 60 has simple modulated brick panel and standardized window infill construction accompanied by the frank use of log column colonnades which alluded to a primitive Australian

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3. The term "New Brutalism" was first used in public by Peter Smithson to describe a small house project for a site in Soho. See Peter Smithson, "House in Soho, London", *Architectural Design*, December 1953, p.342.
vernacular. His McNicoll House, South Yarra, 1960 and Handfield House, Eltham, 1960 also suggest a knowledge of the early works of James Stirling, a predilection for the structural logic of contemporary Japanese architecture, and the vigorous structural expressions of Paul Rudolph.

But in Boyd's hands, Brutalism was always coloured by his tasteful concepts of beauty and elegance, his sophisticated and subtle eclecticism. Boyd's buildings were not so brut as stylishly shibui. The more rigorous exponents of this aesthetic in Melbourne were younger: David Saunders, Neville Quarry, Judith and John Brine, Graeme Gunn who had worked for Grounds, Romberg and Boyd from 1960 to 1962, and Daryl Jackson. Their work can be considered as part of a general trend towards a perceived vernacular and the spare exposed surfaces of English Brutalism. Bernard Joyce's houses show an understanding of the planning clarity of Mies van der Rohe and the cellular squares of Louis Kahn, blended with an entirely homespun palette of materials. Keith and John Reid's houses show an understanding of the work of Charles Moore and contemporary Californian architecture. It is this small collection of architects who provide the basis for new theoretical work of the 1960s in Melbourne, which at the time was overshadowed by the formidable publicity of the so-called Sydney School. There is no question of a school or a movement in Melbourne, but the houses designed by these architects form the basis for the next wave of thought that was to power the Melbourne architectural scene of the 1970s.

**David Saunders**
The David Saunders House, Parkville, completed in 1962-63 is one of the first Brutalist house designs in Melbourne (4) (fig.407). It is a rare and important work in Melbourne and must rate beside the important Sydney houses of the same period such as Ken Woolley's own house, Mosman, 1962 and Peter Johnson's house at Chatswood, 1963. Neville Quarry described it in 1967. He noted that in 1963, Architecture in Australia Council policy had changed to no longer permit the publication of critical reviews of an architect's work. Consequently publication of the Saunders House lagged behind the high public profile of the Sydney houses. Quarry was to say of the Saunders House that,

... it has remained significant especially on two points. First as an example of a new house inserted into a terrace
house street it has remained, in terms of serious modern un-imitative architecture unique in Melbourne. Second, it represents one of the first expressions in Australia, and one of the few yet in Melbourne, of an attitude towards architecture that Robin Boyd has lately termed the "third phase" of the modern movement (5).

A narrow inner suburban site dictated a simple division of space between two parallel double brick walls. Entry was not from the front but from the centre of the house where stairs and bathroom formed a service core. The ground floor was occupied by a living room at one end and dining/family/kitchen area with sleeping above at the other. Children were separated from the parents by the bathroom and stair and this was expressed by two opposing skillion roofs with clerestory lighting for the spaces within. Materials were frankly expressed: reconditioned slate roofs, dark grey concrete bricks, stained timber stairs, internal walls lined throughout with old handmade "Hawthorn" bricks, and an off-form concrete slab ceiling. The message was honest simplicity. In the children's

Fig.407 David Saunders, architect. Saunders House, Parkville, Victoria, 1962 - 63.

bedrooms, an exposed off-sawn timber truss was stained black and with no ceiling lining other than the aluminium foil insulation. A relaxed barn like space was created. Reyner Banham was to remark, "But this is not an Australian house" (6). Similarities to contemporary English domestic architecture were obvious but in Melbourne such a house was rare. The typology of the 19th century terrace house was respected by the use of slate roofs, double storey, balconies and a dominating linear orientation along the length of the block. The saw tooth roof line marks the house as unmistakably of the 1960s and with its contextual allusions and urbane setting, it departs radically from the 1950s.

Neville Quarry

Neville Quarry's own house at Kew, c.1966 is in rough brick with stained timber fascias, a simple porch entry and a hybrid roof form with "a skillion lifting to catch the early morning sun, a hip sloping down from a mezzanine studio to reduce single storey volume in the kitchen, and a cut-off gable to the west" (7) (fig.408). The image of the house is

Fig.408 Neville Quarry, architect. Quarry House, Kew, Victoria, c.1966.
brick, floors were parquetry and vinyl tile and ceilings were lined with untreated plywood. Both Saunders and Quarry taught together at the University of Melbourne.

Brine Wierzbowski Associates
Judith and John Brine and Mark Wierzbowski designed several houses in the 1960s in which simply expressed structure was an essential theme. Untreated timber and exposed brick were employed in simple arrangements based purely on the spatial requirements of the functions within. Brick walls returned to create interlocking volumes of space and the junction of structural members was highlighted. In an article devoted to women architects, Judith Brine proposed that houses

should either be like caves (built of brick) or tree-top pavilions (built of timber) (8).

The three level Hajek House perched on the steep slope of Arthur's Seat, 1963 by Brine Wierzbowski was a tree-top house (fig.409). The theme of truthful structural expression was followed with a clearly delineated timber post and beam system and an external cladding of vertically laid rough board and battens. With purlin rafters overrunning the wide eaves, low pitched gable roof, graphically expressed roof and floor construction and minimal balustrade detailing, this house recalls the simplicity of Japanese construction techniques and local houses on the Mornington Peninsula by Chancellor and Patrick (9). By contrast, at a house on an elevated site at Doncaster designed by Judith Brine in 1964 (fig.410), interconnecting cave-like volumes via a split level created a simple form with subtle domestic gestures: low pitched gable roof, chimney, vertical bricks piers and horizontally laid cedar weatherboards left to weather naturally. The

8. Keith Bennetts, "How would you like to live in a cave?", Australian Home Beautiful, March 1968, p.7. In the same article, Judith Brine states that houses should be like the ideal man - practical, rugged and relatively unadorned.


11. "House, Glen Waverley, Victoria for Mr. and Mrs. Peter Terrill", Architecture in Australia, February 1967, pp.84 - 85; Cross Section, October 1964.
house was a description of brick as mass and timber as lightweight infill (10).

The Peter Terrill House, Glen Waverley, c.1967 extended the theme of interlocking volumes achieved by massive brick or block return walls (fig.411). In this house they were non-load bearing. An oregon post and beam system independently supported the roof structure above the open sleeping and living area. The external expression of doubled beams and posts, the central placement of the kitchen as the most important room of the house with visual access to the playroom make this a successful small house with the sleeping areas on plan delineated as sheltered corners enclosed by brickwork (11). The concept of the row house was tentatively explored in a house and office for John and Judith Brine, South Melbourne, c.1967, sited amongst terrace houses like the Saunders House, and built of brown manganese brick, exposed on the internal and party walls, with a tile roof, corrugated aluminium insulation ceilings and concrete slab floors. The calm deference to context, the wing walls and free plan within were typical features of the period.
The Modern House in Melbourne 1945 - 1975

Characteristically, they refused to disguise or try to hide essential structural members purely for the sake of appearance. Exposed rolled steel joists and massive reinforced concrete beams are seen to be doing their job of supporting the wide expanse of concrete that forms the upper storey floor. And on the underside of that slab, the pattern of the formboards helps to heighten the "cave-like" atmosphere of the ground level areas (12).

These houses by Brine Wierzbowski were an attempt to return to a fundamental notion of shelter. With their cave-like spaces, unadorned structure and surfaces, and their subtle allusions to vernacular form, these houses show modest steps away from overtly modernist themes of the 1950s.

Graeme Gunn

Graeme Gunn's house designs of the early 1960s show an interest in the Brutalist philosophy of exposed materials, expressed construction and the structural logic of Japanese architecture (13). Sitting amidst a pine forest at Donvale, the Shoebridge House, 1961 was a graphic expression of post and beam timber construction (14) (fig.412). Posts and beams whether internal or external were undressed Oregon. The same timber and unfinished surface was used as lapped boards for the external cladding. The long linear house block was edged into the slope and one entered from below into a simple modular planned interior complete with family room, dining room, living room and separate ensuite for the parents. From a distance, the house read as a grid, with horizontal base plate, balustrade and fascia.


Fig.412 Graeme Gunn, architect. Shoebridge House, Donvale, Victoria, 1961.
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opposed by vertical posts. Within the house, sliding screens replaced swinging doors. The ceiling was natural caneite wedged between the exposed rafters which followed the line of the roof to a doubled ridge beam. The underside of the corrugated iron roof was reflected in the underfloor space which at its deepest section contained a horizontal duct. Consequently at the end of the house the floor frame was expressed as a scissor truss recalling an inverted version of Robin Boyd's Clemson House. To the north, the wall was held back from the frame of posts and balustrade to express its non-loadbearing function and provide shade to the master bedroom and living room.

Gunn's best known house of the 1960s was the Richardson House, Essendon, 1963 (15) (fig.413). This large house with expansive entertaining areas was designed for maximum privacy to reduce street noise and provide an intimate relationship between the living areas and the garden which was landscaped by Gordon Ford. The house extended to the boundaries of the flat site to form an internal courtyard as well as enclose a garden at the rear to create a second court. The house was constructed in concrete block left exposed with timber ceilings and exposed beams in western red cedar. All floors except the two bedrooms and sunken formal living room were paved in 9 inch square quarry tiles. Different functions within were delineated by changes in floors and ceiling levels. The centre of the design was a square court crossed by a timber pergola and paved in brick. It was the formal landscape of the house. At the rear, a free form swimming pool curved around a circular deck with a tree at its centre. On the boundary wall, the windows were deeply recessed slots giving the house an austere formality and sense of depth. Cross Section complimented Gunn by saying that "the interior is suffused with that sort of mild mellow light that


Fig.413 Graeme Gunn, architect. Richardson House, Essendon, Victoria, 1963.
one had despaired of ever encountering in a modern house” (16). The Richardson House was a thoroughly considered work reminiscent of Boyd's concrete block McNicoll House which Gunn had worked on while in the office of Grounds, Romberg and Boyd. The disposition of major living spaces at the centre of the composition and the service rooms at either side suggest a knowledge of the served and servant space ideas of Louis Kahn and an interest in courtyard houses of the Mediterranean and Japan.

Sitting behind a perforated screen wall, the Stradwick House, Kew, 1963 extended the theme of the courtyard (fig. 414). It was described by *Australian Home Beautiful* as

*an answer to the coming mass dilemma of how to live privately and comfortably on a small area in a flat heavily built-up suburb* (17).

Like the Richardson House, the Stradwick House was designed to look onto a series of enclosed landscaped courts. Within, all doors and many of the windows were

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Fig. 414 Graeme Gunn, architect. Stradwick House, Kew, Victoria, 1963.
sliding screens. Light was filtered through bamboo screened strips and the living room was sunk down three steps below entry level. Rough sawn timbers for posts and beams, bagged brick, stained or varnished trim timbers and boarded ceilings indicate similarities with contemporary Sydney domestic architecture. But this Melbourne house was designed for privacy and encompassed the whole site rather than a direct engagement with the landscape as occurred with the outward looking Sydney houses.

These early houses and others by Gunn were to inform his highly influential project house designs for Merchant Builders in 1965. The Studio, Courtyard and Terrace Houses were all partly based on previous experiments with the one-off house (18). Gunn was to subsequently reinforce his growing reputation with multiple housing design as well as these imaginative single family houses. A set of six town houses in Molesworth Street, Kew, 1968 (fig.415) won for Gunn and Merchant Builders, the 1970 Bronze Medal Award of the Victorian Chapter of the R.A.I.A. (19). Each house was designed for family living with at least three bedrooms and provided with private courtyard spaces, a double carport and at least one large balcony at first floor level to face the sweeping views over the Boulevard. This was an attempt at medium density housing and coincided with Gunn's concern for the diminishing power of the average homeowner to purchase and maintain the quarter acre block both financially and physically (20).

18. Trimble, op. cit., pp.74 - 80 explains comprehensively the origins of the houses designed for Merchant Builders.
22. David Yencken and Graeme Gunn, "Perception, expectation and experience", from George Seddon and Mari Davis (eds.), Man and landscape in Australia, pp.324-326. Council regulations eventually forced the client and architect to include doors and windows.

Fig.415 Graeme Gunn, architect. Townhouses, Kew, Victoria, 1968.

The later Dobyn House, Donvale, 1968 - 70 departs from the early courtyard house schemes to explore the
use of the fin wall, the internalized servant spaces of bath and kitchen and a controlling circulation spine (21) (fig.416). This was a large house with separate living, dining, family rooms, a billiard room and a study suspended over the living room. The interplay of volumes was impressive with flat and wedged shaped volumes that interlocked over the sloping site. The house had been designed primarily in section. The window had not yet returned to be a puncturing of the wall surface and remained a glazed infill between fin walls running north south. The disposal of rooms saddlebagged off a central spine of services (a technique employed frequently by American architect Charles Moore) represents a rational response to a north south orientation and the Kahnian notion of served and servant space. With the Dobyn House, the mix of split levels and skillion and flat roofs and the use of the fin wall to define space resulted in the virtual disappearance of the box-shaped house of the 1950s.

An important house of Gunn's at this time was "Baronda", the holiday house for David Yencken at Nelson's Inlet, N.S.W., 1968 (fig.417). This house was elevated to obtain views and escape the sandflies and constructed as a series of interlocking platforms over five levels. It was planned to have no doors or windows just blinds (22). Robin Boyd had used log poles to support roofs and create colonnades at his flat roofed Black Dolphin Motor Inn which was nearby and for the same client, but in the case of "Baronda", Gunn employed a grid of poles bolted together both horizontally and vertically. The house was a description of a three dimensional grid with vertical boarded infill panels of rough sawn boards. It was organic in its layout of space and free in its use of gables and overt domestic imagery. "Baronda" was a veritable Brutalist tour-de-force (23).
Daryl Jackson

Daryl Jackson worked in England and the United States between 1961 and 1964 before returning to Melbourne in 1965 to join in partnership with Evan Walker who had also been overseas studying and working in Canada (24). Jackson's early houses, the Parsons House, Red Hill, 1959 and Riley House, Sorrento, 1959; the Auret House, Wandin Yallock, 1965 and the large Murray House, Templestowe, 1965 – 69 designed and completed on his return to Australia were to influence his designs for institutional buildings and other architects' work such as that of Kevin Borland. These houses give important clues to Jackson's continuing design interests.

The Parsons and Riley Houses were influenced by the mood of the 1950s: the precision of Donald Fulton (25) whom Jackson admired and for whom he later worked and the structural truths of Robin Boyd’s timber and steel houses such as his own house, South Yarra, 1958 and "Pelican", the Kenneth Myer House, Mt. Eliza, 1956. The Parsons House (26) (fig.418) was a lesson in structural simplicity. A simple rectangular plan with a centralized fireplace/kitchen and bathroom core was roofed by a low pitched gable which overran the walls to form vast eaves.
A deck at one end formed an enclosed verandah and at the other the eaves were large enough to become a carport. The exterior of the house became a description of the frame: the ridge, rafters, fascias, wall plates, posts, tie beams and balustrades were picked out in white paint. The rest of the house was off-sawn vertically boarded hardwood walls. These and all window and door trims were finished in a very dark green (almost black) stain preservative. Consequently the mass of the house under the eaves seemed to disappear and leave only a graphic expression of the post and beam. The house became a cage of sticks. Similarly, the two storey Riley House (27) (fig.419), elevated to gain views of the Bay, consisted of an exposed post and beam system with all structural beams, exposed floor and decking joists, posts and balustrade all painted white contrasted with the dark stained timbers of the rest of the house. Both these houses recalled Robin Boyd’s Clemson House, Kew which was essentially a white timber frame supporting a butterfly roof, with a dark green carcass of house underneath which disappeared into the surrounding greenery of the site.
The Murray House designed on his return to Australia shows Jackson's structural interest embrace ideas of urbanism. This large house built on a river frontage block at Templestowe, was encouraged to create its own spaces both internal and external (28) (fig.420). Its significant contribution was the inclusion of the 45 degree angle employed to control outdoor space and extend views out from the house and into the landscape, even to swathing diagonal lines through an existing orchard. Comparison with examples of spreading ranch house types such as John Yeon's A.R. Waczek House, Portland, Oregon, 1937 and Pietro Belluschi's Menefee Ranch House, near Yamhill, Oregon, 1948 show a similar spreading of rooms around a protected court while comparison with Louis Kahn's courtyarded Morton Goldenberg house project shows a similar use of the 45\(^\circ\) angle at the corners of the scheme to extend and adapt the spaces within to Kahn's what-they-want-to-be as well as the use of clerestory windows for internal services and circulation. However the Murray House differs from Kahn's Goldenberg project. There is a centrifugal quality, an extension out to the landscape in Jackson's interior spaces as opposed to Kahn's concentration on the centre of the house.

The Auret House also has the 45\(^\circ\) angle wall. Jackson set out to give his South African clients a home in the "Australian vernacular" (29) (fig.421). At either end of a rectangular plan with living rooms oriented towards the north and bedrooms and service rooms to the south, wing
walls called "blinkers" by Jackson, shoot out at 45 degree angles to encompass views to the north. These fins are like directional pointers. The tiled roof also slices back at 45 degrees. Underneath the carport, the splayed wall creates an entry court before the front door, a device that would appear frequently in later houses by Peter Crone such as the Abrahams House, Brighton, 1972 and Coakley House, Hampton, 1975. The plan of the Auret House suggests an embracing of the landscape. Jackson also claims that these blinkers acted as receivers of the external space, creating external spaces adjacent to the house. The 45 degree angle was also used in section to describe the roof shape and interior volume of the living room with its clerestory windows to the south and dropped roof over the bedroom and bathroom block. The steep skillion seemed to be part of the land.

The Auret and Murray House with their use of the 45 degree angle prefigure Kevin Borland’s use of the same angle in his design for his important Paton House, Portsea, 1969. Indeed Borland has said that he owes the appearance of the 45 degree angle in his work to Daryl Jackson and his use of it in the Harold Holt Swimming Centre, 1969 on which the two architects collaborated (30).

The Mac Parsons House Mornington, 1973 shows Jackson’s refinement of this angular experiment. The 45 degree angle is completely integrated into the design as an embracing element to gather outdoor space and as an enclosing element to close the sculpted volume within (31) (fig.422). Built over three levels, the timber framed house, roofed in corrugated iron and clad in vertical treated pine is a typical architect designed house of the early 1970s where the influence of the heavily publicized Sea Ranch resort

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33. Bernard Joyce had travelled to Japan in 1962 on the Melbourne University Tour. Others who went to Japan included Neil Clerhan, Dimity Reed and Peter Corrigan. Joyce recalls that they saw much of Kenzo Tange's and Kunio Mayekawa's work and were particularly impressed with Le Corbusier's National Museum for Western Arts, Tokyo, 1957 - 59.


Bernard Joyce

Bernard Joyce's houses of the 1960s blend the planning clarity of Mies van der Rohe's courtyard houses with Louis Kahn's cellular square pavilions and with a deep admiration for the court spaces and structural standardization of Japanese architecture (33). The palette of materials he uses is entirely local: bricks, tiles, concrete blocks, stained timbers and simple bagged and whitewashed walls. Yet Joyce remains committed to the modernist principle of the plan as generator of form and his house plans are consequently some of the most graphically modernist in the changing mood of the 1960s. Joyce also made the concerted attempt to make the architect designed house available to and consumable by the general public. Many of his houses were built as speculative projects (34). Hipped tiled roofs, french doors, private courts and the occasional shutter mark these as careful and accurate judgements of Melbourne homebuying taste. Two brick veneer houses at Hawthorn, 1963 (fig.423) are typical of his speculative work. One house consists of two square pavilions roofed by a tiled pyramid and joined by a glazed gallery. The plan is bi-nuclear and the elevations are carefully and symmetrically designed. The continuation of brick walls beyond the boundary of the squares create a private garden court. The second house is flat roofed with a similar distinct zoning separation of living and sleeping/kitchen/family blocks. The use of entrance and
garden courts which are the size of rooms expands the house creating a sense of continual opening and closure. Windows and doors of these houses were an important design consideration as a flexible but standard unit. The result was a window permitting three functions: openable sashes top and bottom, fixed sashes, or a glazed door. This not only gave the buildings a distinctive character of their own but also permitted the builder increased economy (35).

A speculative house for Gary Connel in Surrey Hills, c.1966 also had a strongly expressed zone separation via a glazed gallery and used a theme of wall piers similar to Gunn's Richardson House, to give a sense of mass and repetition (36) (fig.424).

The idea of pavilions informs the design of the Stansen House, Portsea, 1967 where the plan is organized into five flat or skillion roofed cells with the central cell containing living, kitchen and dining areas (37) (fig.425). Three bedroom cells, one with a rumpus room were positioned off each corner. The fifth cell contained carport and entry. Consequently by the placement of each cell, a series of
courtyards was formed, each with a different view, varying degree of privacy and quality of light. A single skin of white concrete blocks, internal linings of plywood and stained timbers reduced maintenance. Modular windows and french doors added to the economy of the house. According to Joyce, the use of concrete block was an attempt to flee the common brick and create a holiday environment free from suburban overtones (38). The formal plan spilled over the sloping site with three changes in level, accommodated by steps at each cell connection. Louis Kahn’s Trenton Bath House scheme, 1955 (39) is recalled by the planning parti with its formal arrangement of cells about a communal centre as is a house in Connecticut, 1958 designed by John Johansen (40).

The Alan Gibson House, Mont Albert, c.1967 takes the theme of the square further (41) (fig.426). Four cells are displaced about a linear circulation spine. Window openings connect to similarly scaled courtyards. Each cell has a pyramid roof clad in concrete tiles. Clinker bricks and natural oiled hardwoods soften the clarity of this geometric plan. Built as a speculative house, this is another of Joyce’s calmly assured designs providing easy informal living spaces and recalling the free disposition of squares


36. "This Month’s Cover", Architecture Today, September 1966, p.3.


of Louis Kahn's Weber de Vore House, Springfield Township, Pa., 1954 and Francis Adler House, Pa., 1954. The Gibson House dissolved the all-encompassing hipped roof of the suburban vernacular. Instead of being a tightly planned whole, this house was a series of pavilions strung along a spine. The Pence House, Mill Valley, Ca., 1962 designed by architects, Marquis and Stoller also consisted of a series of hipped roof pavilions though each square cell was a different size and with a skylight at the centre of the living room pavilion (42).

A more rigorously structural expression occurred in the design of the Healy House, Ocean Grove, 1967 (43) (fig.427). The house was planned with three levels with living at the uppermost level. A bolted timber column and exposed beam construction ensured speedy erection and economy through standardization. The entire structure plus the wall joinery system and the floor was pre-cut and drilled before delivery to the building site. Between the dark brown stained timber frame, the infill panels of hardboard and asbestos cement were painted white. Once again the plan was based on a square with a cruciform plan within. The result was a series of cells, each zoned to be a function be it bedrooms, kitchen or living. The notion of a system thus can be detected as permeating all of these Joyce houses. Reproduction is implied.

The Mason House, Brighton, c.1971 designed by Joyce in association with Peter Crone is a later house and like Gunn's Dobyn House, Joyce explored the bi-nuclear plan with a service zone separating the living and sleeping areas with the main structural theme of the house being the use of two parallel fin walls with glazed infill between (44) (fig.428). Joyce's Mason House however is elongated and
the clarity of functional separation is stronger. Forty-five degree angle roofs over the living and rumpus rooms create large volumes for the public spaces of the house. Timber boarding, light grey concrete blocks and reinforced concrete floor slabs form the muted colours and textures of this strongly formed house.

Keith and John Reid
The houses of Keith and John Reid also demonstrate the move away from the open plan in the 1960s toward a restoration of intimate scale and the idea of centre. John Ried's own house, Templestowe, c.1964 - 65 is the most important of these. At the time it was described as
outside a simple and "anonymous non-featurist" type of architecture, that makes it virtually unique. The interior is given a touch of theatricality with eight peeled radiata pine logs which support the exposed rafters of the cement tiled roof (45).

In an effort to provide as much space as possible as well as cheaply, Reid designed this house with painted concrete block walls, exposed rafters, strawboard ceilings, all within a simple rectangle and without roof overhangs (fig.429). Internally the log columns created four celebratory zones of lofty interior space within the exposed volume of the roof. Unlike Charles Moore's own house at Orinda, 1962 (46) (fig.430), the placemaking effect of the square of columns was penetrated by white painted partition walls held well down from the roof structure. In addition, Moore's design consisted of two offset squares with sculpted roofs of plywood as opposed to the spare structural regularity of the Reid design.

The result is a heavy hipped roof sitting on perimeter solids and supported internally by two groups of four pinus logs.

45. Cross Section, December 1964.
This gives a strong dignified control within which the functions could be placed freely as required - formal living, family living in the middle and sleeping at the rear - according to use, sun and privacy (47).

This house appears as a modest pavilion concealing a rich interior. A simple symmetry to the street, white planar walls and a hipped roof blend the vernacular and the abstract. This house is a special entree into Melbourne of the architecture of Charles Moore. The Reids understood the Californian example and reinterpreted it with typical Melbourne modernist restraint and lack of overt historic allusion which Moore was inclined to employ. Polished floorboards, white walls and the interpenetration of the free plan mark this house as a blend of Japanese, functionalist and contemporary Californian influences. Its similar vocabulary to the houses of the contemporary Sydney School exposes the insularity of that label and points to a widespread reassessment of the modern house in the early 1960s (48). John Dalton's houses in Brisbane can similarly be cited with those of the Reids as positing new directions for the image of the Australian house. Like the Reids, Dalton blended frank construction with overtly domestic forms: gables, chimneys, verandahs and a mix of timber and white painted brick (49).

The Sinclair House, Ivanhoe, 1967 is quite different being an unusually free picturesque composition in Melbourne house design at the time (fig.431). It bears a remarkable resemblance to a house on Belvedere Island, Ca., 1957 designed by George Rockrise which has a similar differentiation of roof form and plan and deck space between the two major blocks. The living block of the Sinclair House is romantically roofed with cedar shakes on a steeply pitched gable as opposed to its adjacent sleeping...
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block, massive and crisply geometric. The concrete slab over the carport becomes a generous entrance forecourt and deck. Within the steep roof space is a cosy and intimate study which overlooks a grander scaled living room. The large scale of the house is broken by the distinct separation of zones and it is this symbolic delineation of zones which is also unusual (50).

The Hall Beach House, Point Lonsdale, 1969 extends the growing theme of particulate composition with a concrete block courtyard house resembling Danish architect Jorn Utzon's Kingo Terrace Houses, Helsingor, 1956 or his court houses at Fredensborg, 1962. Three connecting blocks each with a skillion roof of half round concrete roof tiles have exposed prefabricated gangnail trusses spaced at four feet intervals. Inside the main living block, a huge concrete lintel spans the end wall to form a fireplace and hearth running the whole width of the room. This house exudes an air of primitive shelter (51) (fig.432).

The Reid's design for the Adams House, Templestowe, 1969 was a series of stepped platforms 12 feet wide with a 4 feet difference in floor level between each platform all


51. John Barker, "Emphasis on holidays" (R. A. I. A. Citation No.14), The Age, undated clipping; Cross Section, August 1970.

Fig.431 Keith and John Reid, architects. Sinclair House, Ivanhoe, Victoria, 1967.

Fig.432 Keith and John Reid, architects. Hall Beach House, Point Lonsdale, Victoria, 1969.
Chapter 6: The Re-evaluation of Structure, Space and Texture

Fig. 433 Keith and John Reid, architects. Adams House, Templestowe, Victoria, 1969.

52. Cross Section, April 1969.

53. Don Dunlop, “When a change is as good as a rest”, Australian Home Beautiful, January 1972, pp.6 - 11.

underneath a series of skillion roofs that followed the line of the land (52) (fig.433). At the uppermost levels were the bedroom. Living, dining and kitchen and family rooms were on the lower levels with views to the north and the Yarra Valley. The resulting composition was a picturesquely fragmented form roofed in brown Roman tiles and clearly resembling Ken Woolley's own house in Mosman, 1962. A holiday house at Anglesea for the same family was a different concept but on a similar steeply sloping site surrounded by trees (53) (fig.434). Instead of a series of living spaces, a large single space was required with a large outdoor living area opening to a view of the ocean. High above in the trees, this first floor space and its spacious deck resembled a very large tree house. Construction consisted of a simple stud frame.

The sense of additive growth was graphically explored in the Hooper Beach House, Anglesea, 1972 and the Smith House, Burwood, 1969. In both houses, first floor rooms project out from a simple cubic form as bays and pods. Windows are scaled according to the functions within which spaces are clearly defined rooms, and though

Fig. 434 Keith and John Reid, architects. Adams Holiday House, Anglesea, Victoria, c.1972.
visually connected both horizontally and vertically by a gallery overlooking the family room, they are not part of an overall open plan. The Smith House is a suburban house, built in brick, bagged and painted white with a first floor section built of timber with horizontal cedar weatherboards. The roof is clad in hand split cedar shakes, a typical American roofing material (54) (fig.435). Like John Dalton's houses in Brisbane, each part of the house, the wall, roof, fascia, window, or bay, takes on an important symbolic role with traditional associations rather than each part reduced by a gradual process to abstraction as was the goal in the house of the 1950s.

Similarly, the Hooper House (fig.436) is a two storey house with pod-like projections and recalls the Sea Ranch Condominium #1, 1965 by M.L.T.W. with its projecting bays and balconies and shed-like roofs. In the Hooper House rooms are sized according to function and packed together to form a sculptural whole. The cladding material on this tall thin two storey shed was unusual, being corrugated asbestos cement sheet. Six inch deep industrial roofing sheet was used giving a bold effect with strong shadow patterns. This unconventional use of the material was a rugged response to the seaside site and gave an almost brutal quality to the house. Upstairs, an expansive

Fig.435 Keith and John Reid, architects. Smith House, Burwood, Victoria, 1969.

54. John Barker, (The Age - R. A. I. A. Citation Award No.29), The Age, undated clipping. The Smith House was also a standard plan, V434 of the R. A. I. A. (Victorian Chapter) Housing Service.
living room had a bedroom and kitchen off to either side, a deck to the view, and a window seat as well. The feature of this room was an internal wall of corrugated asbestos which curved as a king-size cornice. *Australian Home Beautiful* described it as giving "the illusion of a surf wave about to break" (55). The simple shed-like volume of the house was elaborated by the extension of decks and cantilevered enclosures such as wardrobes and bench seats and niches for bunks built beyond the main wall line.

The houses by these architects illustrate a search for textural and structural truths. They are exploratory and signal a new intensity being applied to the home in terms of siting, space, materials and the realistic economies of standard building construction. Spatial hierarchy is highlighted and the level of abstraction is reduced. The diversity of influence had grown to encompass many architectures particularly an appreciation of the vernacular of Japan, the Mediterranean and contemporary American interpretations of their own vernacular. The exploration was rarely extended to include Australia. Indigenous practice was reasserting itself rather than causing a reassessment of an indigenous style. The practice of assimilation and reformulation was returning in a freer and more symbolic guise. The house was being returned to its

Fig. 436 Keith and John Reid, architects. Hooper Beach House, Anglesea, Victoria, 1972.
visual roots and the act of building celebrated, confirming
the house's status as desired and preferred dwelling type.
There were also the hints of a more decided rift. The idea
of the urban townhouse began to be explored while the
image for the new suburban house began to be regarded as
a retreat from the city. The issue and the phenomenon of
density was being neatly sidestepped by architects in
preference for a delight once more in the plastic
manipulation of the discrete object, a determined escape
from the urban environment and any urban responsibility.

The great American master architect, Frank Lloyd Wright died in 1959. He was 92 years old. In 1969, the young Melbourne architectural photographer, Peter Wille wrote for the R.A.I.A. Victorian Chapter magazine, Architect, an article entitled "Frank Lloyd Wright in Victoria: one hundred years after his birth he still practises vicariously in Melbourne" (1). Wille described the survival in Melbourne of the principles and in some instances, the stylistic devices employed by the great American master. An array of institutional buildings recently designed and built in Melbourne since his death confirmed his proposition. The E. S. & A. Bank, Elizabeth Street, 1960, by Chancellor and Patrick (2) (fig.437); the Hoyts Cinema Centre, Bourke Street, 1966 by Sydney architect Peter Muller (3); the Sandown Motel, Springvale, c.1966 by Jorgenson and Hough (4) and the Brighton Municipal Offices, Brighton, 1961 by Oakley and Parkes (5) (fig.438) were just a few of the public buildings that showed the influence of Wright's organic architecture in the boom years of the 1960s.


More apparent however, was the continuing influence of Frank Lloyd Wright in the design of the single family house. The application of the principles of organic
architecture espoused by Wright had begun early in Melbourne with intelligent interpretations by the architects, Beaver and Purnell as early as 1916 (6). Walter Burley Griffin and Marion Mahony also began designing houses in Melbourne in 1916 with their own interpretation of organic architecture, extending Wright's ideas and those of his liebermeister, Louis Sullivan (7). The Griffins' subsequent influence on architects such as Edward F. Billson, J.F.W. Ballantyne, E.M. Nicholls and Roy Lippincott was to result in a small but distinctive collection of organic architecture of the 1920s marked by their sudden cessation after the financial crash of 1929 and confirmed by Griffin's departure for India in 1935. During the 1930s there were few cases of Wrightian inspired domestic design in Melbourne. An entry for the 1934 Centenary Homes Competition was a concrete block design of Leonard Bullen which resembled Wright's Los Angeles experiments in concrete house construction (8).

Norman Seabrook's own house in Hawthorn, 1935 was a Dudok-inspired interpretation of the Winslow House and in another house for himself at Croydon, 1941, Usonian house themes of single room width wings stretching over the site, were explored (9). A 1943 design for a house in Heidelberg by Frederick Romberg was a Swiss Heimastil version of Wright's Fallingwater, the Kaufmann House, Bear Run, Pa., 1939 (10). After World War 2, Wright's influence continued with Alistair Knox's timber interpretations of the Usonian house in Heidelberg and at Eltham in mud brick as a means of overcoming materials shortages immediately after the war. In houses designed by Robin Boyd, Roy Grounds, and David Chancellor and Rex Patrick in the early 1950s there was a concerted effort to resolve the much argued problem of organic versus rational, the eagerly cultivated Gropius versus Wright dichotomy, where distilled versions of Wright appeared as attempts to resolve the lack of humanism of the new architecture coupled with an attempt to avoid the expensive and highly crafted detail of Wright's buildings (11).

From 1954, with the publication of Wright's The Natural House and his much touted revival on the American architectural publication scene, there was unconsciously spawned in Australia, a new generation of Wright followers who would also extend and produce highly original interpretations of organic architecture through to the 1970s. In Melbourne, the noted domestic architects Chancellor and Patrick continued to produce Wrightian
interpretations of the modern house while added to the fold were Charles Duncan, Geoffrey Woodfall, David Godsell and Jorgenson and Hough (12).

In Sydney, there was also a small but loyal Wrightian following. Peter Muller, Bruce Rickard, Ian Mackay, Ross Thorne, Neville Gruzman and the idiosyncratic Stan Symonds all cultivated an interest in Wright’s principles of organic architecture (13). In Canberra, Alex Jelinek, Laurie Virr and Enrico Taglietti were also avid Wright enthusiasts.

There are many reasons for the Wrightian survival. In response to the search for a more humane modern architecture, there was in the late 1950s and early 1960s, an increasing return to vernacular imagery for inspiration in domestic design. Indeed, even since 1945, for many architects, the quest for the "post-modern" house, free from the "machine" had already been an issue of consideration (14). Wright’s essential domesticity of hipped roofs, wide protective eaves, elaborated details, centralising and celebrated massive fireplaces, his use of face brickwork and natural timbers, and importantly his retention and exploration of the open plan and its intimate relationship to the site; all were seen as embodying and


extending enduring principles of modern domestic design without resorting to the styles of history. Consequently, many architects saw Wright's philosophy of domestic design as an attractive and realistic alternative to the aridity of the late 1950s International Style. It was a return to the home. The simultaneous interest in the shibui aspects of Japanese architecture, the delights of natural finishes and simple detailing, Japanese landscaping, and the elegance of repetitive construction also struck similar chords with the devices used by Frank Lloyd Wright. In addition, the forms of Wright signalled a welcome return to mass with the use of brick return walls and massive supporting piers, and the extension of planar brick walls to extend space beyond the boundaries of the interior. For the traditionally brick city, which Melbourne is, Wrightian forms heralded relief from the lightweight 1950s. With the building industry back in full production after the penny pinching years of austerity, came the assurance that notions of permanence and mass were to return.

Wright's principles had been perpetuated in post-war American domestic architecture and in the morass of U.S. publications that appeared after 1945. Architects such as Schweiker and Elting, Fred and Lois Langhorst, Jack Hillmer, Van Evera Bailey, John de Koven Hill, Alfred Browning Parker, Harwell Hamilton Harris, Gordon Drake, and Charles Warren Callister all contributed at various times to the continuing assimilation and transformation of Wright's architecture from 1945 well into the 1960s. In American popular home journals, the Wrightian glamour home was de rigueur. House Beautiful's Pacesetter House for 1953 was by Alfred Browning Parker, for 1955 by Harwell Hamilton Harris and for 1960 by John de Koven Hill and all were variations on Wrightian themes (15).

In Australia, however, it was not just the spectre of Wright that was fuelling interest in organic architecture, but also that of Walter Burley Griffin and Marion Mahony. In 1964, James Birrell published his biography, Walter Burley Griffin (16). A previous article on Griffin by Birrell had appeared in 1954 in Architecture and Arts (17). American author, Mark L. Peisch's The Chicago School of Architecture appeared in 1964 and in 1965, his The Chicago School of Architecture: Early Followers of Sullivan and Wright was published (18). Both of these books for the first time exposed for Australian readers the


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importance of the Griffin's achievements in America. Robin Boyd's writings had always supported the Griffin's innovative role in the development of Australian architecture. From his 1947 Victorian Modern, where Boyd optimistically traces the derivation of the so-called Victorian Type to include the Griffin's Salter House, to his later Australia's Home and The Australian Ugliness, the pivotal role of Griffin is highlighted. In Boyd's own house designs of the 1960s, Griffin influence is apparent. Both the Baker House, Bacchus Marsh, 1964 and the McClune House, Frankston, 1969 owe much to Griffin's own atrium house, "Pholiota", in Heidelberg, 1920.

The survival of Wright and the revived interest in Griffin however has its primary basis for its existence in one overriding theme, that of organic architecture where building and landscape are inextricably intertwined to become one and the same. The idea of organic architecture had been espoused by Frank Lloyd Wright since 1894 and his thoughts first published by Architectural Record in March 1908.

A building should appear to grow easily from its site and be shaped to harmonize with its surroundings if Nature is manifest there, and if not try to make it as quiet, substantial and organic as She would have been were the opportunity Hers (19).

After years of promoting organic architecture throughout his career, these ideas were crystallized by Wright in his 1954 book, The Natural House, and enshrined in his concept of the Usonian house.

The Usonian House aims to be a natural performance, one that is integral to the site; integral to the environment; integral to the life of the inhabitants. A house integral with the nature of materials (20).

It was these ideals and the theme of the Usonian house that Melbourne architects of the Wrightian survival were to explore simultaneously as those Sydney Wrightians of the late 1950s such as Bruce Rickard and Ross Thorne whom Jennifer Taylor describe as critical in the development of the so-called Sydney School (21). The issues of site and the careful response to the bush, the changing lifestyles of the 1960s, and the celebration of brick construction and natural timbers were all addressed by the Melbourne


Wrightians. It must be pointed out that this small group of architects did not practice as a school and were not unique in Melbourne (or Australia) for their interest in such issues. They form just one small part of an extremely broad reaction away from the pristine forms of the 1950s in search of a genuinely regional form of domestic architecture for Australia.

What follows then is a brief survey of Wrightian practitioners in Melbourne in the 1960s. In comparison to the stripped distilled versions of Wright of the 1950s, the houses designed by these architects are more determinedly textural in their use of materials: of brick, timber, stone and the overt domesticity of their massive fireplaces and tiled hipped and gabled roofs.

**Chancellor and Patrick**

The father firm of Wright in Melbourne, Chancellor and Patrick, continued throughout the 1960s to produce high quality interpretations of Wright themes with their particular emphasis on expressed structure.

The Wilson House, Mt. Martha, 1961 - 62 (fig.439) is an elevated house blending the structural clarity of Richard Neutra's architecture with the earth-hugging mass of Frank Lloyd Wright's Sturges House, Brentwood, Ca., 1939.
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Fig. 440 Frank Lloyd Wright, architect. Sturges House, Brentwood, California, U. S. A., 1939.


At the carport level below the main first floor, the supporting structure of the house is displayed with sweeping lengths of heavy section rafters and the vertical mass of the clinker brick fireplace. A deck opening off the living room cantilevers out toward the view of the Bay. As with the Sturges House, the Wilson House backs into the slope and there is a run of bedrooms off to the side of the open living/dining area (22). Exposed brick internally, a sculptural fireplace nook, plywood and red cedar joinery, timber floors and exposed beams give warmth while a tilted skillion roof and a flat roof to the rear provide opportunity for clarity of structural expression and glazed infill between the different roofs to form a drop ceiling and light trough within. This house with its mitred glass corners and indoor-outdoor pond is a masterly blend of the precision of Neutra and the organic warmth of Frank Lloyd Wright's architecture.

The W. L. Kraft House, Mornington, 1962 (23) is another elevated house embedded into its sloping site with car spaces and covered areas slotted underneath the first floor living and bedroom spaces (fig.441). Vertical masses of
light grey concrete blocks containing storage, fireplace and service zone for the ground floor form a linear spine to this in-line plan, one of Chancellor and Patrick's familiar house types of sliding linear plans (24). The spine demarcates a change in floor level between the living and sleeping zones of the house. Flat roofs with generous overhangs, wide horizontal boards cladding the bays which project out from the main mass of the house and the brick spine which rises above the roofline are the bold compositional element of this house.

Fig.442 Chancellor and Patrick, architects. Claire and Mary Cameron House, Flinders, Victoria, 1962.

The Claire and Mary Cameron House, Flinders, 1962 (25) is another elevated holiday house with the familiar theme of massive vertical supports in brick containing stair and vertical circulation and fireplace on the first floor as opposed to the horizontally expressed concrete encased steel joists and cantilevering roof planes (fig.442). Large overhangs to the flat roof are supported by steel cantilevers. The roof seems to float above a continuous balustrade level which encircles the entire first floor, becoming wall to the windows which carry right up underneath the soffit as well as balustrade to the deck off the living room. This boldly formed house has as its


internal focus a vast fireplace sitting within a large archway which forms one of the main supports of the brick stair tower. Once again the softness of Wright is transformed by Chancellor and Patrick into an emphatic expression of load and support.

A large house built for the Victorian manager of the E.S.&A. Bank in Miller Street, Brighton, 1962 (26) (fig.443) was set on a wide and shallow block facing north. This house is a horizontal composition of hipped roofs and banks of windows that go right up to the underside of the eaves with the major living areas on the first floor. The major vertical element of the house is naturally the fireplace chimney that extends upward through both floors. Allusions to the Prairie School do not seem far away.

One house described as a "home in the Lloyd Wright mood" and an example of the "natural house, with which Frank Lloyd Wright lit the flames of architectural controversy many years ago, (which) can still stir some glowing embers in Australia", was the W.E. Green House, Heathmont, 1962 (27) (fig.444). The plan of this spreading single storey house was a cruciform, made up of low pitched gabled wings with wide eaves overhangs and sloping ceilings within. Each wing was zoned and brick walls that became garden boxes denoted points of entry.
forming deep shading recesses between wall and eaves. At the intersection of the wings was the main entry and circulation node of the house, with axes that took off into the native landscape beyond. Like Norman Seabrook's own house, Croydon, 1941 this house pinwheeled into the landscape, a sparer, lighter version of Wright, and extending the pristine vocabulary of Neutra into warmer, domestic textures and exposed joists, low gables and timber linings that suggest an interest in Japanese architecture.

The later Gandolfo House, Brighton, 1966 designed by Rex Patrick was a relaxed interpretation of Wright's vocabulary, a cruciform plan of low pitched gabled wings (28) (fig.445). Instead of the suggestion of infinite extension into the landscape, a screen wall and garage

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31. Major commissions by Chancellor and Patrick c.1960 - 1975 include Frankston Community Hospital, 1963 - 79; Halls of Residence, Monash University (Deakin, 1964 - 65; Farrer, 1967; Howitt, 1967; Roberts, 1972; Richardson, 1972); Halls of Residence, Latrobe University (Chisholm, 1970 - 74); Burwood Methodist Church, c.1961; Wattle Park Presbyterian Church, 1962; St. Matthew's Church, Cheltenham, 1964; St. Peters Church, Mornington, 1966.

32. Geoffrey Woodfall completed his architectural degree at the University of Melbourne in 1956. That same year he entered into an informal partnership with Basil Walker. Between 1960 and 1961 he was in partnership with Linton Reynolds, and from 1962 - 1970 practised solely under his own name. In 1971, his firm became known as Geoffrey Woodfall and Co.Pty. Ltd., and between 1973 - 74, the firm became Hanson, Todd and Woodfall Pty.Ltd.

Fig.446 Geoffrey Woodfall, architect. McIntyre House, Mt. Waverley, Victoria, 1962.


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formed a private court to the street and the close confines of the suburban site dictated a more internalised composition aimed at maximizing the small site. This house closely relates to the aesthetic applied by Chancellor and Patrick to their investigations into their highly successful project house designs for Vindin Suares (29) and the theme of raking sloping wing walls and semi-enclosed courts reappears on a house in Raheen Drive, Kew, 1974 - 76 (30). The majority of the Chancellor and Patrick houses of the 1960s do not however radically depart from the 1950s types developed by these two talented architects. It was left to the younger architects to develop from the example of Wright as Chancellor and Patrick moved into larger experiments in organic architecture with buildings such as the E.S.&A. Bank, Elizabeth Street, Melbourne; and several churches, hospitals and Halls of Residence at Monash and La Trobe Universities (31).

**Geoffrey Woodfall**

Geoffrey Woodfall continued to creatively reinterpret Frank Lloyd Wright's Usonian house (32). His pre-1960 houses, the flat roofed Samuel House, Brighton, 1957 (33) and low-pitched gable roofed Hellier House, Beaumaris, 1958 (34) informed several of Woodfall houses of this period and form the two major types of his domestic oeuvre: the gabled house stepping down the site and the in-line plan running parallel to the contour.

Woodfall's McIntyre House, Mt. Waverley, 1962 is a variation of the Hellier House. Its all encompassing asymmetrical gable crosses the sloping site to cope with the level change and provide a massive fireplace mass alongside the carport (35) (fig.446). The massive end bay to the street and oversized eaves recall Walter Burley Griffin's Mervyn Skipper House in Eaglemont. Similarly
the Chinner House, Donvale, 1961 built in timber with wide square edged weatherboards, also uses this gabled theme and an elevated dining room to step down to a living room with a north south vista to either side, and massive fireplace endwall (36) (fig.447).

The Kerr House, Glen Waverley, 1960 (37) (fig.448) has its gable running the opposite way, i.e. in the longitudinal direction and is an in-line plan like the Samuel House. The entry becomes the pivotal point of the house with a longitudinal bank of kitchen, bathroom and laundry to the south. Repetitive elements such as shading and screening battens, open shelving and emphasized ceiling battens give visual interest to this minimum house. In the Larsen House, Mt. Waverley, 1962 the same occurs with a bank of vertical mullioned windows running the length of the street face of the house to include french doors at one end and the gable oversails at the other to include the carport, stretching the house "ranch-wise" across its block (38) (fig.449).

38. Cross Section, October 1965.
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The Heine House, Mornington is another in-line plan elevated on its sloping site to provide views of the bay. The two-storey house is given a sense of permanence by its first floor supported off a steel framework which straddles the three brick masses of the ground floor structure (39) (fig.450). John Sergeant describes this form of house as a "Raised Usonian", and cites Frank Lloyd Wright's Lloyd Lewis House, Libertyville, Illinois, 1940 as an example (40). These types of Usonian house are characterized by a masonry piered plan, emphasized horizontally boarded balconies and the house often merging into the slope, with the car slipping underneath. Woodfall's design follows this type and as with many of his house designs the roof is a low-pitched gable recalling Walter Burley Griffin's use of a similar gable in his Melbourne houses such as the Mervyn Skipper House, Eaglemont, 1923 and Mary Williams House, Toorak, 1923.

Listed as one of Architecture and Arts Ten Best of 1966, the Williams House, Mont Albert, 1964 expands the Usonian vocabulary into a large flat roofed house which explores the theme of mass and harnessing external space on a site without view or slope (fig.451). Brick return
walls carried up beyond the line of the roof and flat horizontal eaves of timber boards characterize this design where windows are simply spaces between massive walls. Built on a concrete slab, the plan is arranged so that all main rooms face on to semi-enclosed courtyards. Construction is of elongated hollow concrete blocks with a flat roof of galvanized steel decking and the timber throughout is natural finish (41).

The Breedon House, Brighton, 1966 signals a new development in Woodfall's work where modulated structure is combined with a modular floor plan (fig.452). Working with his client who was a structural engineer, the thematic principle of the house was the interlocking of two small span gable roofs - a popular method of roofing early Australian domestic buildings and their support on large brick piers spaced on a 12 foot grid to form a 100 foot long spinal passage. The 12 foot module was a feature oft employed by Frank Lloyd Wright and was derived from the Japanese sleeping space of 8 tatami mats equivalent to a 12 foot square. Thus off the wide circulation spine, living spaces were designated as open and bedroom spaces closed, with apparently infinite extension along the axis of
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Fig. 4.52 Geoffrey Woodfall, architect. Breedon House, Brighton, Victoria, 1966.


the interlocking gables (42). The planning principle of a series of columns or piers, spaced to a regular grid, and supporting a roof structure, with non-bearing intermediate walls is common to industrial and commercial buildings but rarely used in domestic construction. The Breedon House made use of such a principle while retaining the advantage of traditional building materials, and departed from Wright's example in its structural-functional rigour and simplicity of detail.

The theme of modulated timber roof structure was extended to two large country house projects, two of Woodfall's most notable designs. The Woolnorth Homestead, in the extreme northwest corner of Tasmania, 1969 sits in a natural depression on the lee side of sand dunes. The remoteness of this spectacular site dictated a building of light pre-fabricated components which could be easily shipped to the site (43) (fig. 4.53). The roof ceiling structure consists of rafters butted at the gable apex, springing from a paired post and outrigger system, all of Californian redwood. Beneath this doubled post and
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outrigger system of support was articulated the circulation of the house. The overall plan of the house is a Latin cross of zoned wings extending with pergola ends feathering the house perceptually into the landscape, with the kitchen at the heart of the composition. A similar theme of cruciform plan and modular timber construction was employed by Harwell Hamilton Harris in his Wyle House, Ojai, Ca., 1948 (44) and the 1955 Pacesetter House for House Beautiful in Fair Park, Dallas, Texas (45).

By contrast, Woodfall's design for the construction of the new homestead for the Old Penola Estate, at Penola, South

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Australia, 1967 (46) was based on a grid of Mt. Gambier limestone piers grouped in fours and spaced apart to form a tartan of 12 foot squares alternating with the width of the two piers and space between (fig.454). Circulation and verandah space occurs between these piers. Linked together, the units form three wings that pinwheel out into the landscape from a centrally located courtyard. As at Woolnorth, at the major intersection, a kitchen occurred. Pergolas and oversailing outrigger beams ensured the feathering out of the house into the landscape. The roof of this house was framed with butted rafters forming a low-pitched gable supported off the doubled piers. Once again,
explicit structure and the rigour of a rational ordering system indicate the departure from Wrightian models to develop a local assimilation and reformulation for the 1960s house.

David Godsell
David Godsell was another architect whose houses reflected an interest in the principles of Frank Lloyd Wright and the idea of an organic architecture (47). Godsell, a sole practitioner from 1961, was devoted to the design of houses, with a smattering of other building types completed during his life such as factories, post-offices and kindergartens. His inspirations were diverse, ranging from Rene Grenon's book, The Symbolism of the Cross (48) to Coomaraswamy's Transformations of Nature in Art (49) to the module of the tatami mat and the Japanese love of asymmetry.

Godsell's house for himself and family in Beaumaris, 1960 is the embodiment of his ideals. Built on a site sloping steeply upward from the street, this house is a skilful interplay of horizontal roof and floor planes over a number of levels (50) (fig.455). With long cantilevered eaves and an exciting linear skylight in the living room glazed with smoked topaz glass similar to that found in Peter Muller's own house, Whale Beach, 1955 (51), this U-shaped house planned around a courtyard, was designed on a four foot module, with floor to ceiling windows and in places, mitred glass corners. Fawn coloured bricks, glass and Californian redwood were the materials used, all left in their natural finish throughout. The notched bricks at wall corners and the brick returns emphasizing mass, the coved lighting and wide horizontal boards give a warmth to this Usonian reformulation in Melbourne.

Fig.455 David Godsell, architect. Godsell House, Beaumaris, Victoria, 1960.


48. Ibid.


51. The Godsell House should also be compared to a house designed by Jack Hillmer on Belvedere Island, Marin County, California. See "Ebony, Granite, Steel and Skill", Architectural Forum, April 1951, pp.110 - 117.
The earlier Sussems House, Beaumaris, 1958 is a more literal interpretation of the flat roofed Usonian house (52) (fig.456). With its flat roof encompassing the carport, L-shaped plan, return wall enclosing the fireplace and bank of french windows it is a tribute to Wright houses such as the first Herbert Jacobs House, Westmoreland, Wisc., 1937 and the Stanley Rosenbaum House, Florence, Alabama, 1939.


One of Godsell's more literal translations of the Usonian house, in particular Wright's series of hemi-cycle houses designed to catch the sun, was the Kennedy House built in Glen Waverley, 1964 (53) (fig.457). This house continues Robin Boyd's experiments with the hemi-cycle as seen in the Haughton-James House, Kew, 1956 and his Lloyd House, Brighton, 1958. Godsell's crescent shaped design was built on a site sloping down to the north toward the rear of the site. Curving outward to the view and backed by a courtyard wall and kitchen wall to the south, the house was embedded into its site. The interior of the house gives the sense of being in a transparent glass wall with closure gained by the courtyard wall to the south. The main
entrance to the house was to be through an arched doorway in the wall of the inner courtyard. Full height glass walls were to contrast with inverted clerestory lunettes in the kitchen, dining room and study. In the living and dining rooms there were corner fireplaces with hearths cantilevered off the floor. Driftwood coloured clay bricks were used both internally and externally, with some walls in Californian redwood (54).

The Chapman House, Brighton, 1962 (55) was developed from a pinwheel plan which pivoted about a massive fireplace core (fig.458). Each wing terminated in a solid triangular bay. Of two storeys, the house was built in sand coloured concrete blocks. Bedrooms on the upper floor have access to balconies which sit over the pointed ends of the ground floor living areas below which themselves form vertical prisms bursting out of a cube. The balconies are then interconnected by narrow bridges which encircle the entire building, and form eaves to the completely glazed walls below as well as delineate a perimeter square. In this house, the determinism of the geometry has compromised

Fig.457 David Godsell, architect. Kennedy House, Glen Waverley, Victoria, 1964.

Fig.458 David Godsell, architect. Chapman House, Brighton, Victoria, 1962.

54. Harry Perrott, "House designed as part of site", The Herald, undated clipping.

adequate daylighting for the living spaces of the house, though providing a neat parti below based on the pivotal centre of the house, the hearth.

**Jorgenson and Hough**

Another Wrightian practice was that of the partnership of Peter Jorgenson and Alan Hough whose commissions involved a string of Wright-influenced hotels as well as houses (56). One house indicative of their Wrightian interests is Alan Hough's own house, Brighton, c.1971 (57) (fig.459). Situated on a corner block, the house contained a bedroom wing for his five daughters and a staggered series of living spaces to the north with a studio space in the gabled roof over the main living area by the fireplace. With generous glazing in the gable and a wide eave with a deep timber lined fascia encircling the house at the level of the flat roof which covered the remainder of the house, this house was a collection of rich exposed textures, of terracotta floors, clinker bricks and bandsawn pine, redwood weatherboards and reused orange terracotta tiles for the gabled roof.

**Charles Duncan**

Charles Duncan is one of the most gifted of the 1960s Wrightians in Melbourne. He commenced private practice in 1962 after working with other architects who also shared an interest in Wright such as L. Hume Sherrard, Chancellor and Patrick, Peter Jorgenson and McGlashan and Everist (58). Like Godsell, his practice has been virtually devoted to the design of the single family home. His first new house for the Williams family at Heidelberg, 1962 - 63 won him the 1964 - 1965 Victorian Architectural Medal (59) (fig.460). Built in clinker brick, with layered flat roofs, planar walls that encompass and enclose both indoor and outdoor space, this is a house of courts and

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56. Jorgenson and Hough designed the Hotel Burvale, at the corner of Springvale Road and the Burwood Highway, Mulgrave, c.1969; the Sandown Park Hotel - Motel, Springvale, c.1966.


58. For a brief study of Charles Duncan's work, see Andrew Briant, "Charles Duncan Architect", Investigation Project, Recent Architecture, Department of Architecture and Building, University of Melbourne, 1983.

semi-enclosed interiors, blending the spareness of a Richard Neutra plan with the mass and textures of Frank Lloyd Wright. The raised sleeping area of the house and the completely separated sunroom meant a house of distinct zones and a composition of roof planes expressive of the changes of volume within. Dark stained heavy window joinery makes the distinction between inside and outside clear, but copious glazing extends the sense of liveable space to the boundaries of the property. Landscaped by Robert K. Skerritt with rocks and paving that extend from within to without, this house blends landscape and architecture into an organic whole.

Another of Duncan's well known designs was the Tozer House, Beaconsfield, 1963 - 64 which was built on the site of a previous homestead from which some materials were re-used such as the paving slates, handmade bricks exposed internally and externally and reconditioned slates for the roof (60) (fig.461). Essentially three overlapping rectangles, each on a different level, the connecting theme was a large hipped roof gently softened at the edges by a lower pitched splay near the eaves. A row of massive brick...
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Fig. 461 Charles Duncan, architect. Tozer House, Beaconsfield, Victoria, 1963 - 64.

Piers which articulated both interior and exterior circulation on the entry side of the house, expressed mass and repetitive structure as opposed to the predominantly glazed section of the house facing the view of the undulating countryside beyond. The inspirational cue from Wright's architecture would seem to have come from his Keyes House, Rochester, Minnesota, 1950 - 51 and his early designs for Co-operative Homesteads, Detroit, Michigan, 1942. Internally white plaster ceilings follow the slope of the roof, but the eaves soffits are flat and project inside to carry concealed lighting above the window heads. The quality of these spaces together with the long rambling nature of the house easing across an undulating site add up to a building of unusual and romantic appeal.

Fig. 462 Charles Duncan, architect. Bucknell House, Lower Plenty, Victoria, 1966 - 67.

Employing a similar roof form to the Tozer House, the "conservative and genteel" Bucknell House, Lower Plenty, 1966 - 67 (61) (fig. 462), has a T-shaped plan and is built in slate, bluestone and meticulously detailed overlapping weatherboards. Nestling into the contours of the hill, the use of bluestone both inside and out, to form internal walls...
and external window boxes which continue inside the living room, this house is a tribute to the hovering hipped roof and the massive quality of stone.

The theme of the hipped roofed pavilion extends to the Welsh House, Heidelberg, 1966 - 67 where like the Tozer House, the plan has been separated into three rectangles and positioned according to the dictates of the site (62) (fig.463). Three different floor levels all roofed separately allowed a logical grouping of sleeping, living and car accommodation. Sixty thousand second hand Hawthorn bricks were chosen from various demolition sites around Melbourne. Thus each brick had to be cleaned by hand, a laborious process which occupied the whole family for almost a year. The bricks were laid rough side out with deeply raked joints to add to the texture of the walls. In keeping with this rugged character; cedar shingles were chosen for the roof and nailed directly to an underlay of second hand floorboards, a technique imported from America. Floors throughout were concrete, paved with Welsh roofing slates. As with the Tozer house, the repetition of brick piers denoted circulation and broke the heat of the afternoon sun. Walking around the house it is possible to reach out and touch the weathered shingle roof which at times comes within a metre of the ground.

Fig.463 Charles Duncan, architect. Welsh House, Heidelberg, Victoria, 1966 - 67.

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Hipped roof and brick piers reappeared in the single-bedroom Knott House, Heidelberg, 1968 - 69 which was truly embedded into its site with three sides of the house below ground level (63) (fig.464). Windows from the ground up framed beautifully landscaped gardens on all sides, with flowering shrubs, grass, soil and plants all lying close to the glass.

An unusual house by Duncan which derived from Wright's experiments with the hexagonal module at the Paul Hanna House, Palo Alto, Ca., 1937 was his Okalyi House, Lower Eltham, 1968 (64) (fig.465), which used the triangle to bend the house into a U-shape around a courtyard. The plan was based on triangles and the house was constructed in solid brick with heavy timber beams. The slate paved court was surrounded by full glass walls. Exposed orange brown bricks and pine ceilings contrasted with the neutral grey floor paved in reused roofing slates.

The Sutterby House, Donvale, 1972 - 73 was one of Duncan's most innovative designs and extended the idea of brick piers with their replacement by a series of large
treated pine poles placed in the shape of a cross enclosing a house of more than 40 squares (65). (fig.466). The poles were grooved to take the floor to ceiling window frames and the seven external doors. Quarry tiles, exposed brick, stained timbers were part of a continuing Duncan aesthetic that reinterpreted and reformulated the work of the American master to original ends.

In each of these houses, one notes Duncan's concern for the importance of the roof and its relation to the site. Over the last 26 years of practice he has developed a series of responses, the flat roofed house which steps down as separated planes down the slope; (Williams House, Heidelberg; Holst House, Heidelberg; Glaspole House, Vermont) or the hipped roof rectangles and brick piers (Tozer House, Beaconsfield; Welsh House, Heidelberg; Knott House, Heidelberg; Bucknell House, Lower Plenty) and the longitudinal gable house which follows the contours of the slope (Reade House, Briar Hill, 1966; Naylor House, Eltham, 1968). Similarly in plan, a number of tried responses have developed a series of houses which form outdoor spaces of room size and harness the site; the cruciform or T-shape (Bucknell House, Jones House), the agglomerative cube (Forsyth House) and the unusual U-shape (Okalyi House). Like Wright, Duncan has developed a successful series of house types derived from an intimate relationship to the site, i.e. it is the landscape that has encouraged a typology and not a preconceived form implanted upon the land.

The Wrightian survival in the 1960s in Melbourne is an important phenomenon when seen against the wealth of 65. Lana Wells, "Pine Poles Shaped the Design", *The Australian Women's Weekly*, undated clipping. See also John Barker, "Boldness pays off on one acre site" (*The Age* - R. A. I. A. Citation No.34), *The Age*, undated clipping.
publicity of the so-called Sydney School. The affluent 1960s saw the increase in texture and exposed surfaces, and the possibility of exploring more fully Wrightian principles than the spare distillations of the 1950s. The theme of assimilation and reformulation continues in the 1960s but with a richer palette of materials and concerted attempts at the expression of wall mass and the weight of the roof. Interestingly, there is a lineage of interest amongst the Melbourne Wrightians. Peter Jorgenson, Alan Hough, and Charles Duncan had all worked for Chancellor and Patrick (66). Duncan was also to later work for Peter Jorgenson (67). In addition to his personal interests in Wright, Griffin, and Desbrowe Annear, Geoffrey Woodfall has expressed his admiration for the houses of Chancellor and Patrick, and one of the designers of that practice, Ian Banner, and praised the work of Jorgenson and Hough, and David Godsell, in particular his Beaumaris House (68). The common inspiration for these architects was Frank Lloyd Wright, his idea of an organic architecture and the celebration of the individual and original creation of the house. The importance of specifically pinpointing Wright's influence is critical as showing up a weakness in Jennifer Taylor's term, the Sydney School, which generously embraced diverse philosophies from Peter Johnson neo-Brutalist interests, Peter Muller's Eastern and Wrightian influences and Sidney Ancher's reformulations of Mies van der Rohe and William Wurster. Taylor groups the houses of these architects via the palette of materials and similarities of roof forms and siting, and claims their importance to the development of a so-called Sydney School. Like Peter Muller, Bruce Rickard, Ian Mackay and Neville Gruzman, who were creating sincere and more exacting interpretations of Wright in Sydney, in Melbourne there was also a Wrightian tradition - though one underpinned by clarity of structural expression suggestive of a faith in Modernist principles and made complex by the successive inclusion of diverse influences such as the details of Richard Neutra, Walter Burley Griffin, and Japanese architecture to create in each case "a natural house." The argument for a cohesive regional architecture based on common materials and methods of siting is lost on Melbourne. What links local architects is a common tradition of assimilation and reformulation via the layering of diverse sources and their explicit display rather than any consistency of visual style.

Despite the turning away in the 1960s from the slim reductive aesthetic of the 1950s towards mass, texture, a resurgence of interest in the vernacular image and the gradual closure of the open plan, a very small number of Melbourne architects pursued their formal interests of the 1950s and proceeded to mature the designing of the modern home in Melbourne. These architects understood the rigours of the post-war International Style: efficient structural means, a reduced palette of materials, generous amounts of glass, and elegantly simple details. They also understood the limitations of the open plan but were also its most sophisticated exponents. The successful integration of garden and house are the highlights of these pristine pavilions. Their clients were inevitably amongst the most wealthy of Melbourne's homemakers and consequently the most sophisticated in their appreciation of spatial subtlety and equipped to furnish these wide open spaces with elegant pieces of modern furniture and fine works of art. They were clients who also could often afford the luxury of air-conditioning.

Each of these mature moderns had a different source of influence. Common to all was skill in meticulous detailing, a quest for restraint and simple sparse furnishings, and a delight in the essential qualities of building materials. The open plan; an intimate connection with interior and exterior; the planar wall and its space harnessing qualities; the full height glass sliding door; the flat roof; the return wall to suggest mass where required; gracious spatial dimensions to give grandeur and excitement to revive the impressive entry hall of the neo-Georgian house of the 1930s, were all part of the mature modernist repertoire. These architects did not adhere dogmatically to the idea of the machine-made house of the 1950s. Natural timbers, exposed brick, stained finishes and frank but sophisticated craftsman detail combined with a lack of structural experiment superseded the deterministic structural gymnastics of the previous decade. In the late 1960s, these architects, as with many others, participated in the increasing use of secondhand bricks, the "roughness" and "honesty" of humble building materials, a philosophy much revered in the local gropings for an understanding of New Brutalism. Importantly, the work of these architects was just one part of a general search for fundamental truths in domestic architecture in the 1960s. Thus, these architects were equally susceptible to
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The mature moderns also contributed in the 1960s to the spate of architect-designed display and project homes which appeared in the 1960s. Their efforts in this field bequeathed some of the finest project homes realized on the Australian market.

Neil Clerehan, Guilford Bell, Bernard Joyce, David McGlashan, and John Adam are four consistent producers of Melbourne's most elegant and urbane architect-designed houses. There are other high points of mature modern dotted around Melbourne such as J. Dale Fisher's own house of glass and steel in St.George's Road, Toorak, c.1975 spectacularly sited above the Yarra (2) (fig.467) and A.R. Von Rompaey's own house, a flat roofed secluded courtyard house in Waterloo Street, Camberwell (3) (fig.468).

In many respects these sophisticated houses represent the high point of modern architecture in Melbourne and at the same time these expansive modern homes epitomizing the glamorous promise of post-war living were being

eclipsed. Spatial and volumetric complexity, overlays of allusion and symbolism, emphatic rude construction and the 45 degree angle were to replace the pure perpendiculars of these mature modern houses. For aesthetic commentators, many of these houses harboured essential problems related to the general barren state of architecture in the 1960s. In 1965, Robert Venturi questioned,

the relevance of analogies between pavilions and houses, especially analogies between Japanese pavilions and recent domestic architecture. They ignore the real complexity and contradiction inherent in the domestic program - the spatial and technological possibilities as well as the need for variety in visual experience. Forced simplicity results in oversimplification.....the building becomes a diagram of an oversimplified program for living - an abstract theory of either-or. Where simplification cannot work, simpleness results. Blatant simplification means bland architecture. Less is a bore (4).

Countering such an argument is the large number of mature modern houses all over the world, the inhabitants of which have a lifestyle attune to such architecture, where surrounding landscape and climate is appropriate to the indoor-outdoor way of life, and the construction techniques are specifically appropriate to the region and their owners' sophisticated tastes enjoy the pleasures of spartan elegance and the subtle richness potentially embedded in simplicity. It is not surprising then that the sleek Californian houses of Richard Neutra or that the formal themes of Philip Johnson were of influence to these Melbourne architects. The subtle infusion of Japanese shibui or the return of Hardy Wilson's celebration of entry and the timeless qualities of

Fig.468 A. R. Von Rompaey, architect. Rompaey House, Camberwell, Victoria, c.1967.

light and dappled shade upon a pristine white wall also exist in many of these houses.

More importantly, in these houses the simplification is not blatant but studied. It is polite and it is conservative but always appropriate, carefully aimed at its market. Above all, these houses become elegant backdrops to families or individuals who know how to or want to inhabit them. Echoes of Georgian purity and the informal and relaxed years of the mid-1960s could make an unusual but successful association. This is the ambience, say, of a Guilford Bell house. David McGlashan's "Heide" for John and Sunday Reed, built of white Mt. Gambier stone and described by Neil Clerehan as "International Style set down amongst the melaleucas" (5), is perhaps the house that deserves the greatest accolade for the successful resolution of open plan and the simultaneous desire for secluded protective space, an intimate engagement with the site and the eschewing of any historic allusion through detail or form. What follows then is a brief survey of the mature moderns in Melbourne.

Neil Clerehan
At the end of 1961, Neil Clerehan decided to leave the directorship of the R.V.I.A. Small Homes Service and devote himself to full time practice. Between 1962 and 1964, he was in partnership with Guilford Bell. His houses of the 1960s and early 1970s are restrained and understated Melbourne homes, highlighting efficient entry from car to house, clarity of plan and a minimum of building materials and finishes.

The Gillam Quigley House, Mt. Eliza, 1961 (6) designed by Neil Clerehan was described as "a classical example of the way Japanese living ideals are spreading in Australia" (fig.469). Built as a holiday house for two single men who were both enamoured with the extreme simplicity of the Japanese way of life, Clerehan designed a symmetrical house with a vast living room and kitchen opening onto a fly screened area containing the swimming pool with vistas to the sea beyond. Two brick fin walls enclosed this central living space and off to each side were two virtually identical bedroom/service blocks clad in vertical boards of Western Red cedar left to weather naturally. The remainder of the house was built in an expressed post and beam structure. The flat roof had a deep white painted fascia. The brick


paving of the open living area also extended out to encompass the screened pool area. Heavy oregon beams projected through this space and over the pool area.

The Box House in Glenard Drive, Heidelberg, 1963 was a flat roofed house (fig.470). It was an assured, calm and elegant expression of privacy and propriety with its courtyard wall and elongated window to the street. The strong fascia line of the flat roofs and slim steel columns to the carport contrasting with the pale coloured brick walls resulted in a subtle play of line and plane (7).
Similarly, Clerehan's Clive Ross Fenner House, South Yarra, 1964 exudes privacy, urbanity and precise detail (fig.471). Designed for a retired pastoralist, this house is located on a busy street and within a tightly confined and overlooked site. Built in exposed elongated grey concrete Besser brick, the design is typical of Clerehan's clear and efficient planning to gain as much from the site as possible and to take advantage of the south facing block to open up rooms to the northern sun (8). Consequently, two internal courts and a rear garden give a northern orientation to every room. Gracious entry stairs and an imposing front door with centrally placed door knobs are simple but essential additions to the sobriety of these mature modern designs. Like Martin and Tribe's Van Staten House nearby in Anderson Street, South Yarra, 1937, the careful composition of concrete block front screen wall of the Fenner House ensures the car slips beneath the ground floor which has been raised half a flight above street level. Full height sliding anodized black aluminium windows give access to the north facing terrace. The bathrooms were placed along the windowless wall on the street and were illuminated and ventilated by plastic roof domes. The resourceful use of space on this confined site and the engaging sequence of rooms make this an exemplary
townhouse design for Melbourne comparable to the courtyard houses of American architects Mies van der Rohe, I.M. Pei, Eliot Noyes and Philip Johnson.

Clerehan's own house, Walsh Street South Yarra, 1968 extended the themes of the Fenner House on a slim west-facing site (fig.472). Typically it was a highly sophisticated arrangement of unpretentious elements, its prime theme being discreet privacy. In physical terms, the major element was an open exposure of structure and materials. The ceiling of this double storey house, hidden from the street by a dower house which occupies about one third of the site, is off-form concrete and the main structural south wall of the house is spiked with cantilevering stair treads connecting the two levels. The two storey house is set back from the north boundary to enable all the main rooms to face a paved court containing a heated pool and minimal garden. Clerehan created an inner urban townhouse realising the high density benefits of the 19th century terrace house yet he elaborated the traditional circulation pattern using a greater width at entry to provide a gracious entry hall. Further into the house, the passage, delineated by a strip of white tiles, narrows to include on the south wall, a stair, storage and kitchen bench. This is a compact and densely planned house. Conscientiously honest structural expression throughout the house results in the heavy concrete lintel on the north wall providing both sill and spandrel panel to the windows of the first floor bedrooms. Infill walls are of light grey concrete block and a neutral terrazzo paving tile blends with the beige carpet in the living, dining and bedroom areas. The elimination of passage space is achieved by implying circulation routes within the house by changes in floor surface. A double height void above the

Fig.472 Neil Clerehan, architect. Clerehan House, South Yarra, Victoria, 1968.
sitting room provides visual and aural access with the upper level of the house. A study overlooks this space. Designed for a family of four, the house was planned for many separate activities taking place at the same time. On the first floor the children had their own living area for television and homework, linked vertically to a large utility room downstairs. Bathrooms on the south and west boundaries are lit by skylights. All the main windows are of heavy section aluminium. In the living room a large circular opening in the brick wing wall separating dining from living provides visual continuity between the entertaining spaces on the ground floor. Though possessing a strict linear plan and rigorously expressed structure and materials (9), fluid interlocking spaces characterise this relaxed townhouse.

Clerehan differed from his close friend Robin Boyd in architectonics and style.

Robin Boyd would establish a theme and dramatize it in a design. I was and still am intrigued with living patterns, actual and possible, and the architectonic expression was and is to me only a frame for the patterns. Therefore I never produced intriguing forms (10).

This discretion and intimate relationship with the needs and desires of the client make Clerehan's houses eminently liveable and also some of the least expressionistic in Melbourne, where the tendency is to produce bold and at times provocative aesthetic projections. Taste and restraint were paramount. Space was open and flowing, blending the parti of Mies with the controlled vistas of Japanese architecture. Clerehan travelled to Japan on the University of Melbourne study tour there in 1961. Like Boyd and
other architects, for Clerehan, the carefully modulated architecture of Japan and its minimal palette of materials was of immense appeal.

Guilford Bell
The supreme architect of manners in Melbourne of the 1960s and 1970s was Guilford Bell. In contrast to the work of his colleagues, his houses reveal a greater formality and adherence to classical notions of symmetry and repose, and above all notions of pure contained space. While Clerehan practised the asymmetry of the International Style and the unlimited boundaries of the open plan, Bell extended the vocabulary of modernism to include contained space and to transcend notions of structural or material truths. His architecture is concerned with the infinite, not spatially but cerebrally. In many respects, Guilford Bell is a latter-day Hardy Wilson.

Though comparisons may be drawn with the early Connecticut houses of Philip Johnson, a personal friend of Bell's and an architect whose early work he admires (11), the temptation to assign precedence to Johnson's work should be resisted. Bell admired the work of many architects amongst whom are included Hardy Wilson, Leslie Wilkinson, Marcus Martin, William Wurster, Roy Grounds, Robin Boyd and Luis Barragan. But Bell claims he was not influenced by them. In fact he shunned the influence of any architect as much as he could (12). He seeks a higher level of being, an almost zen-like state in which to create architecture. Critics of his houses might find a shallow classicism, a kitsch rendition of the Georgian and pandering to the neo-Georgian tastes of his Toorak clientele. To examine several of his houses however is to see the strength of his commitment to the qualities of light and shade on a plane white wall, to see the procession of entry celebrated and the outside world shut out in favour of an oasis of privacy. The parti of formality is there. So is symmetry and Georgian order and proportion. Guilford Bell's houses are about transcendence through classical perfection. The suburbs have no part in these studied creations.

There are three basic types of house employed by Bell: the urbane walled haven; the spreading farmhouse villa and the pavilion.

12. Ibid. In an interview with Bell, he stressed his fear of the influence of other architects' work on his own. He prefers not to look at their work or socialize with other architects. It is a means of staying committed to ones personal beliefs.
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The two storey Bardas House, South Yarra, 1958 presents a walled mass to the street. It is an urbane walled haven which has its back turned to the street entirely. To the north, the rear of the house was entirely glazed with a symmetrical fenestration layout (13) (fig.473). The Simon House, Mt. Eliza, 1962 (fig.474), designed in association with Neil Clerehan, is a private courtyard house with a flyscreened swimming pool like Clerehan's earlier Gillam Quigley House. This large five bedroom 34 square house was designed around a large courtyard containing a swimming pool. An island fireplace forms a central focus to a symmetrical parti which is made more formal when the curtain in the open living/dining area is drawn. A salon is created with views of Pelican Bay and the horizon to one side and on the other to the walled court and pool. Sandstone coloured concrete blocks, natural finished timber walls, white plaster ceilings and cork tiles throughout lend this house a relaxed beachside air (14).

Fig.473 Guilford Bell, architect. Bardas House, South Yarra, Victoria, 1958.


14. "House at Davey's Bay Road, Mount Eliza, Victoria", Architecture in Australia, December 1964, pp.91 - 92; "House Overlooking Pelican Bay at Mount Eliza", Architecture and Arts, April 1964, pp.31 - 34; Eric Wilson, "Unity in House and Pool", Australian Home Beautiful, June 1964, pp.5 - 9. The Simon House won the Victorian Architectural Medal in 1963 - 64 and was described by Cross Section, May 1964, as It captures the dream of indoor outdoor living that flies and winds tend to turn into a nightmare in less carefully controlled beachside dwellings.
The Purcell House, Ivanhoe, 1964, like Philip Johnson's Hodgson House, New Canaan, Connecticut, 1951 uses slim wings to create private courts (15) (fig.475). Bell's designs employ a standard dimension for all wall openings. The floor to ceiling window, using the dimensional module of a door or french window is a continuing theme in his work. Bell detests windows cut out of walls and nowhere in his houses after c.1960 is there a traditional window to be found (16).

Fig.474 Guilford Bell and Neil Clerihan, architects. Simon House, Mt. Eliza, Victoria, 1962.

Fig.475 Guilford Bell, architect. Purcell House, Ivanhoe, Victoria, 1964.
16. Interview with Guilford Bell, 27th October 1988. For Bell, elements such as conventional windows have no role. Window elements suggest limiting boundaries to movement outside interior space. Consequently each opening could be a door or simply a glazed floor to ceiling space implying movement through it.
18. Ibid., pp.60 - 63. In an interview in *Australian House and Garden*, October 1980, Bell is quoted as saying, "Almost every city home I design has its roots in Middle Eastern architecture - where one enters the home through a single opening in a protective wall and comes into the environment of a garden and inner buildings. People feel safe in such a place."
19. Interview with Guilford Bell, 27th October 1988. Bell spoke of space having an entity, limits and a sense of containment, and an evocative quality that other architects were not dealing with in their domestic designs at the time.

The McGrath House, Bellevue Hill, Sydney, N.S.W., 1971 shows Bell in one of his most formal moods. Entered on axis from above, the hall is a square space with a circular skylight above and a spiral staircase leading to the floor below (17) (fig.476). To either side of this receiving space are dining room and library. Beyond the hall on axis is the generous living space of the house. Externally, the brickwork is rendered white and all openings extend to floor level and contain glass doors and louvered timber doors which slide away into the cavities. Each window/door has an external moulded surround of render as does the outline of the building. The imprint of the Georgian is veiled but readable.

The epitome of the urbane walled haven and Bell's control of the ritual of entry and receiving is the Seccull House, Brighton, 1972 (18) (fig.477). The house is entered along a wide covered loggia beside a long white plane wall. The end of this passage is blank, seemingly a dead end. One turns to the right and enters a square skylit hall and immediately engaged with another axis of arrangement. The impression is sweeping distance and generous palatial dimension. This extremely large house, flat roofed and with a plan in the shape of an F is Bell's *tour-de-force* of white stucco, black steel, and travertine. Enclosed courts off bedrooms and family area and major court spaces adjacent to the living and dining wing of the house create a dense network of controlled internal and external space. The living room as with most Bell living rooms, centres on the fireplace. There are definite boundaries to these generous spaces. They are contained. These are not the peripheral, outward seeking spaces of Mies van der Rohe but timeless containers of space in the tradition of the Renaissance and the Georgian periods, with characteristic proportions and boundaries, and ideas about centring (19).
The use of white surfaces and concealed details and hidden structural connections blanks out any techno-functional response to this architecture. For Bell, the space and the visual beauty of that space is uppermost. Anything else is simply irrelevant (20).

Bell designed many large spreading symmetrical homesteads and country houses in the 1960s (21). Perhaps the best example of his country house designs was that for Fig. 477 Guilford Bell, architect. Seccull House, Brighton, Victoria, 1972.
Sir Russell Drysdale at Kilcare Heights, N.S.W. in 1966 (22) (fig.478). Bell's ordered parti is Palladian in its division of the house into three pavilions: studio; living/kitchen and sleeping. From the entry side of this house set deep in the bush with views to distant hills, the house appears as a collection of brick prisms and hints at Bell's love of Assyrian architecture (23). The front two prisms house water tanks and cars and one enters between the two on axis. A circulation spine runs across this entry.
axis from one end of the house to the other. Between each major pavilion are courtyards. Outrigger beams, being extensions of the exposed beams within, form a pergola along the north face of each pavilion. The entire north front is glazed while the south entry side is a composition of blank walls. The roof of each pavilion hovers above its pink masonry block walls indicative of the open structural expression. The Beckman House, Colac, 1967 is similarly a symmetrically planned large spreading home where the parti is extended to conceal and provide spaces such as drying courts and garden court (24) (fig.479). Every space of the house and even the ancillary spaces are considered as an integral part of the overall schema of things. There is a thoughtful accommodating totality to Bell's design.

The pavilion houses see Bell at his most dream-like and his most romantic. In 1969 he designed for the Fairfax family a pavilion at their property at Bowral (25) (fig.480). Though not a family house, this design for a pool house represents Bell's celestial leanings. This is a heavenly pavilion. Beauty is the aim. The imperative is visual (26). The pavilion was built in sandstone, glass and sandblasted steel. The plan is a square marked by four solid corners containing services and bathroom facilities. Above the centre of the space is a square skylight topped externally by a pyramid. Along one axis of the space lies a garden pool on one side of the pavilion and a swimming pool on the other. The slim floor to ceiling panelled doors of the pavilion slide entirely away into the solid corners.

The square, the pyramid and the pavilion were to reappear in Bell's houses. The Willy House, Toorak, 1972 blended the urban walled haven with a pyramid roofed pavilion (27) (fig.481). At the centre of the formal composition is the living room. Above is the huge pyramid roof with a second

20. Interview with Alan Powell, 9th December 1988. Powell describes Bell's architecture as different from the work of those who were practising in the early 1970s. Powell believes Bell to have subsumed all learnt skills to a private state of mind, a position beyond the vagaries of technique, beyond even the vagaries of style to some upper sense of being. This concept schematized a view of the total environment.

21. Homesteads, country houses and farmhouses designed by Bell include the Manager's House, Kalamia Sugar Mill, 1966; Burleigh Station, Richmond, Queensland, 1965; Yugilbar Station near Grafton, Queensland, 1966; Eidsvold Station, Eidsvold, Queensland, 1968; Birkenburn Station, Bungendore, A. C. T., 1968; Ferguson House, Shepparton, 1971; "Mingara", Romsey, 1978. See Imrie, op. cit. for a description of these large symmetrically planned complexes.


23. Bell made a visit to Syria in the early 1950s, accompanying the archaeologist Max Mallowan. Bell's position was architect to the expedition which was financed by the British Museum and the British School of Archaeology in Iraq. See Joseph Burke, "The Architecture of Guilford Bell", from Imrie, op. cit., p.9.

24. Ibid., pp. 42 - 43.


27. Imrie, op. cit., pp. 64 - 65.
Chapter 6: The Maturing of the Modern House in Melbourne

Fig. 480 Guilford Bell, architect.
Fairfax Pavilion, Bowral, N. S. W., 1969.
The Modern House in Melbourne 1945 - 1975

skin exposed within. The house is entered from a cul-de-sac. The axial path culminates in the fireplace which has its flue carefully manipulated so that smoke wafts out from the apex of the central pyramid. The Moylan House, Templestowe, 1973 is a reduced version of the Willy House and has a central pyramid roofed living room flanked by a bedroom block and a kitchen/dining block on the other side (28) (fig.482). The Secull Holiday House, Lorne, 1973 is another house employing a pyramid over its living area (29) (fig.483). This house was divided into two parts, a two storey flat roofed bedroom block attached at one of its corners to a large steel framed pyramid roofed living block. This pyramid has a splayed edge suggestive of a Chinese pagoda or the upturned edge of the roof of outback homesteads where the verandah met the main roof of the house (30). It was covered with white asbestos cement shingles and lined internally with mountain ash tongue and groove boarding.

Pyramids, the Middle East, pagodas, the shibui of Japan and the calm repose of the Georgian and early Colonial architecture, all would seem to have a part in Bell's

Fig.481 Guilford Bell, architect. Willy House, Toorak, Victoria, 1972.

Fig.482 Guilford Bell, architect. Moylan House, Templestowe, Victoria, 1973.

28. Ibid., p.65.
29. Ibid., pp.69 - 71.
30. Inspiration for the pyramid shape has many possible derivations. Contemporary American architecture of the mid-1960s frequently featured the oriental inspired pagoda roof. For example: "Progressive Architecture Annual Awards: Residential Citation" (House for Dr. and Mrs. Henry G. Simon, New Orleans, Louisiana: architects, Colbert and Lowery and Associates), Progressive Architecture, January 1960, pp.132 - 133 and "Display Pavilion for New Land Development" (Visitor's Pavilion, Marin Bay, near San Rafael, California: architects, Bay Group Associates), Architectural Record, May 1962, pp.150 - 151. More importantly, the idea of the pyramid and its mystical powers would be of great appeal to Bell's Middle Eastern interests. The double pitch roof of colonial homesteads is another possible source suggested by Allan Powell. Bell was brought up on the famous property, "Coochin Coochin", Warwick, Queensland which has been in the influential Bell family since 1882. See Philip Cox and Wesley Stacey, The Australian Homestead, pp.72 - 79. Bell himself has designed several Queensland homesteads and is extremely familiar with the designs of these early Australian farm buildings.
architecture. The subtle blend of east and west, the quest for spirituality and purity was also part of Hardy Wilson’s ideas about architecture. In many respects, Hardy Wilson’s unbuilt vision for “Celestion”, a house whose style Wilson hoped would harmoniously blend East and West (fig.484), is carried on by the houses of Guilford Bell (31).

Bell’s houses are special additions to the arena of domestic design in Melbourne. They are very private and very personal expressions of a rigorous and committed designer. For the most part, these houses were built for the creme de la creme.

31. Hardy Wilson’s idea for a meeting of the architecture of east and west occurs frequently in his writings, in particular, Old Colonial Architecture in New South Wales and Tasmania, p.7 and his major thesis on this subject, the lavish Grecian and Chinese Architecture, Melbourne 1937. A common interest held by Guilford Bell and his friend Roy Grounds in the architecture of the Orient may also be of influence. In July 1947, there was a special issue in The Architectural Review devoted to the architecture of China. Roy Grounds’s house and the National Gallery of Victoria would seem to have an affinity with the buildings in the Forbidden City, Peking, China. Bell’s architecture however diffuses direct reference to buildings and seeks to transcend the material realm.
of Melbourne society. Many of Bell's houses are unpublished and remain behind high Toorak walls bespeaking the shaded oasis of light and shade and old money nurturing silent anonymity. These houses are modern versions of a gilded Colonial age, and politically out of step with the mainstream of Melbourne architects who for the most part in the late 1960s and early 1970s were committed to an open and free approach to form and structure. Bell's imperative of visual beauty was unfashionable and untenable in these times. The resistance to or unacceptability of Bell's position was a sign to retreat further into the mystique of sole practice and continue to develop an autonomous architecture based on eternal themes of order and the pure space combined with personally held beliefs on form, colour and materials.

Bernard Joyce
The houses of Bernard Joyce develop modernist themes of spatial continuity, repeatability of structure and parts, and the frequent use of the private courtyard as an extension of internal living space. Joyce's house plans are vivid indications of faith in the modernist theme of the plan as the generator of form. A similar vocabulary to Bell is employed, though in a modest and less pretentious fashion. An early prize winning design of 1963 for a timber home demonstrates Joyce's interest in the courtyard (32) (fig.485). Similar to Craig Ellwood's Rosen House, Brentwood, 1962 in its formal Miesian parti, this project employs standardized windows and doors, arranged symmetrically on each elevation. It is a flat roofed square clad in vertical timber lining boards with a square court at

Fig.484 Hardy Wilson, architect. "Celestion", house project, 1924.

its centre. Similarly, a speculative house built in Gordon Grove, South Yarra, 1968 was tightly planned on a constricted inner city site (33) (fig.486). Two major brick wing walls form an L and the house is disposed off these walls with space removed at intervals to provide courtyards. All windows are modulated as the same standardized floor to ceiling sash affording economies in construction and joinery production.

The Pearse House, Lansell Street, Bendigo, 1966 is another of Bernard Joyce's exercises in planning clarity (fig.487). It has a symmetrical parti of central courtyard flanked by bedroom blocks and living and kitchen blocks.
similar to the rigour of Clerehan and Bell's Simon House parti (34). Where these houses differ from Bell's is Joyce's insistence on aspects of function and economy. A visual imperative is not a major issue in these houses. Joyce was to extend his planning skill to the design of numerous apartment blocks and speculative project house designs in Melbourne in the 1960s, and Senior Diplomatic Staff Group Housing in Kuala Lumpur, Malaysia for the Australian Government, 1977 - 78.

David McGlashan
Another of Melbourne's mature modern architects is David McGlashan of the firm, McGlashan and Everist. Between 1957 and 1976, his house designs also extended the themes of the open plan, relaxed indoor-outdoor living and the paring down of structure to explicit and economic minimums (35). In each house; there was a concerted effort to reduce the palette of building materials to a realistic minimum. McGlashan intended the integration of house and landscape, not to have the house sit upon the landscape but participating with it. The sprawling houses of Richard Neutra with their delimited indoor and outdoor spaces, their unified areas flowing together, wafer thin flat roofs and flywire porches, pinwheeling plan that extends fingers into the landscape, are recalled by McGlashan's compositions which have undergone a similar process of intimate engagement with the site.

34. Material provided by Bernard Joyce, Interview 2nd November 1988. The Evans House, Elenara Court, Glen Waverley, 1964 and Spedding House, Bolton Avenue, Brighton, 1964 continue Joyce's theme of courtyard and meticulously planned blocks expanding across their sites.

35. For an excellent introduction to the houses of David McGlashan, see Michael Fink, "The Residential Work of David McGlashan", Investigation Project, B.Arch., University of Melbourne, 1985. The firm of David McGlashan and Neil Everist designed many houses. I regret that for the sake of brevity, I am able to include only one of the many domestic designs completed by Neil Everist.
The Geoffrey Grimwade House, Rye was built in 1960 as a retirement house that could also serve as a holiday house (36) (fig.488). A series of five separate wings, each discretely planned with enclosed separate courts and garden areas, were connected by covered ways, verandahs and screened porches. Overlaid onto this sprawling informality was the unity of consistent window detailing, rattan blinds and internal and external wall linings of bleached cedar and limestone which had been quarried on the property. Completely enclosed by melaleucas and casuarinas, the house sits easily in its native surroundings. In the tradition of houses such as Norman Seabrook’s own house at Croydon, 1941 and the much acclaimed Badham House, Cronulla, N.S.W., by Bryce Mortlock also designed in 1959, the Grimwade House varies the degree of enclosure and mists the distinction between inside and out. The atmosphere of beachside living pervades this glamorous plan of generous proportions. Elegantly minimal gestures both in terms of materials and structure characterise this design.

The Guss House, Kew, 1963 was a house of steel, timber and glass sitting on a steeply sloping site (37) (fig.489). McGlashan’s design followed ideas suggested by American architect Edward Larrabee Barnes in an article entitled


37. Fink, op. cit.
"Platform Houses" which appeared in *Architectural Record*, October 1956 (38). The article discussed the opposing ideas of a house merging with its setting or rising crisply above the landscape and how it might be resolved. Barnes's solution required that:

actual outdoor living areas and gardens were lifted above the surrounding terrain onto a podium or platform with the house; these areas are carefully cultivated, while the rest is left more or less as is. Thus the integrated gardens and house do stand apart (39).

An expansive use of glass, large sliding panels, flat roofs and large concrete paved outdoor court platforms with timber expansion joints was typical of Barnes's work. Where the Grimwade House entailed unfinished timbers and rock construction, the Guss House had white painted joinery and brick veneer planar walls and was of post and beam construction with the supporting posts strongly expressed in black. The Guss House was fundamentally an elevated platform house with a cultivated courtyard at the upper level, with the plan module expressed in the paving. Ceiling beams and posts, and window mullions form a three dimensional grid into which fit sliding doors and windows. The platform was concealed from the street where the house appeared as an elevated glass box.

The Roderick Carnegie House, Sorrento, 1967 consists of three interlocking platforms at different levels (40) (fig.490). The house was constructed of three timber framed and flat roofed boxes designed on a six foot module, sitting on concrete slabs and melded together in a staggered composition which stepped gently down the slope. A minimized vocabulary of simple butt joinery, large

39. Ibid., p.205. Barnes was to make a distinction between the garden and nature:
"The house and nature: the contrast between untouched nature and the area for living is dramatized in the platform plan. A house should never melt completely into the landscape - it should retain its identity as a habitation and have its own crisp organic form. To me "organic" does not mean that the house sprouts out of nature like an over-fertilized plant.
The house and garden: in the platform plan, the garden is conceived as part of the house. Its wall is an extension of the house foundation; enclosed terraces complement inside spaces. Shade trees make a leafy outdoor ceiling."
panels of glass, vertical lining boards and rattan blinds provide an unobtrusive and restful background in contrast to the spectacular views out to sea. Living and main bedroom, kitchen and dining areas, and a further bedroom wing comprise this holiday house by the sea. Timber decks stretching outward from the living spaces enlarge and extend the indoor spaces to become outdoor rooms. McGlashan's disciplined minimum of materials, deceptively simple assemblies and the elimination of unnecessary conjunctions of dissimilar materials informs this design. The unified wall treatment of vertical Radiata pine boards is complemented by warm toned pebble concrete floors throughout, with ceilings of chalk white sailmakers cotton duck over 4 inches of insulation. Doors are sliding wall panels. In the glazed bay of the living room, there is a window seat, either side of which glazed doors lead to a deck with a spectacular bay view and with a beautiful tree emerging upwards into and out of the timber slatted deck.

A comparable design to the Grimwade House was the Bob Jane House, Portsea, c.1969 (41) with its similar themes of covered ways, private courts and discretely planned blocks (fig.491). Post and beam construction allowed all structural
loads to be carried on exposed beams on a regular 9 ft module and thus also large unobstructed window openings with huge sliding glass doors. Stramit board was used as a ceiling throughout the house and consequently all the rooms were planned with dimensions that were multiples of a standard board size (42).

The Loeliger House, Oliver's Gully, Ararat, 1965 was a very large E-shaped plan designed by McGlashan's partner, Neil Everist (fig.492). Built on the top of a hillside, the house proper was built around a courtyard containing a swimming pool. A series of brick piers coupled with horizontal oregon beams modulated this symmetrical plan. Rough sawn, dark stained exposed beams link the three arms of the "E" plan and are carried into the courtyards on seven foot high brick pillars. Each arm is a zone; sleeping, service, and store/garage respectively. The back of the E contains the living rooms adjacent to the swimming pool and a covered loggia on the entry court occurs on the outward facing side (43).

42. The Stramit board provided an attractive ceiling between the exposed beams at the same time acting as an insulation against heat and as a support for the tray roofing. Copper downpipes were used so that the only painting required would be the fascia gutter.

43. Robert Clarke, "Hilltop Haven", The Herald, undated clipping.

Fig.491 David McGlashan, architect. Bob Jane House, Portsea, Victoria, c.1969.

Fig.492 Neil Everist, architect. Loeliger House, Ararat, Victoria, 1965.
The tour-de-force of McGlashan's career of the 1960s is "Heide" designed in 1964 and built in 1965 for noted art patrons and collectors John and Sunday Reed on their estate on the banks of the Yarra at Bulleen. The Reeds had lived previously in the adjacent Victorian weatherboard farmhouse now known as "Heide I". In 1964, they commissioned McGlashan to design "a romantic building, ageless, and with a sense of mystery; a quality of space and natural light appropriate to a gallery, and the sense of walls within and extending into a garden" (44). Described by Neil Clerehan in 1968, as "International Style set down amongst the melaleucas" (45) and more recently by Memory Holloway as "a monument to a generation" (46), Heide II was built in Mt. Gambier limestone, timber and glass, and massed as a series of L-shaped masonry walls interlocking to form a sequence of internal and external rooms of space, a sophisticated de-Stijl composition in plan and volume (fig.493). The large multi-level house contained a large bedroom suite, a sunken study/sitting area, open height living/dining area, gallery space and a self contained studio/bedroom wing. Each space has its own external court, all of which interconnect to form a maze of outdoor rooms. From the motor court, the house is entered via a covered way alongside a solid wall. Just before the

Fig.493 David McGlashan, architect. "Heide", John and Sunday Reed House, Bulleen, Victoria, 1964 - 65.


Fig. 494 David McGlashan, architect. "Heide", John and Sunday Reed House, Bulleen, Victoria, 1964 - 65.
front door, the covered way becomes a bridge and a dramatic vista opens out to the slope of the valley running down to the river.

Heide II is one of the finest examples of 1960s domestic architecture in Australia and in 1968 was awarded the R.A.I.A. (Victorian Chapter) Bronze Medal (47) (fig.494). A rare and romantic distillation of diverse post-war influences in architectural design, those of Frank Lloyd Wright, Richard Neutra, Japanese architecture and contemporary American domestic design notably that of John Johansen, are represented in the house by the forming of a sculptural whole integrated carefully into the surrounding 15 acres of the Reed estate. It is a period exemplar of the world-wide reappraisal in the 1960s of the post-war International Style resulting with Heide II in a de-Stijl composition that is at once both romantic and rational, and marks a high point in the development of post-World War 2 architecture in Australia. Open space and closed space are resolved in this complex interplay of form. The plan is at once strung out and space is given no distinct limit. At the same time walls enclose and embrace. Mies van der Rohe's projected plan for a brick country house, 1923 is a distant relation of this sophisticated modern house (fig.495). The Reeds dwelt in this "gallery to be lived in" until just a few months before the property was donated to the National Gallery of Victoria when the Reeds moved back to Heide I. "It then took six months to convert the award-winning house into a very special art gallery" (48). McGlashan's later houses never quite reach the heights of this rare combination of an artistic client and magnificent natural setting.

John Adam

The domestic architecture of the late John Adam owes much to the Californian Austrian emigre architect Richard Neutra whom Adam visited whilst overseas 1959 - 60 (49). The pinwheel plan, the pergola outriggers, the planar wall and its space defining qualities, the sculptural fireplace (apparently suspended), the full height glass walls and the feathering of the building into the surrounding landscape are all part of an Adam design as it was of Neutra's. Where Adam differed, was in his pragmatic use of the module to structure the plan as opposed to Neutra's play of elegant planes. It is this post and beam construction, with the dominant use of timber and the counterpoint of large areas of heavy mass opposed to large expanses of glass which
characterize his domestic work. Like Neutra, Adam's planning revolved around the use of continuous wall and roof planes to create dramatic space in the public areas of the house. By contrast the private spaces of the house, bedrooms, bathrooms and laundry in Adam's plans were compartmented and grouped efficiently together. As with Neutra, a major concern was also the melding of the house to its site. The projection of beams, posts and planar wall beyond the roof of the building delimited the boundaries of enclosure as well as creating and defining outdoor rooms, and subsequently feathered the edge of the building into the landscape.

Frank Lloyd Wright, Mies van der Rohe in the brick country house project (fig.495), and Richard Neutra are the major aesthetic influences in John Adam's domestic architecture. Common to all three architects is their centrifugal planning of planar wing walls which spin outward from the only dominant mass of the house, the fireplace. The offsetting of rectangles about these planes which gather external space to form courts, screen, and heighten circulation axes are typical of each of these architects' work.

An early house design by Adam, the Collie House, Croydon, 1956 has a typical mid-1950s compact plan with a splayed eave roof reminiscent of contemporary Californian designs. This house predated Adam's overseas trip (50). After his return to Melbourne, Adam's design for the Dyson House, Loch, 1961 (51) (fig.496) showed a clear understanding of the Neutra vocabulary and disposition of space via a lineal push-pull along the longitudinal axis of the house. On the northern face of the house on two corners the fascia beam over-ran to create a glass corner with an outrigger beam and post beyond. The

50. Adam's Warneet Yacht Club, Warneet project, 1958, also done before Adam's trip overseas however bears some resemblance to Richard Neutra's Holiday House Motel, Malibu, California, 1948.


52. The features of the Dyson House, 1961 appear in virtually any Neutra design of the 1950s. e.g. Earl Street Reunion House, Los Angeles, 1949; Logar House, Los Angeles, 1951; Moore House, Ojai, 1952; Perkins House, Pasadena, 1955 and the Cheuy House, Los Angeles, 1956. A different theme occurs in the O'Malley House, Aireys Inlet, 1966 designed by Adam in association with Philip Sargeant. The O'Malley House blends Usonian themes with those of Neutra. Instead of the wafer-thin expression of invisibility, the fascias in this house are broad and panelled in stained timber boards.
cornet had disappeared. An illusion of weightlessness was instated and traditional notions of load bearing mass and the delineation of exterior and interior were reversed. Above, the flat plane of the roof accentuated and made complex this de-Stijl composition of shelter and support. All the familiar elements of roof, support and fireplace became abstract elements tautly controlled at the edge of the house. Windows were carried right up to the underside of the eaves. The car sat beneath a hovering flat plane. All are trademarks of a Richard Neutra house (52).

The John South House, Croydon, 1965 was built on a steeply sloping wooded site and sat on one level (fig.497). The visual anchor of the western corner of the house was a massive block in fawn grey brick. The house seems to
extend off this anchor with the familiar pergola over-running beams and posts stained dark brown with roof held back. The simple zoning of this linear house and the passage which follows the contour again recalls the colony of Neutra homes at Silverlake in Los Angeles where Neutra lived and had his office (53). The Langlands House, Ivanhoe, 1966 sits on a similar site amidst Australian eucalypts. The broad emphatic horizontal expanse of glass and wafer thin fascias and beam ends also recalls Neutra's Silverlake houses (54) (fig.498). At Adam's Scott House at Flinders, 1967, roof beams overrun the edge of the house to become a north facing pergola to enable a free expanse of glass beneath. The setting back of the roof overhang to accentuate the posts and the beam termination is another of Neutra's detail trademarks (55) (fig.499).

The "K" House is a free interpretation of the Neutra vocabulary with its deeper fascia and dark stained timbers on the second floor (fig.500). The wafer thin proportions are fattened to lend humanity to this elegant upper income bracket project house. On the balcony side the familiar pergola members occur, but over two storeys and the eaves


55. John Barker, "Work was done away from site" (*The Age* - R. A. I. A. Citation No.37), *The Age*, undated clipping.
read as a slim and narrow flat plane. The familiar negation of the corner with the glazed return and lightweight timber infill reappears, given dramatic effect by the massive return walls. The house is a graphic description of careful tectonic deliberations and shows some indication of Adam's work experience with the renowned residential firm of Chancellor and Patrick (56).

Other Adam designs such as the Pleasance/Adam House, Balwyn, 1966; Hildebrand House, Wangaratta, 1969; Plan V435 designed for the R.V.I.A. Small Homes Service, 1969; and John Adam’s own house, Hawthorn, 1970 all transform the tectonic devices of Richard Neutra into a local idiom of brick and stained timbers, with increased use of the modulated timber members to form pergolas at the edge of the house (57).

The Pleasance House, Park Orchards, 1973 shows most clearly the principles of an Adam design (fig.501). The four major brick walls which pinwheel about the entry define the internal zones of the house and the division of the exterior of the house into bedroom court, living court, carport and kitchen and breakfast court on the east side of
the house to catch the morning sun. The central entry also provides the lineal dynamic of the house, with wing walls that stretch the house into the landscape and provide the limiting boundaries for the modulated timber structure between. The edge of the house feathers into the landscape with the familiar outriggers and posts, with a skyline punctuated by a 45 degree skylight popping out of the roof. Generous glazing, huge sliding glass doors and the glazed return walls are the typical elements of the design. Grey pressed bricks, white walls and ceilings, and natural timbers internally characterize these low key relaxed designs. The north wall of the house is completely glazed allowing controlled north sun to penetrate living areas as well as the open corridor kitchen which overlooks the court. A hobbies room at the other end of the house enables there to be an almost discrete children's block. This relaxed house is the epitome of the architect designed home of the early 1970s (58).

These houses by Cleerehan, Bell, Joyce, McGlashan and Adam extended the modernist vocabulary of the 1950s. They retained the open plan and sought to enrich it beyond its limitations. Exposed timbers and brickwork, retreat spaces and sensitive siting and landscaping softened the rigorous social motives of the International Style. Reformulation and the assimilation of diverse sources matured the modernist box of the 1950s skirting dangerously the edge of blandness, which is the problem of the simple solution. Guilford Bell's spatial and compositional skills stand out as an unusual and politically unpopular position in Melbourne. His order and rigour was out of step with the mainstream of Melbourne work in the late 1960s and early 1970s. Space in Melbourne design is about the resolution of two themes, the open space and centripetal space. Structure is expressive and resolutely exposed. The result is an admixture, awkward and gauche in many cases. In Bell's architecture, space is virtually always centred. Like Hardy Wilson, his environments are always controlled and ordered. Repose and propriety were celebrated. The purity of Bell's architecture was anathema to a different truth sought by the majority of Melbourne architects. The conscious search for a visual beauty was feared by many. It is this sense of visual taste which characterizes the mature Melbourne modern work and that was to be challenged by an emerging generation of younger architects. The perfection of one generation would be challenged by an equal and opposite reaction.

57. (Pleasance/Adam House, Balwyn, 1966) John Barker, "House design citation, No.1", (The Age - R.A.I.A. House of the Week Citation No.1) The Age, 4.10.1971; (V435 for the Architects' Housing Service, 1969) Graham Whitford, "These took R.A.I.A. housing honors this year", The Age, 25.8.1969; Graham Whitford, "Houses of this week", The Age, 22nd June 1970; John Barker, "Module Planning gives economy with 4 bedrooms", The Age, 15.11.1971 (John Adam House, Hawthorn, 1970) Hay, op. cit., pp.14 - 15. Another house of interest was designed in 1971 as a "building that should have no 'no style' and no connections with current 'fashions' in domestic architecture", and therefore an apparently suitable building for first year students of architecture to build at the University of Melbourne property at Mt. Martha, a long linear house design by Adam made use of an "outdoor room" enclosed by flywire as a circulation gallery linking the detached living and sleeping zones. Walls were lined with ship-lapped Celcure pine and the same material was used as a weatherproof slatted floor in the outdoor room. The entire house was a workshop of design and construction techniques ranging from three different foundation systems used below floor level to traditional high standards of workmanship such as mortice and tenon joints between joists and beams. See John Barker, "Students are building a place of their own", (The Age - R.A.I.A. Citation Award No.7), The Age, 16.12.1974.

58. John Barker, "Open design on wooded acre has views across a valley", (The Age - R.A.I.A. Citation Award No.3) The Age, 24.11.1975.
New Eclecticism: Ethic and Aesthetic - The Houses of Robin Boyd 1959 - 1971
Robin Boyd's designs for houses in the last 12 years of his life reveal a commitment to a theoretical position formulated in his writings for the British journal, *The Architectural Review* in the early 1950s. This position was consolidated in the 1960s as Boyd matured his personal vision of functionalism. In his 1960s house designs, a startlingly rich diversity occurs. This diversity does not indicate a period of fleeting new interests, nor is it a shallow reflection of the times.

The aim of this chapter section is to locate Robin Boyd's position not as a writer nor as social commentator but as a designer of buildings. One building type, the house, will be the vehicle for this investigation. A Boyd house of the 1960s is characterized by five design concerns:

1. the re-use and refinement of eight domestic themes;
2. the gradual closure of the open plan;
3. the strict adherence to a doctrine of truthful and explicit structural expression;
4. the exposition of the "controlling idea" of each building, a structuring principle that relied not on unity of tectonic order but on unity of theme; and
5. the most important concern of all, the pursuit of Boyd's self-titled new eclecticism.

Boyd's position is radical and rare for a post-war modernist. In a time when the term eclecticism connoted the much feared word, *style*, Boyd's house designs of the 1960s are a brave and unusual attempt to use the techniques of choice to explore the modernist goal of functionalism.

A New Eclecticism
In 1951, Robin Boyd's article, "A New Eclecticism?" appeared in the September issue of *The Architectural Review* (1). In it, Boyd compared the Goodes House, Frankston, 1948 designed by Roy Grounds and the Rose Seidler House, Turramurra, 1947 - 49 designed by Harry Seidler. He posed the provocative question,

*Could an architect be accused justifiably of muddleheaded vacillation if he felt himself free to draw upon different parts of the scale according to the emotional impulse of the occasion? Although the buildings under discussion express the different personalities and backgrounds of their*...

designers, is it inconceivable that two such different but competent buildings could have been produced by the one man? (2)

Boyd believed that they could. He was arguing the case for an appropriate architecture for the appropriate occasion. He echoed an earlier plea of 1950 by J.M. Richards (then editor of The Architectural Review and who was to become a close friend of Boyd's) for "the logical next step, the functionalism of the particular" (3). Richards believed that,

There is no call to abandon functionalism..... but to (relate) it ever more closely to the essential particulars of time and place (4).

Boyd was also restating Sigfried Giedion's 1950 advocacy of an ability "to leap from the rational - functional to the irrational organic" (5).

Boyd was concerned that the potentially rich principles of functionalism be examined and not jettisoned in favour of featuristic dabbling with the new Modernist vocabulary, that architects did not resign themselves to technique. In 1951, the 32 year-old Boyd was arguing for an inclusive appraisal of functionalism. The thematic diversity of his work throughout his career consistently demonstrates this belief. His choice of materials and their finish, the choice of structure and detail, and the response to client requirements all vary according to region, site and the specifics of living patterns of the time. Boyd was willing to move between different tectonic vocabularies of structure and enclosure. It was a philosophy that necessarily entailed diversity and dismissed the autonomous examination of a singular theme of architecture. For example in 1966, Boyd designed, all in the same year: in Bacchus Marsh, the free form plan of the Elizabeth Sticklen House which was constructed in locally quarried stone; in Kew, the urbane flat roofed cubes of the grey Besser brick Lawrence Flats; in Sydney, the courtyarded Lyons House which is supported on giant timber brackets; and in Toorak, the collected shed roof forms of the Milne House. Each house is testament to Boyd's belief that,

Might not an architect select, in a new era of vital eclecticism, the mood best suited to the time, the place and the purpose? Might not he select from the atmospheric

2. Ibid., p.153.


4. Ibid., p.181.

The controlling idea

In 1956, Boyd restated his inclusivist themes in "The Functional Neurosis" which appeared in the February issue of The Architectural Review.

The tragedy is that it (functionalism) is dying while still young and inexperienced. It is being discarded while virtually only one application of its principle has been investigated conscientiously, and even this one application is still so unfamiliar in the streets of most countries that the layman has had not sufficient opportunity to evaluate it (7).

The problem as Boyd understood it was embodied in the problem of intent, that the peculiarity of architecture, apart from other arts, is the scope it allows for the intrinsic theme, the operative idea.

What matters is the strength of the idea, and how it is developed. What matters to the spirit of functionalism is whether the requirements of purpose are misinterpreted or distorted, or are in any way not suitably served by the idea when developed without stress or embellishment. What matters in terms of art is whether the idea is developed consistently enough to permeate the entire work. And what matters to the spirit of architecture is the extent to which the development of the idea exploits the qualities of space and enclosure (8).

Consequently, Boyd's houses of 1959 - 1971 are idea houses. A conceptual theme dominates and the house is transformed in most cases to successfully accommodate that theme. The Featherston House satisfies the clients' desire to live in a courtyard with platforms of living space suspended above an internal garden. In the Burgess House, the theme of platforms and brick piers is employed to deal with a difficult sloping site. The McClune House is a series of freely arranged platforms under an all embracing and partly transparent parasol. The Clemson House is a white frame of shelter with the volumes beneath painted deep green to disappear into the bush of the gully.

Boyd's use of the controlling or operative idea is his technique to insert meaning and provide unity. He avoids stylistic and representational reference by metaphor. The
house is a theme - a bridge, living in a garden, a series of platforms, a shading hat from the summer sun. Unified legibility is gained by the sweeping and all-encompassing (and often deterministic) expression of the metaphor. The operative idea is a metaphorical encapsulation of the problem at hand.

The doctrine of truthful and explicit structural expression
Throughout Boyd's career, the truthful expression of structure dominated every thematic group of buildings that he produced. Boyd was aligned with the Sigfried Giedion/ Nikolaus Pevsner/J.M. Richards theoretical position: that architectural progress is embodied in technological progress (9). Boyd confirmed this allegiance in 1970 in his book, Living in Australia:

Architectural is good building and building is good structure.....The only real progress in architecture comes from structural progress. All the rest, delightful as it may be, is only variation on themes and theories which the first builders of bark huts and igloos knew....Bad designers.....use even more materials than they need to make their design look more interesting. The objective of building technology, on the contrary, should be, and generally is, to reduce the number of materials (10).

In some of his houses of the early 1950s, Boyd pursued, as he put it, "a great structural-functional idea carried out with an enforced austerity and a voluntarily cavalier technique" (11). The steel bridge arches of the Richardson House, Toorak, 1954 and the Ctesiphon arches of the Wood House, Jordanville, 1952 are two examples. The houses of the 1960 - 71 period maintained frank structural expression but were limited to traditional construction materials and techniques. The English Brutalist tendency toward vernacular forms of building construction (structural brick panels, window infills, expressed fascia, roof and wall connections) and the clarity of traditional Japanese timber architecture (expressed post and beam timber construction, natural finished timbers, exposed shibui surfaces and non-structural infill panels) were to inform Boyd's designs. The Handfield House at Eltham has an exposed post and beam frame with asbestos cement sheet infills. The McNicoll House is a loadbearing concrete

The block system of piers with completely glazed infill panels, a logical diagram of structure and not the traditional conception of windows cut out of solid walls.

The gradual closure of the open plan

In the 1960s, compartmented living space returned to favour in domestic design. An interest in modular planning, the shortcomings of the open plan (both thermally and socially), and the desire for larger houses in the more affluent 1960s resulted in the return of the dining room as a discrete space, and the inclusion of the family room or play room as an expected necessity for the family home. The return to traditional construction techniques, hence the return to shorter spans, was intimately connected to the economic modulation of space and the desire to reinstate feelings of enclosure and private shelter. When discussing Boyd's design for the Patrick Hegarty House, John Barker noted that Boyd's idea of architectural perfection,

will be achieved in a building of which every part is visible to any viewer at all times, while any part is private to any user at any time he wishes for seclusion (12).

One of Boyd's last residential designs completed, the Hegarty House achieved a blend of open and closed space with a volume that stepped down over three different levels on a steeply sloping site in East Ringwood. Each space was small and private but with visual and aural access to the rest of the house. The development from the open platforms of the Wyn House (1954) to the open space of the Featherston House (1967) with small enclosed service and retreat spaces off a main volume is also part of Boyd's move to close and control, but not dispense with, the open plan.

The re-use and refinement of 8 themes of house

Between 1960 and 1971, Boyd combined the four previously discussed concerns into 8 thematic approaches to the problem of the house. These were 8 controlling ideas which Boyd had developed from 1947, which he would reuse and refine, often many times and occasionally with other building types. Boyd's catholic tastes and skills were carefully orchestrated to ensure consistency and diversity. The identifiable controlling idea was the mainstay of the design, but the result was always specific to time and location.

Interestingly, Boyd's dramatic experiments with structure and bold geometric shapes of the 1950s ceased in the 1960s. The highly individual solutions of the Richardson bridge house, the Ctesiphon arched Wood House, the floating roof of "Pelican", the Kenneth Myer House, and the curved Haughton James House were not to occur again as thematic groups. Strength of operative idea was still apparent but less visually and less structurally expressionistic themes prevailed in Boyd's 1960s houses.

The eight themes subsequently developed by Boyd during this period were as follows:

1. the courtyard house;
2. platforms within a shed;
3. the urbane house or pier and infill house;
4. the colonial/homestead/Georgian allusion house;
5. the house as expression of timber construction;
6. the stepped plan house;
7. the collected sheds house;
8. the free-form house.

By examining Boyd's five concerns of the 1960s in more detail via the eight house themes, I will show that Boyd is not a bequeather of singular tectonic and formal canons as other Australian modernists such as Harry Seidler have been. Boyd was committed to his philosophy of new eclecticism - a vital game of choice within the bounds of functionalism - a volatile method of design that was receptive to changing and currents attitudes to space, surface, and structure even to the point of examining overseas models. But in each case Boyd firmly rejected, overt employment of style or iconography. Boyd's position acknowledged unending possibilities and alternatives but with only one restriction - that of representation.


1. **The Courtyard House**

   The theme of a central, private and internalized court had been employed by Boyd in several houses of the 1950s. The Holford House, Ivanhoe, 1956 and the Date House project, Kew, 1958 are two examples. The courtyard houses of the 1960s strengthen the theme of an enclosed oasis of privacy. The court was a protected haven from the alienating bush or it was a cultured retreat from the barbaric philistinism of the Australian city.
The Michael Baker House, Bacchus Marsh, 1965 is a centralized courtyard house (13) (fig. 502). The house has a square plan with four cylindrical drums of locally quarried stone on each side, several of which are water tanks. A huge all-encompassing low pitched hip roof sits over the square and a massive fireplace is centrally located in a vast living hall. The plan is a diagram of served and servant spaces similar to the unbuilt courtyarded Morton Goldenberg House, Rydal, Pennsylvania designed by Louis Kahn in 1959, a house which Boyd illustrated in his book *The Puzzle of Architecture*, published in 1965, the year of the Baker House design (14) (fig. 503). The inner ring of rooms, closest to the courtyard, are service rooms: bathrooms, laundry and tiny bunk rooms for the children. The house is a simplified version of the Kahn diagram, attune to local materials and climate, and derived from a hierarchy of geometry, of great appeal to its owner, an academic who delighted in the nuances of geomancy. The protected square court is an exotically planted haven in contrast to the untended native bush surrounding the house. Tiny windows in the rock wall look into the court which is covered by a timber frame which restates the pattern of the square plan.
The McClune House, Frankston, 1967 is also a centralized courtyard house (15) (fig.504). Unlike the Baker House, where the court is only accessible from the living room, the courtyard of this house is an internal circulation hub as well as a garden atrium. The roof is a huge parasol of steel and translucent corrugated fibreglas supported on steel braced posts which sit independent of the rooms beneath. It is the same structural-functional principle which informs "Pelican", the now demolished Kenneth Myer House, 1956 where rooms were freely arranged beneath an all-embracing and rationally supported floating roof. The McClune House recalls Walter Burley Griffin and Marion Mahoney's own square planned and atrium centred house "Pholiota", Heidelberg, 1922 (fig.505) and more particularly their Salter House, Toorak, 1924 which Boyd in 1965 described as "the most charming house he (Griffin) ever built, and a historian would be hard pressed to find a more delightful one built anywhere in the world at that time" (16). In 1965, Boyd also sketched in The Australian newspaper, an American house which he had recently seen whilst judging a competition for Sunset Magazine and the A.I.A. (17). The Pence House by architects Marquis and Stoller in Mill Valley, California, 1965 has a similar pyramid roof, transparent apex and theme of platform zoning. Beneath...
the parasol roof of the McClune House, the concrete slab floors step as platforms down the slope (18). Sliding screens within, platform timber floors and the resultant split levels around the perimeter of the McClune House diffuse the formal geometry of the pyramid roof. There is a relaxed and informal deformation of the square plan.

The Dr. William Lyons House, Dolans Bay, Port Hacking, 1966 has a different reason for its central courtyard (19) (fig.506). A site of solid rock determined that the proposed centre of the house, a swimming pool, be raised above ground. Consequently the rooms surrounding the pool were also elevated. Massive beams form brackets and a ring of rooms of lightweight timber construction hovers above the brick base. This dramatic solution harks back to the incisive solutions of the 1950s. The house is an answer. Within, all doors are sliding and open onto timber decks which surround the pool. The interior of the house is an oasis of informal living in contrast to the powerful scale of the exterior form presented to the street. The fourth side of the court opens to a view of the bay beyond.
Another courtyard house type of Boyd's was the implied courtyard house, generally made up of a collection of self-contained blocks, where the outer walls of each enclose a court as well as a covered section of the house. The implied courtyard house had also occurred in the 1950s. In the Bridgeford House, Blackrock, 1954, roof rafters extended out beyond the line of the roof to sit on a courtyard wall. As with the Holford House and numerous other Boyd houses, the roof structure doubled its function and became a pergola.

Like the Bridgeford House, the Norman Fletcher House, Brighton, 1966 was located on a busy street with courts carefully dispersed around the tight site according to requirements of sunlight and acoustic separation from the street (20) (fig.507). The skillion roofed forms echo the collection of shed roofs of Moore, Lyndon, Turnbull and Whitacker's Sea Ranch Condominium #1, Northern California, 1965 in the random disposition of simple forms about a series of protected outdoor spaces. In Boyd's case, these are elegant sheds rather than the rough-sawn rural timber vernacular of northern California. The three skillion roofed blocks differentiate three separate functions; the living/dining wing to the north, the bedroom wing and the guest wing, each with its own courtyard and all linked by a glazed gallery to a three car open garage. Inside elegantly detailed mountain ash wall linings, handrails and folding screens, all meticulously documented by Paul Couch within the Romberg and Boyd office, followed Boyd's concept of materials "dressed formally for inner suburban living" as opposed to the timber finishes of the McClune House which had been "softwood and casually undressed for the outer suburbs" (21). It is this sense of propriety which is peculiar to Boyd and colleagues such as Guilford Bell, Neil Clerehan and David McGlashan, and places Boyd in a
different league to architects such as Kevin Borland and the emerging young Melbourne architects to whom roughness and the as-found were more important than taste and manners.

2. Platforms within a shed

In 1967 Robin Boyd produced for the industrial designers Grant and Mary Featherston the epitome of the idea house. During initial client discussions, the Featherstons had remarked to Boyd, "We wish we could live in a courtyard" (22). On a steeply sloping site in Ivanhoe, Boyd provided them with just that (fig.508). Between two solid brick wing walls, lay an exposed garden of moss and ivy. At each end a wall of glass implied the unimpeded slope of the ground passing down towards the river. The living spaces inside this shed which was roofed in translucent fibreglass with 4 inches of dacron fibre underneath, were solid timber platforms supported off massive beams which hung within the wide open glasshouse volume. The only fixed vertical within the space was a massive pier-like brick fireplace. This house was a rationalised version of Bruce Goff's ultimate fantasy, the Bavinger House, Norman, Oklahoma, 1950, a spiral house with a garden interior and open floating balcony saucers (fig.509). The servant (or private) spaces of the extraordinary volume of the Featherston House were the ensuite and dressing room accessed from the upper platform bedroom, and the family, kitchen and guestrooms off the dining room. One could retreat to these spaces from the major garden volume. The Featherston scheme had its antecedents in Boyd's own house of platforms beneath an all-encompassing roof slung on cables on a sloping site in South Yarra and in the Wyn House project of 1954 (23) (fig.510), the earliest example of Boyd's free floating platforms or trays of living space within a shed.

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Fig.508 Robin Boyd, architect. Featherston House, Ivanhoe, Victoria, 1967.
Fig. 508 Robin Boyd, architect. Featherston House, Ivanhoe, Victoria, 1967.

Fig. 509 Bruce Goff, architect. Bavinger House, Norman, Oklahoma, U. S. A., 1950.
3. The urbane house or pier and infill house

In 1976 Conrad Hamann described the thematic group of urbane houses as Boyd's least successful (24). Perhaps they are, in terms of an obvious controlling idea expected of a Boyd house. However, they are not bland, but coolly considered responses to the inner suburbs and their client's desire for propriety and status. The consistent feature of these houses is the exploration of brick pier construction with non-structural infills of glass. This rational and economic method of construction liberated the wall from the dominating pattern of the window frame. The functionally and structurally generated fenestration was an intellectual pique for Boyd in the Georgian strongholds of Toorak, South Yarra and Kew. Here was a means of achieving the taste and solidity of the Georgian desired by many conservative clients but without bowing to specific historical allusion. The Brett House, Toorak, 1955 was an antecedent for the 1960s designs as was the first 1953 scheme for the Richardson House, Toorak. The exploration of free standing brick piers and platform floors as a means of building on a difficult sloping site without resorting to lightweight construction of timber posts or steel columns is the rationale of these houses. The use of structural piers and window infills was a particularly British response to the problem of the wall and its fenestration. A house near Cowes, Isle of Wight, 1956 by English architects James Stirling and James Gowan is a typical example (fig.511).

The Boyd pier and infill houses are amongst the least idiosyncratic of his domestic designs of the 1960s. To the rational structure of these houses Boyd added trademarks of respectability: the large circular doorknocker, grey concrete bricks or blocks, black painted steel, fascias and window frames, striped awnings and a shadow line to expose the fascia and hovering platform roof above. It is...
these representational details which other architectural critics have highlighted (25), rather than Boyd's consistent search for an appropriate aesthetic for brick construction that by-passed the structural deceptions possible with brick veneer construction. What makes this group of houses interesting is their demonstration of the crisis of the 1960s, an unfulfilled desire for representation whilst maintaining a rigorous structural rationalism.

The McNicoll House, South Yarra, 1959 - 61 (initially designed by Roy Grounds) was built in concrete block and spans between two streets and over three levels (26) (fig.512). The main house is on the top floor. Below is a...
self contained flat with storage and plant rooms in the basement. The sculptural quality of the three storey high concrete block wall is explained by the need to create a retaining wall to the principal street frontage. The externalizing of cupboards accentuates the brick piers, adding further justified mass to the composition. On the secondary street frontage, the house appears as an elegant elevated pavilion with carspace underneath alluding to the Orient with its temple-like formality. The frank and formal expression of a structural steel beam over the carport and the shadow line roof recalls the hovering platform roofs of Ulrich Franzen's Richard Beattie House, Rye, New York, 1957 or the wall/roof connections of Philip Johnson's Dr. Miller House, Irvington-on-Hudson, New York, 1959. Also recalled is Johnson's Boissonnas House, New Canaan, Connecticut, 1956 where the scale of spaces between piers indicates the functions within (fig.513). The house is expressed as a logical diagram of beam and support.

Conrad Hamann emphasizes this design phase of Boyd's as one when Boyd "used non-functional elements for visual effect", i.e. for sculptural ends (27). This is not entirely true. Boyd was exploring ways of supplanting the brick veneer wall with a clear structure-related vocabulary. If the result with the wafer thin roof was not, as Hamann contends, visually successful then it is strange that Boyd should repeat these experiments from 1953 to the Burgess House of 1962, Bewley House of 1964 (fig.514) and Lawrence Flats of 1966, i.e. over a period of more than ten years.

The Burgess House, Ivanhoe, 1962 is an extremely large house also on a steeply sloping site (28). A series of brick
piers at irregular spacing with wide expanses of glass infill allow the house to grow organically over the site. The structural theme of the inner suburban sites is retained but the materials change. The bushy response of a smooth face clay coloured brick together with stained timber replaces the dandified grey Besser blocks and black-painted detail of the Kew and South Yarra houses. From the street, as one enters under a four car porte-cochere, the house appears as a symphony of five roof planes. The picturesque collection of roof planes suggests a spatial complexity within dictated by the vagaries of the sloping site. By using the module of

Fig.514 Robin Boyd, architect. Bewley House, Kew, Victoria, 1964.

Fig.515 Robin Boyd, architect. Burgess House, Ivanhoe, Victoria, 1962.

Fig. 515 Robin Boyd, architect. Burgess House, Ivanhoe, Victoria, 1962.
brick piers, Boyd achieved a free displacement of platforms about the site, alternating deck, interior and void as need required (fig.515).

The Lawrence Flats in Studley Avenue, Kew, 1966 - 68 also sit on a sloping site and are Boyd's last notable work in the pier and infill manner (29) (fig.516). An elevated bridge entry and circulation spine was placed between simple cubic volumes. This spine takes up the space of an infill panel and forms part of an overall structural matrix overlaid onto the ground plane. In this case the piers are stepped to accentuate their supporting function in the same way that Louis Kahn might have done to describe the decreasing structural role of the pier along its height. Boyd was to say of this elevated house:

*The hoisting might have been accomplished by posts of various kinds, but brick, the oldest of all technologies, was selected for the supports as well as for the walls above so that building and supports would be a whole thing. Stepbacks and corbels of the brick courses negotiate the transfer of stresses from the walls to the piers (30).*


Boyd's Moore House Wheeler's Hill, 1965 is another pier and lightweight infill panel house which steps down its sloping site.

The traditional wall literally disappears and the house becomes a diagram of support and infill. Like the Burgess House, the Lawrence Flats schema is potentially enlargeable, with the ability to create a labyrinthine complex of buildings that walks across its site. These flats are small scale experiments in platform or tray designs with vertical point supports or cores that Boyd was concurrently working on in much larger and unrealized projects for multi-storey developments in Melbourne (31).

4. The house as expression of timber construction
Boyd's experiments with timber structure demonstrate his fondness for the structural prop and the expression of the structural frame.

In 1962 and 1968, Robin Boyd published his two books on Japanese architecture: Kenzo Tange and New Directions in Japanese Architecture (32). These two books demonstrate Boyd's deep interest in the honest simplicity of Japanese architecture. The qualities of lightness and openness, the modulated repetition of elements, and the reliance on the use of ingenious construction and untreated natural materials to build a sort of refined extension of
nature, "a concentration of nature's own kind of beauty" (33), were all extremely appealing to Boyd. Elements of Japanese architecture: bold expressed timber construction, sliding screens, the simple broad timber balustrade and handrail details, the platforms of space floating within an open volume and the restraint of unfinished natural materials are all part of Boyd's aesthetic from the late 1950s until his death in 1971.

The Handfield House, Eltham, 1960 replaces the brick piers of the urbane pier and infill houses with a graphic explanation of the post and beam timber frame (34) (fig.517). Unfinished asbestos sheet panel infills and floor to ceiling windows divided horizontally like shoji screens give the air of a minimal Japanese house. There was a logic to this house, an unwritten code of expressed construction and spartan elegance. At the basis of such an approach is a structural-functional idea rather than one of sculpture. Formal qualities arise through the inherent qualities of the ordering system of a modular grid i.e. symmetry,
repetition, and harmoniously proportioned volumes. Spaces are delicately arranged platforms which create a courtyard outside and inside, a wide suntrapping living gallery.

The disastrous bushfires of January 1962 at Warrandyte meant the rebuilding of the Wright House (an early Boyd design of 1950) (fig.518) and also the new Arnold House (35) (fig.519). To achieve bushfire resistance, Boyd designed each house with external framing posts and beams all in steel, with steel decking on flat roofs, and steel siding on all external walls with details which allowed no lodging places for flying embers. These simply planned houses were understated and informal, pragmatic containers of simple prismatic volumes. In the Wright House, sliding shoji screens were integrated with the explicit framing system of timber within the steel shell. Of the original Wright House, only two stone walls remained. One of these became an end wall, the other a screen wall for the stair in the new design. They were the shibui features in a house where a skylit island kitchen could disappear behind sliding screens.
The structural prop and the expression of the frame inform the 1959 Clemson House in Kew (fig.520). An expressed butterfly roof was lifted clear of the blocks of the house beneath. The frame and the diagonal roof supports were painted white. The block of the house beneath was painted a deep green to blend in with the Ellis Stones garden. The Clemson House recalls the Finlay House at Warrandyte which was destroyed by bushfire and is one of the last lightweight expressions of timber structure employed by Boyd. In the 1960s, Boyd's timber members grew in thickness and depth to achieve a definite solidity. There was a quest for mass.

Fig.520 Robin Boyd, architect. Clemson House, Kew, Victoria, 1959

Fig.521 Robin Boyd, architect. Kaye House, Frankston, Victoria, 1966.

The two storey Kaye House, Frankston perches above a brick base (36) (fig.521). Massive timber supporting beams form brackets which extend the upper floor spaces some sixteen feet outward from the base. The dynamic construction is accentuated by the offset of rooms against the perimeter of the building in a dramatic diagonal slash that had previously occurred in the roof framing of another beach house, "Pelican", the Kenneth Myer House, Mt. Eliza, 1956 and also in the flooring of the Handfield House. Doubled posts emphasize the timberness of the Kaye design.

The Shelmerdine House, Portsea, 1964 follows similar principles of a house extending outward from a smaller base except that the supporting structure was a strutting system of steel pipes (37) (fig.522). The Lyons House in Sydney has the massive base and projecting timber prop construction combined with the theme of an internal courtyard (fig.523). In each of these houses, the operative idea is that of a freely planned platform elevated above a difficult site.
The Farfor Flats, Portsea, 1966 - 68 use the timber prop and all encompassing roof for different reasons. Courtyards are also involved. Four small houses were built on the edge of a cliff overlooking Port Phillip Bay, each identical in plan and oriented to provide privacy on a congested site (38) (fig.524). An upturned 45 degree angle verandah roof along the north side of the three bedroom L-shaped houses was propped off cantilevered roof beams to catch the sun. An unusual feature of these houses was the internal-external circulation which was a roofed pebble garden. This enclosed garden provided access to all the rooms as well as a fenced-in courtyard and the carport. It also acted as a cool breeze gallery. In layout these houses recalled Jorn Utzon's "Kingo" courtyard houses, Helsingor, Denmark, 1956 (fig.525).

5. The colonial/Georgian allusion house

In 1955 Robin Boyd designed the Brett House in Buddle Drive, Toorak (39) (fig.526). The simple double storey rectangle had a formal exterior with a verandah on its north face and a balustrade of loosely hung chains. French doors opened onto the verandah on both levels. The materials, grey concrete blocks and black painted window joinery, were restrained and tasteful. The thin white steel columns, the chains and the load bearing brick panels with infill glazing behind, hint at later developments in the formalised expression of structure.

The Black Dolphin Motel, Merimbula, 1958 (40) (fig.527), has the same structural divisions, however the use of steel columns and chain balustrade of the Brett house is replaced by rough untreated logs and heavy section timbers for balustrading which recall early Colonial homestead forms, as well as Roy Grounds's country house designs of the early 1930s such as Chateau Tahbilk, Nagambie, 1934. The idea of an appropriate texture and structure for the bush location informs this change of materials. Behind the solid
balustrading and verandah at Merimbula, one finds however the same load bearing brick panel and window infill aesthetic, similar to the contemporaneous McNicoll and Handfield Houses. The Motel was being built also when Boyd was supervising the Philip (fig.528), Blakers and Griffing Houses (fig.529), Canberra 1959, for Grounds who was overseas at the time (41). In each of these Canberra houses, a flat roof extended beyond the edge of a cubic mass of concrete block panel and glazed infill to form a verandah of slim square section columns. The project for the Ralph Blundell House, 1960 (42)

Fig. 528 Robin Boyd, architect. Philip House, Canberra, A. C. T., 1959.

Fig. 529 Robin Boyd, architect. Griffing House, Canberra, Victoria, 1959.

41. Eric Wilson, "Good Mannered Houses", Australian Home Beautiful, December 1963, pp.5 - 7 and "Style is Timeless", pp.8 - 11.

42. See Job file on the Blundell House, Robin Boyd Archives, Central Library, Monash University.
(fig. 530), is also part of this small group of houses: a large double storey house with surrounding colonial verandah and heavy timber balustrading, a detail that would appear frequently in later Boyd houses and public buildings. In each case, colonial allusion was minimal, achieved by the slightest and most restrained deference to an Australian tradition, by the emphatic presence of the archetypal element, the verandah.

The Patrick Hegarty House, Ringwood East, 1970 (43) (fig. 531), one of Boyd's last houses to be built, sits on a steeply sloping site and recalls an earlier planning solution to a similar problem: the stepped plan, both horizontally and vertically, of the Troedel House, Wheelers Hill, 1954 (fig. 532), which also created a multi-level open plan with a completely glazed face to the northern sun. The Hegarty House is also similar to Ken Woolley's own house in Mosman, 1962 (44) (fig. 533). In the Woolley and Hegarty Houses, trays of space under a sloping roof realise the benefits of the simultaneous use of the open plan and compartmented space. On a less dramatic slope than its Sydney counterpart, the Hegarty House is entered from below into a living room from where the roof follows the slope of the hill upward, with dining room, study, family

43. Barker, loc. cit.
44. In 1965, Boyd described Woolley's house as a potential architectural treasure for Australia in 40 years time. See Robin Boyd, "Is our frozen house design about to thaw?", Australian Home Beautiful, October 1965, p.5.
Fig. 531 Robin Boyd, architect. Hegarty House, Ringwood East, Victoria, 1970.

Fig. 532 Robin Boyd, architect. Troedel House, Wheelers Hill, Victoria, 1954.

Fig. 533 Ken Woolley, architect. Woolley House, Mosman, N.S.W., 1962.
room and kitchen overlooking the successive floor levels. Like the Clemson House in which the rooms also step down the site, the Hegarty House is an intimate response to the site with a series of inter-related spaces that occur over the 30 feet of site fall. Solid cedar balustrades between each level create ascending degrees of privacy. The bedrooms of the house are contained in a second storey above the rumpus and utility area.

7. The collected shed roof house
A small group of collected shed roof houses occurs late in Boyd's career. These few houses represent the changing nature of domestic architectural form in Australia in the mid-1960s. The house is conceived as an agglomeration of discrete forms, a theme which had characterised the architect-designed houses of the late 1940s, where prismatic boxes of single function were butted together to form unconsciously picturesque compositions. Concurrent with the much publicised, so-called Sydney School work, there was in Melbourne a similar search for an appropriately Australian expression of the house, a regional variation for the bush or suburb, which also involved the use of rough honestly exposed timber, brick or blockwork and the closure of the open plan.

Fig. 534 Robin Boyd, architect. Milne House, Toorak, Victoria, 1966.

Boyd’s forays in this manner retain the smoothness of earlier decades. Response to location and circumstance is reflected in the choice of materials and textures. The busy street sites of the Fletcher and Milne Houses were both crucial to the arrangement of the collected shed roof forms. The Milne House, Toorak, 1966 is built in white bagged brick and offers a blank collection of cubic wedge forms to the street and inward looking cave-like interiors within (45) (fig. 534). The Fletcher House, Brighton, 1965 is built of semi-bush/urbane exposed sandy coloured brick with three
major skillion roofed blocks disposed about the site. The primitive Bardas House scheme, Portsea, 1969 is timber, with vertical lining boards and a wild landscape setting for its beach site (46) (fig.535). The cluster of shed roof forms signals the complete break away from the open plan, and a return to the compartmented space and the individualised expression of roof, doorway, entry porch and chimney.

Kevin Borland's Paton House, Portsea, 1969 and the shed roof forms of houses by a range of Melbourne architects including Keith and John Reid, Brine and Wierzbowski, Graeme Gunn, Daryl Jackson who had recently returned from the United States, and later Morris and Pirotta, Max May and Peter Crone in the early 1970s, were all part of the shift toward the decomposed box. Influential were contemporary British Brutalist theories of honestly exposed surfaces and vernacular construction, the increasing awareness of the work of the Finnish architect, Alvar Aalto and M.L.T.W.'s Sea Ranch, 1965, in Northern California, and the powerful legacy of Louis Kahn's use of the 45 degree angle in plan. Of early note locally, was David Saunders's own house at Parkville, 1963, with its differentiated skillion roofs and the frank exposure of brick seconds, slate and off-form concrete floors (47). This

46. See Job file on Bardas House, Robin Boyd Archives, Central Library, Monash University.

47. The Saunders House built on a tight inner suburban site was completed in 1963, just one year after Ken Woolley's Mosman House, which spills dramatically down its bushy hillside slope. For an appraisal of the Saunders House, see Neville Quarry, "House, Corner of Morrah and Gatehouse Streets, Parkville, Victoria", Architecture in Australia, vol.56, no.3, June 1967, pp.446 - 449.
urban infill house was reduced to the bare essentials of enclosure, an exciting, raw textural house amidst the smooth surfaces of the mature modernists of Melbourne.

8. The free-form house
In 1967, Robin Boyd designed a dower house for the Michael Baker House at Bacchus Marsh (48) (fig.536). Unlike the muscular formality of the square planned Baker House, the dower house built for Elizabeth Sticklen was an attempt to reconcile the organic with the rational. A free-form plan of sinuous curving rockwalls sat beneath a square hipped pyramid roof. A further ordering device was the line of glazing which also formed a square conforming to the shape of the roof. The curving walls of slate which had been quarried on site, ran out beyond the line of the roof to form private courts. In the bathroom court there sat a water tank. Such free planning had rarely occurred in Boyd's work apart from satirical cartoon house designs from his student days illustrated in Insulwool advertisements which had appeared in the pamphlet, Smudges. The Elizabeth Sticklen House is an eccentric addition to Boyd's oeuvre of the 1960s. In 1965, Morrice Shaw designed and built an entirely free-form telegraph pole-framed mud-brick house at Cottles Bridge for the potter, Leon Saper (49). It had an undulating floor, a window of beer bottles and a roof of shingles that rose and dipped in in an exuberant organic curve.

Fig.536 Robin Boyd, architect. Elizabeth Sticklen House, Bacchus Marsh, Victoria, 1967.
in Boyd's work is however pertinent. The now much hackneyed dichotomy of rational versus organic was a recurring theme of Boyd's architecture informing buildings such as the Haughton James House, Kew, 1956 where an organic curving form embedded into a river bank was juxtaposed against a slim glazed rectangular box.

The eight themes of house which Boyd pursued inevitably had parallels in other local architects' works. The urbane house category could be found in the work of Neil Clerihan and Guilford Bell, the expressed timber structure in the houses of David McGlashan or Bernard Joyce; the Hegarty House recalls contemporary Sydney work of architects such as Ken Woolley or Philip Cox. The collected sheds house could be found in the houses of David Saunders or Kevin Borland. Overseas comparisons can also be made. What is important is that Boyd had a finger in every pie - a measure of his ability and his persistent pursuit of his new eclecticism of the 1950s.

Between 1959 and 1971, Boyd's houses show the breadth of architectural thought in the 1960s and in each of the various approaches, Boyd is there, doing some of its most representative work. His houses show the embracing of many themes: the influence of Japanese architecture, the so-called Sydney School, nascent gropings for Brutalism, the idea of an appropriate architecture for the bush, the suburbs and the inner city. Levels of privacy, of finish, and choice of structure and materials are tuned to respond effectively with each commission. Boyd's adeptness and skill in traversing aesthetic philosophies indicates a scholar of architectural thought rather than a rigorous tectonic master. Indeed, Boyd is an unusual figure in this period with such a skill, with virtually no-one to comment on his multifarious interests and discuss with him his commitment to a vitalist programme of experiment.

When Robin Boyd died in 1971, these houses were the progeny of a mature and developing modernist. A year before his death, Boyd published a book of his own designs for houses, Living in Australia (50). The book's contents show a remarkable faith in the principles of functionalism. He divided his book into the four S's: surface, space, structure and spirit. It was this set of four s's which had affected each house design since 1946. Living in Australia, was Boyd's only book where his own architectural commissions were connected to an idea of a

50. Robin Boyd and Mark Strizic, Living in Australia, Pergamon, Sydney, 1970. A number of Boyd houses that were published and which have not been mentioned in this paper include the Purves House, Kew, 1969; Crawford House, Canterbury, 1969; Marks House, Mornington, 1968; Noble House, Vermont, 1964; the Donald Eltringham House, Aranda, A. C. T., 1968 - 71, all of which appear in Boyd and Strizic's Living in Australia. For further reference to these houses and others such as the B. D. Simon House, Narre Warren, 1965 - 68, see Philip Goad, "Specific Buildings and Projects 1962 - 1971", Robin Boyd: the architect as critic, bibliography and exhibition catalogue, Latrobe Library, State Library of Victoria, 3rd - 28th July, 1989, pp.72 - 77.
personal theoretical position. Unlike the Harry Seidler pattern book, *Houses, Interiors, Projects* of 1954 (51), *Living in Australia* was not a catalogue of works. It represents best the difference between Boyd's unique architectural position and that of his peers. His book is evocative rather than canonical. This is the quality of his buildings, an evocation of the moment. Boyd's houses fit their clients like a suit of clothes. In *Living in Australia*, Boyd clung to the concept of the architect's primary role in the design of the house and the architect's ability to impart to house and home a special quality. Boyd was critical of current ideas which encouraged the lessening of the autocratic role of the architect:

...a team ensures that any poetic ideas that might arise are strangled soon after birth, that no-one will be offended by the result and no-one elevated. In any case, a single architect who might be capable of a creative or poetic idea need not necessarily be a primadonna or a despot. So I intend to persevere regardless of teams or artificial aids (52).

Boyd was firm in his criticism of anti-architecture and the anti-creative leap. He criticised the young "counter-counter revolutionary" who

when he gets down to the drawing board he produces painstakingly neat drawings of untidy buildings with numerous protrusions and loose ends. Open ended, he explains. He is compulsively opposed to the one element that used to tie together all architecture, whatever the style: a sense of unity or order. It is as if he wanted to smash open the core of architecture and find something quite different inside (53).

Boyd described himself as an "unrepentant intuitive leaper". He argued for the "something more" in architecture:

*The something more is most simply described as appropriate character. It may be reduced to an almost imperceptible level in the shoe factory, and it may grow to overwhelming proportions in a building of outstanding importance. I am aware that it is dangerous to support a temporarily unfashionable idea like that. I realise that the chief objection to architects held by a great many people*
outside the profession, including numberless long suffering clients, is directed against the visionary qualities in architecture (54).

Boyd was searching for the restoration of faith in the primary role of the architect in the design process. In searching for the incisive solution, Boyd showed himself to be searching for some sense of greater order. Though not in favour of an autonomous architecture, he was also not in favour of an undisguised complexity. Unlike the frenetic formal wanderings of the young, Boyd was primarily concerned for living in his houses. The idea, the poetic power of the maxim, the rush of adrenalin that accompanied the conceptual theme of the house was paramount. It is this quality that lifts his houses out of the ordinary and which gives them unity. They were characterized by specialness. Boyd could slip between a style or constructional technique with ease, yet all of his houses have a definitive quality of being special for their time and place. Boyd's new eclecticism was in fact a position located within the ambit of Modernism. For him, design was an open-ended process. To be a modernist was not to invoke forms but to exist in a continual state of flux. New eclecticism was a means to resist servitude to technique. Invention and reinvention, the misting over of past and future - all were important for Boyd. A modernist position was one of perpetual inquiry, a state of being, a functionalist position of continual architectural speculation.

Walter Gropius, perhaps Boyd's greatest idol, and an architect who also left us not with a catalogue of parts, was to state this position succinctly in his 1943 book, *Scope of Total Architecture*.

Neither medievalism nor colonialism can express the life of the twentieth century man, There is no finality in architecture - only continuous change (55).

When Robin Boyd designed the Fishbowl Takeaway Food restaurant in 1969, (a post 1968 work) he shocked both public and profession (fig.537). Who would have thought it of the shy and diffident man of taste? I would contend that Boyd was continuing to build with the same wit with which he could write and also with which he had proved he

54. Ibid., p.15.
could build. His own **ethic** and **aesthetic** of new eclecticism which he practised so rigorously in the design of the house demanded it. The safety balloon of modernist technique was now ready to be popped.
The Project House in Melbourne c.1965 - 1975: The Success of the Crafted Machine

Most of the houses in the range were by no means in the lowest price bracket; nevertheless any one of them was considerably cheaper than an equivalent house designed and built specially for one owner. Thus for the first time a genuine architectural circumspection was brought within the financial reach of the average owner. ....


This housing take-off is getting underway as a Typical Machine Age operation. In it, the buying of houses is, for most people, divorced of the emotional content that it has held for older generations. The house is becoming a manufactured product, and like the motor car, is being bought as an item of merchandise.

Eric Wilson, *Australian Home Beautiful*, May 1964 (2).

The concept which signalled the acceptance of the house as commodity in the 1960s was the streamlined marketing of the speculatively built house, a package item to be ordered off the hook. Developers shrewdly sought to speed up the process of not only building the house but of selling it too. The package house was posited as the ideal and most readily available alternative to those who did not want to enter into or perhaps could not afford the cost and involved process of an individually designed house. The display house and the display centre were consequently to become the much vaunted vehicle for developers to demonstrate their range of available house designs. The large scale developers in Victoria such as A.V. Jennings Construction Co. Pty. Ltd., Spaceline Homes and Consolidated Homes Industries Pty. Ltd. (C.H.I.) had by 1960 perfected this marketing technique. In 1961, A.V. Jennings had begun its "Westerfield" Estate, Glen Waverley; "Greenwood" Estate, Bundoora; and the massive "Karingal" Estate at Frankston which was to become the company's largest estate with 2322 blocks (3). In 1964, one of A.V. Jennings's display homes, "The Ashburn" was considered "the nation's favorite"(4). Integral to each estate was the display home within the display village. To walk through and see the completely furnished display house on its garden block was the most direct and persuasive means of selling a new house. The Sunday afternoon drive around the suburbs of Melbourne to view display homes was soon to become a

social institution. Typically, these large scale housing entrepreneurs aimed for the lower end of the market where demand was highest and building economies most easily and expeditiously achieved. The results were brick veneer bungalows of pragmatic amenity and little pretension, enshrined by satirists such as Edna Everage and loathed by architectural commentators such as Robin Boyd. Typical also was the prominence of the developer's name and the absence of any overt involvement of architects. Though these firms employed architects, there was not the market need to publicize their involvement. Security and accountability were to be the sole responsibility of the developer. This was one of the prime marketing strategies of the house as a commodity: only one liaison was involved, that of the client and developer. A high design profile was not an issue in these houses.

However a gap in the market was soon perceived by developers in the boom years of the early 1960s. There was a market for the buyer who wanted something other and better than was generally available, but who could not or still did not want to pay the cost and apparently involved process of the individually designed house. A market profile of such potential buyers was sought and found to be a viable target. These buyers were the middle and upper class homeseekers whose buying power made possible more than the average. To fill this market niche came the idea of the project house: a collaboration between architect and developer. The architect was now an integral part of the marketing process. With the architect's name and participation, the project house was automatically associated with an aura of quality, advanced design and up to the minute styling. For the architect, there were two benefits. First, any ideas of change or vision for the mass produced house could be tested at a much faster rate. Secondly, the architect was required to produce a market desired result for the consumer and one which the developer could afford. The results, of course, varied. The architect either produced a sophisticated version of the conventional type or took the opportunity to search for a new paradigm of the marketable house. The project house gave the architect a potentially greater role in influencing the general level of domestic architecture. For the builder, the successful project house was the key to capturing the extremely lucrative upper end of the speculative market.
The project house as display home proved to be an optimum selling technique. It was graphic comparative proof of the advanced quality of design available with an architect’s involvement. A positive selling point of the project house was the notion of a standard plan able to be modified by the architect to meet the specific requirements of the site and the clients’ needs. The result of this more desirable and attainable alternative was the faster filtration of so-called good ideas to this more generally available home which was made larger to match the size of middle class speculative houses, taking its price with it and expectations as well.

The project house first took strong public hold in Sydney in 1961, as Jennifer Taylor points out, with the Carlingford Exhibition Village where designs were presented by leading Sydney architects such as Harry Seidler, Donald Gazzard, Neville Gruzman and Ken Woolley with Michael Dysart (5). Tens of thousands of people passed through the exhibition, which was jointly launched by Lend Lease and the popular home journal, *The Australian Women’s Weekly*. Occurring late in the year of the credit squeeze of 1961, its timing was perfect to launch a pattern of market habits that would influence a homebuying public for the next twenty-five years.

A significant house among the varied collection was the project house by Donald Gazzard which was built of spotted brick with an inward sloping terracotta tiled roof and planned around a courtyard (fig.538). The return to forms and materials of vernacular architecture owed much to local interest in Brutalist theory and the brick architecture of Finnish architect, Alvar Aalto among younger Sydney architects, many of whom had worked briefly in England. Also significant was the presence of Jorn Utzon in Sydney

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designing the new Opera House. Gazzard’s courtyard house bore a close resemblance to the renowned Kingo Courtyard Houses, Helsingor, 1956 by Utzon and also to Englishman John Voelker’s Lyttleton House, Arkley, Hertfordshire, 1956 (6) (fig.539). Both these well publicized schemes used courtyard plans, face brickwork, garden walls and zoned wings to form a complex similar to a medieval courtyarded farmhouse. These two schemes epitomized the then prevailing interest amongst British and European architects in an anonymous domestic architecture of simple rugged geometric forms, plain unadorned surfaces, small windows and informally sited, a vision of a basic architecture with veiled allusions to vernacular farmhouses and the natural aggregation of spaces to form dwelling and shelter. Gazzard’s comments regarding his choice of aesthetic happened to match perfectly that of the building industry.

A Brutalist, direct acceptance attitude to detailing, exposed structure, surface wiring and coupled with traditional materials used naturally and a return to the use of unpopular “unmodern” elements such as roofing tiles (7).

These were the everyday materials of the local building industry albeit composed in a sophisticated manner. Theory had magically coincided with industry and market demand. The vocabulary of form and detail of the nascent “Sydney School” was to hit the market to become one of the most fashionably packaged styles since the Spanish Mission. This simple unaffected aesthetic would come to be described by Robin Boyd in 1967 as the “Sydney School” (8). Significantly, many of the major proponents of that so-called school were also involved in the early 1960s in the new growth industry of the project house.
Though during the 1950s in Melbourne, the concept of the project house had met with moderate success such as Robin Boyd's "Banksia House", also his "Fler House" and more notably his "Peninsula House", 1955 for C.H.I. as well as Kenneth McDonald's project houses for Apex Realty (9), it was not until 1961 in Sydney that a building firm began to devote itself exclusively to the project house market. In 1961 Brian Pettit and Ron Sevitt employed two young architects who had previously been employed in the N.S.W. Department of Public Works, Michael Dysart and Ken Woolley to design project houses for their small Sydney firm. It was the beginning of a success story for the two builders as Woolley and Dysart produced some of the most popular designs in Australian post-war domestic architecture. Ken Woolley's "Split Level" and "Lowline" houses were to become some of the most successful project houses of the 1960s and their influence is still continuing in the 1980s. The "Lowline" was a superior version of the "Peninsula House". It was a simple brick veneer rectangle, though now in the 1960s, the master bedroom had an ensuite. There was a separate family room adjacent to the kitchen and enough room in the living area for a dining room alcove (10) (fig.540). The post-war house had grown and retrieved the space it had lost during the war.

By 1964 Sydney architects Ken Woolley, Michael Dysart, Don Gazzard, John James (11), Bruce Rickard (12) and Peter Muller (13) were all participating in project house design. With a building industry eager to fill a healthy gap in the market, the aesthetic of the Sydney School was highly marketable and buildable. These houses on Sydney's bush sites needed little encouragement to succeed as an apparently integrated concept of land and house. *Australian Home Beautiful* attributed part of the reason for the early flourishing of the project house in Sydney to the better subdivision layout available there. Sites were

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10. For a description of Ken Woolley's "Lowline" House for Pettit and Sevitt, see Eric Wilson, "New ideas in Sydney projects", *Australian Home Beautiful*, May 1964, pp.47 - 49.

11. Ibid., p.45.

12. Bruce Rickard designed project houses for Shereline Houses in Sydney, see Eric Wilson, "Vintage Year for Houses", *Australian Home Beautiful*, November 1965, p.47.

commonly 65 feet to the front by 100 - 150 feet deep. This large area enabled houses to be built across the block, with opportunities for variety in a street and scope also for imaginative street architecture. In response to the opportunities for greater architectural interest in the small house, the numbers of forward looking houses available off the hook in Sydney was far greater than in Melbourne (14). Yet Sydney was not an isolated phenomenon either in terms of its brick and timber aesthetic or its experimentation with project house design. In Brisbane, John Dalton was also designing project houses which he copyrighted himself to sell to house builders (15), and in Perth, the popular Corser Homes were designed by Peter Overman (16). By May 1966 though, Australian Home Beautiful was to note that the design interest in display homes had shifted back to Melbourne (17). The Victorian capital now had more than 100 display homes along the Springvale Road axis of suburban advancement east and south, and within 3 or 4 miles of that road other big clusters at Frankston, Yarra Valley (Warrandyte), Doncaster and Eltham, and in the north and west of Melbourne at Broadmeadows and Altona. Pettit and Sevitt had opened a branch office in Eltham. Merchant Builders had begun in 1965, offering three designs by their architect, Graeme C. Gunn. The extremely popular Modular House series was released in the same year by Consolidated Homes Industries Ltd. (C.H.I.). Many of Melbourne's best architects soon became involved to varying degrees in the project house market. Amongst them were Geoffrey Woodfall, Peter Hooks, Neville Quarry and John Thompson, Robin Boyd, John Rouse, Daryl Jackson and Evan Walker, Reg Grouse, Chancellor and Patrick, William Collinson Kerr and Neil Clerehan. Soon to join this distinguished grouping were McGlashan and Everist, Charles Duncan, Guilford Bell, John and Phyllis Murphy, and Robin Cocks and Peter Carmichael.

What follows then is a survey of the notable architect designed project houses in Melbourne c. 1965 - 1975 and the attempts by each to either upturn convention by positing a new suburban paradigm or to affirm and refine the existing speculative vernacular. Nearly all accepted the subdivisional plan as given, yet denied the urban qualities of the suburb in favour of improved privacy. They sought an appropriate fashionable aesthetic within the prevalent notion of discreet good taste which informed one-off architect-designed houses of the time. The quest for a

machine made reproducible house was left behind, dampened by the appearance of vernacular crafted homes which were desired and fashionable. The increasing feeling amongst architects for a more discreet role in the public advancement of new architectural ideas was in part satisfied. The search for an appropriate Australian vernacular was also uppermost in many of the architects' minds. Though many of these houses, as entities in themselves were great improvements upon the norm, the notion of such a house being amongst an associated community of houses and a corresponding street was rarely addressed. The same criticism could be levelled at Sydney project homes which also did little to alter perceptions of neighborhoods and collective life. The project house reinforced the prized nature of the single family home. The Australian suburb, misunderstood and mismanaged since the crisis of the housing shortage immediately after World War 2, grew relentlessly toward the horizon without centre, without a vision.

As affluence returned and peaked before the recession of 1975, a search for stylistic diversity and variety influenced the design of the project house. Its image diversified to encompass colonial allusion, the Melbourne Merchant Builders aesthetic of clinker brick and exposed timber which had derived much from the Sydney Pettit and Sevitt experience, and in the mid-1970s the project house became truly sophisticated with Cocks and Carmichael's ultra-modern Civic Growth House. What follows is a brief resume of the choice offered to the homeowner in this period, indicative of commonly held ideas about what a marketable architect designed house in Melbourne might be.

**Consolidated Homes Industries Ltd. (C.H.I.)**

**The A-Series**

**Cost (1966) $9500 - 14,860**

Consolidated Homes Industries Ltd., one of Australia's most technologically advanced manufacturer/builders of small homes diversified in 1965 into architect-designed project homes in the mid and upper price brackets. It was the first such move by a major builder whose output was tied to a production line into the highly specialized and fast growing market of the project house. This company had previous experience with project house design during the 1950s. It was Robin Boyd who designed for them in 1955, the very successful "Peninsula" house. In the ten years that
had followed, C.H.I. accumulated an increasing share of the mid to lower cost home market in Victoria, Canberra, Tasmania and Queensland, and large sales for transportable homes for outback mining and industrial projects. These economical, mostly timber framed houses were the product of component assembly lines at C.H.I.'s Lower Dandenong Road, Braeside, Victoria, factory and smaller plants in Tasmania and Brisbane (18).

The construction process for these houses initially had been to complete an orthodox suspended timber floor on site then move in the prefabricated frames, sides and components, span these with timber trusses for the roof and usually on the fifth day cover the roof after finishing the floor. This system transferred most of the construction work to the factory, cut waste, eliminated much high cost on-site labour, and allowed the long finishing process to go on irrespective of the weather.

The change to a larger, more complex house with the preferred features of the day, such as panelled brickwork, exposed natural finish timbers, varied roof forms and finishes in line with custom built houses was a major undertaking, taking a year to plan. Architect Geoffrey Woodfall was engaged by C.H.I. to produce a new image for their new line of house. Woodfall took the simply built standard rectangular plan and from it extracted a modular series of homes. Enormous flexibility in the internal plan and in external appearances allowed for completely different images though the standard rectangular plans were virtually identical in size and silhouette.

The changes in external appearance were characterized by a choice of four types of roof: an offset gable, a half gable (called the Gambrel), an end gable, and a flat roof. Woodfall designed additional external features such as storage and window boxes, garden walls and screens as a means to further vary the external appearance. These houses had high quality finishes and design features such as the separation of childrens' and adults' areas, considered sun control, integration with the outdoors and central heating. Though assumed requisites in an architect designed house, these items were not usual in the competitive range of display homes. All the houses were developments of a basic 10.02 squares, single bedroom, rectangular planned 26 foot wide house designed for a 50

foot wide block with room for a carport. The price of these new high quality homes did not include landscaping, paths, sewerage or septic installation, and other refinements of home completion within the basic price.

The first three houses to be released were the C.H.I. "A" series; the "Gambrel", the "Offset Gable" and the "End Gable", all modular houses (19). All had external walls of "driftwood" wirecut bricks; concrete roofing tiles and concealed gutters; internal wall and ceiling linings of plaster board (an optional extra in the End Gable was an exposed timber ceiling); walnut stained oregon fascias, meranti entrance screen, door and window frames, black bean doors and fittings. Each house was simply zoned with combined living/dining area, the kitchen or family room grouped at one end of the house and bedrooms at the other. All the houses had a similar basic core, an L shaped living dining area, kitchen, family room, bedroom and bathroom.

The "A" Series Offset Gable House was the most adventurous of the designs with an exterior that revealed Woodfall's interest in the architecture of Walter Burley Griffin and Frank Lloyd Wright (fig.541). The bold gable, deep splayed fascias, the brick piers of the carport which rose above the roof line and contained garage storage, and

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the interlocking brick window box wall gave a muscular appearance to an otherwise orthodox plan which had been resolved to provide everything required in a home of the 1960s. A plan such as this expresses that suburban living requirements have changed little given twenty years hindsight. This project house is significant for the fact that Woodfall believed that he was engendering a typical Australian architecture for the project house in a move to counter shallow Colonial designs that were beginning to permeate the speculative housing market.

Similarly the Gambrel (20) (fig.542) and the End Gable Houses (21) (fig.543) proved to be immensely popular and became designs much copied. The small scaled Gambrel was to be one of the most successful project homes, its form and detail most closely resembling houses of the pre-war era but its appearance and planning clearly reflecting an updated way of living. Versions of this house were to cover the outer suburbs of Melbourne. C.H.I. had by now mastered their production techniques. Prefabricated timber wall panels and window frames were erected directly onto a timber floor frame which had previously been erected on the site. Oregon roof rafters 10" x 2" were then placed in position, and the whole roof sheeted with pre-cut
"Hardiflex" sheets which acted as both ceiling and eaves lining. The roof was then insulated and covered with cement roofing tiles, roof water being collected by a new type of metal fascia gutter. From the completion of the wall framing to lock up stage normally took one week. The carport and screened outdoor areas of each house were designed to be integral components of the house, a much desired selling point in the two-car era of the Australian suburban family.

Fulton Constructions Pty. Ltd.
The "Centre core" Project House
Cost (1966) $11 576
Architects in association John Thompson and Neville Quarry designed in 1966 the "Centre core" Project House for Fulton Constructions (fig.544). The original concept of the display home built at Glen Waverley was a central services core envisaged as a suitable prefabricated package containing all services and equipment. The square shaped plan with this skylit core of bathroom, shower room and laundry was however compromised by the problem of the house being built in areas where septic tank treatment of sewage was required, and consequently the w. c. on an external wall was virtually obligatory. The square plan was
suitable for multiple extensions in any direction and by relocating the "clip-on" carport, various site orientations were not difficult to satisfy. The visual appearance of the house, like the Pettit and Sevitt houses in Sydney were a mixture of white planes as walls and brown lines as structure and trim. The hierarchy of structure versus trim was expressed by the structure exposed as rough, trims as smooth. This was the prevailing fashionable middle brow aesthetic at the time which owed much to Sydney. Exposed beams stained brown and white painted walls and brown doors contributed to this diluted craftsman aesthetic. The house had a flat roof, and sat on a concrete slab with a square plan for reasons of maximum area within minimum perimeter walls (22).

Leighton Homes
The Lowline Mark I
Cost (1966) $10 990
The Lodge
Cost (1966) $12 500
The Parlor
Cost (1966) $15 960

Leighton Homes Pty. Ltd., Melbourne also used a consultant architect. Peter Hooks designed three of their available range of five types in 1966 (23). All three houses had the same aesthetic of tiled roofs, white painted brickwork, stained timbers, with recessed entries in overall rectangular plans. The Lowline Mark I, introduced in 1965, the Lodge and the Parlor were three houses with different plans in themes similar to the cleverly marketed trio of Graeme Gunn’s Merchant Builders houses, the Courtyard, Studio and Terrace Houses. The Lowline was a simple three bedroom gable roofed rectangle in black Roman pattern cement tiles (fig.545). The Lodge was a double
storey house with a spiral stair at its centre leading to a second and third bedroom upstairs and had cathedral ceilings over the living areas. The Parlor House, designed for a sloping site had an internal skylit service core, with exceptionally wide 36" external eaves for sun protection lined with timber battens stained green. Each house had a main bathroom and also an ensuite bathroom for the parents' bedroom.

Lend Lease Homes
"Appletree Hill" : 6 house types

Cost (1966) $17 000 - $21 000

"Appletree Hill" was an estate at Glen Tower Drive, Glen Waverley designed by Robin Boyd of Romberg and Boyd and partially completed in 1966 (24) (fig.546). Lend Lease Homes Pty. Ltd. were the developers for the scheme that would ultimately contain 400 Boyd designed houses. The development was to parallel those in the United States such as Walter Gropius's Six Moon Hill Estate, near Boston and the Anshen and Allen designs for the Eichler Estates around San Francisco. "Appletree Hill" was planned to harmonize with the landscape. There were no front fences and no lamp-posts as wiring was laid underground. Six prototypes in brick veneer were designed by Boyd, whom Paul Couch feels was commissioned more for his reputation than his fame as an innovative designer (25). The houses had simple plans with isolated carports and attached pergolas. One house had a fully internalized courtyard. In many respects Boyd took the best of the conventional Australian house and elevated those conventions rather than imposing new patterns to create a new suburban paradigm. Descriptions of "conservative modern" or "progressive Australian" were the labels used to describe the houses (26). Lend Lease and Robin Boyd did not give the houses


evocative names, but they were simply coded RB001 to RB006 (figs.547&548). The courtyard house was RB004 (fig.549) and RB001 had an offset living room. In the brief for the scheme, Boyd was asked to provide graded prices for the first six display homes with the designs to appeal to a professional and executive sector of the market. Each house was to have a double carport and be able to accommodate possible variations for the requirements of individual buyers. The planned density was to be 5 blocks an acre.

The idea was to create a better suburban environment using familiar suburban ingredients but with controls. Existing trees were retained. The range of six designs could be fitted to accommodate both the landscape and the views of the hills beyond. Half the houses had flat roofs, half had tiled roofs. Half were built in cherry blue clinker brick, half were finished in white painted brick. All pitched roofs had the one shade of charcoal grey roof tile. Each house had a restful roof treatment, as Boyd put it, as an aid to "reduce the architectural temperature" (27). Interestingly there was no Radburn plan developed in the subdivision, nor any attempt at a radical reworking of the typical suburban estate, other than a slightly increased density and generous street frontages, and cul-de-sacs for minimum traffic and
maximum safety. What was important was the idea of co-ordinated homogeneity in non-featurist houses. There was consistent treatment of details, careful colour choice, and a sympathy between each house and its neighbors, and with the landscape. A sense of propriety pervaded, similar to the three "good mannered houses" designed by Roy Grounds and completed by Boyd on a single site in Canberra (28). A sense of community identity or cohesiveness was to be achieved with a co-ordinated landscape plan the instrument by which all front fences were abolished and which required large areas of lawn to visually link the houses with the dominant feature of the landscape being the eucalypts.

The scheme ran into problems when the initial six houses did not sell fast enough for the developers, Lend Lease who subsequently withdrew. The entire estate of 400 blocks was eventually built, but not to the designs of Boyd, and sadly not reflecting the interest or control that his original scheme had embedded within it.

The most progressive attempt in Australia at a community design from a project builder was shortlived. The Appletree Hill estate had remained open for two months then Lend Lease Homes had announced that the concept of a
Chapter 6: The Project House in Melbourne c.1965 - 1975: The Success of the Crafted Machine

community development would be abandoned, sales money refunded, the six display homes sold and the remaining 400 blocks of land in the subdivision auctioned off progressively (29). The debate surrounding the closure of the estate was considerable. Boyd suggested that the estate had been opened ahead of its time. Other Melbourne project builders suggested that it was closed ahead of its time. Lend Lease put the case that during the first eight weeks, 10,000 selected potential homebuyers saw through the houses, expressed plenty of enthusiasm for their quality and design, but only six of them gave firm orders for a house. A venture of that magnitude and nature could not be commercially profitable or be carried through to complete the 400 home community concept on sales of that volume. Lend Lease backed out swiftly. To keep faith with those whom the company had promised a community development, the company announced the abandonment of that concept, and gave buyers a choice of continuing under other arrangements or a refund of their deposits. All chose a refund. Lend Lease considered this the only course it could take to preserve its commercial reputation.


Fig. 548 Robin Boyd, architect. "RB001", Project House at "Appletree Hill" Estate for Lend Lease Homes Pty. Ltd., Glen Waverley, Victoria, 1966.

Fig. 549 Robin Boyd, architect. "RB004", Project House at "Appletree Hill" Estate for Lend Lease Homes Pty. Ltd., Glen Waverley, Victoria, 1966.
At the time however there were other complicating factors. One was that the Appletree Hill estate had hit the market at the low point of sales for 1965, at what appeared at that time to have been the bottom of an 18 months downturn in housing starts. The second factor was the increasing awareness by project builders' with project sales in the higher cost brackets, that there was a much longer time lag between a customer's first sight of a house and a decision to buy, than was the case for the lower priced house sales. It was also found that a house of good design continued to sell for two years or more, and that often its sales in the second year exceeded that of the previous year. It was clear that people had to be given time to get accustomed to new ideas in housing before they would accept design novelty and the notion of change.

Consequently project house builders began to apply this market research to their display centres. They sought sites that would allow for several years occupation and staged their display houses so that new models could be added yearly to the centre, thus retaining the values of earlier models.

A third contributing factor to the demise of the Appletree Hill estate was the dilemma of the project housebuilding market. In 1966, *Australian Home Beautiful* estimated that there were 56 architect-designed builder's model homes already opened, being built or planned for release in that year alone (30). Nearly all these houses however were offered for construction on a buyer's own block. They were built by builders whose visions and resources did not extend to the land, roadmaking, water and electricity reticulation costs which had to be met by estate developers before any houses could be offered for sale on an estate. Consequently the psyche of the housebuilding public and its builders was not in tune with a broader vision for a cohesively planned tract estate complete with community facilities.

A direct outcome of this situation was the lack of overall planned subdivisions, due to the inability of builders and entrepreneurs to visualize the large estate, with community facilities and an innovative aesthetic plan running through the development. In contrast to contemporary American housing estates designed by architects, the small economic scale of Australian conditions dogged prospects of a
coherently planned community development. Despite general pessimism some estates did succeed such as Fountain Gate at Narre Warren.

**Fountain Gardens Pty. Ltd.**

- **The Beau Abri**
  Cost $14 251

- **The Link House**
  Cost $13 847

- **The Colonnade**
  Cost $14 222

- **The Three Courts House**
  Cost $13 680

The Fountain Gate Development at Narre Warren developed in 1966-67 promised to be one of the most ambitious and progressive housing developments in Melbourne of the mid-1960s (31). The initial plan was for approximately 1000 home sites, two small shopping centres, a major drive-in shopping centre, primary and secondary schools and about 30 acres of parkland. The first stage came to life in October 1967 with a 220 block stage under way, covering about a quarter of the 356 acre site off the Princes Highway, just three miles from the highly concentrated industrial areas near Dandenong. The development was the brainchild of the Overland Development Corporation Co. Pty. Ltd. Responsibility for the houses lay with Beaumaris Constructions Pty. Ltd. with whom Overland had jointly formed Fountain Gardens Pty. Ltd. to supervise and establish the project. In addition to Beaumaris Constructions' own house models, a panel of four architects was also approached to design three homes each to suit the unusual parkland environment of Fountain Gate. At least one of the three designs by each architect was built as a display home. They were Romberg and Boyd, Reg Grouse, Daryl Jackson and Evan Walker, and William Collinson Kerr. The estate was planned with a layout of perimeter roads with cul-de-sacs off them. Each block overlooked landscaped central parkland to the rear instead of the usual backyards and paling fences. The area was planned with the idea that the boundaries facing this would be regarded as the front, and footpaths were provided on this side running through this parkland strip separating pedestrian traffic from the vehicular traffic on the roads.


Fig. 551 Reg Grouse, architect. "The Link House", Project House for Fountain Gardens Pty. Ltd., Fountain Gate, Narre Warren, Victoria, 1966 - 67.

trend, white painted bricks and stained timbers outside and stained or clear finish timber widely used on internal doors, windows, cupboard joinery and other interior features. The "Beau Abri" designed by William Collinson Kerr had a centralized kitchen and bathroom core (fig.550). The "Link House" by Reg Grouse concealed a simple L-shaped plan underneath an all-encompassing gable tiled roof (fig.551). The efficient plan of Jackson and Walker's "Colonnade House" employed brick piers and an adjacent sculpted fireplace mass to provide a deep verandah to the house and covered entry from the carport (fig.552). Frederick Romberg and Robin Boyd's flat roofed "Three Courts House" took the theme of three outdoor courts associated with the differing functions within (fig.553). Private functions of kitchen with laundry, and the bedroom areas were given courts. Public functions of living and dining were generously glazed and their views opened up to the court and the landscape beyond. The house plan was an interesting concept but contorted and rather odd, with a bedroom sitting like an island between the living and dining rooms and the master bedroom opening off the family room!

Pettit and Sevitt Constructions Pty. Ltd.
The Split Level Mark I
Cost (1966) $14 000
(1969) $15 500

The Lowline
Cost (1969) $12 750

The successful Sydney based building company Pettit and Sevitt Constructions Pty.Ltd. opened its first demonstration home in Melbourne in 1966 following a survey of the potential market for the company's range of homes in Melbourne which found that there was a market for the architect designed project house (32). The Split Level Mark
Ic, designed by Ken Woolley of Ancher, Mortlock, Murray and Woolley was the first of their project houses to appear in Melbourne. At the same time, Melbourne architect, Neil Clerehan was appointed to act as the supervising architect in Victoria. Clerehan's 1967 design for the "Lowline" or the No.3136 when modified in plan by Ancher Mortlock, Murray and Woolley for Sydney conditions was to win housing awards in the R.A.I.A. N.S.W. Chapter Awards in 1970 and 1971 (33). The "Lowline" plan shows the experienced Clerehan at his most neat and rational and providing the most efficient layout seen in project houses (fig.554). A three bedroom house, the master bedroom has an ensuite. There is a family room as well as an alcove for a dining room and the hint of a formal entry hall (34). A flat roof and white walls and dark stained timber are the familiar fashionable elements for this range of houses.

Inge Bros. Pty. Ltd.
The Centre Court House
Cost (1968) $13 200

The Split Level House
Cost (1968) $13 600

The Satellite
Cost (1970) $17 650

Bernard Joyce and Associates designed for the Melbourne merchant builders, Inge Bros. Pty. Ltd., the "Centre Court House" and the "Split Level House" (35). Tiles, white painted walls and dark stained timbers were dominant. These two houses were extremely sophisticated. The Centre Court House was a formalized symmetrical design with a square courtyard at its centre (fig.555). Brick wing walls and simple zoning of functions, a compactly planned service core and repetitive window dimensioning make this


The Split Level House was likewise a series of elegantly placed wing and courtyard walls and tiled pyramid roofs (fig.556). The front garden facade was a series of planes and roofs with no windows to the street.

Inge Bros. also used the services of architect John Adam to produce a design. The company erected as display homes three designs which took the top prizes in a domestic architecture competition which had been sponsored by the Victorian Chapter of the R.A.I.A., the Architects’ Housing Service and the Gas and Fuel Corporation. The three houses were constructed as a display centre called "Trend 71" at the corner of Williamsons Road and Eucalypt Drive, Lower Templestowe (36). The first prize design submitted by John Adam was built as "The Satellite". Adam's design was highly accomplished and similar to his custom designed work, a sleek interpretation of the houses of Richard Neutra. Fin walls extending into the garden, a flat roof and glazed corners typify the design which made little concession to market taste and still remained an elegant and economic solution (fig.557).
Eliza Homesteaders
The Sundowner
Cost (1969) $11,400 (H. W. Appleton Pty. Ltd.)
The Settler
Cost (1969) $13,800 (T. R. Quinn & Son Pty. Ltd.)
The Squatter
Cost (1969) $16,750 (G. J. Bronson Pty. Ltd.)
The Stockade
Cost (1969) $17,950 (R. A. Williams Pty. Ltd.)

The search for an indigenous style in the project house market was realized in Melbourne at Mount Eliza, c.1969 by architect John Rouse for a group of four separate builders operating on the Mornington Peninsula who traded as Eliza Homesteaders (37). John Rouse had since his student days been interested in the unselfconscious architecture of early industrial and farm buildings, the sort of structures that grew out of necessity rather than intent. For Eliza Homesteaders, he designed four basic house designs that in their linear form and use of the verandah alluded to the early Australian homestead. These houses

were a new approach to the typical display home and were ideally suited to the larger than average building blocks available in certain bayside areas and were soon to be found in other outer suburban areas where block sizes were larger. The four houses significantly named, The Sundowner (fig.558), The Settler, The Squatter (fig.559) and The Stockade were simple linear plans with hipped concrete tiled roofs with spreading angled eaves that could allude to traditional homestead roofs or the long spreading roofs of a Chinese pagoda. Exposed rafters extended beyond the eaves to reinforce this oriental feeling. Typically any reference to Australia’s past in such a house was a distant version of precedent, a settler’s cottage stretched into a linear ranch house.

John Rouse’s advice to designers was,

*Let’s look back and take some simplicity from our heritage, combine with it our local characteristics and create domestic architecture, appropriate to Australia as distinct from the “international” and so-called “traditional” styles too freely accepted as inevitable* (38).

Interest in the project house as homestead grew. The verandah and the gable roof were simple additions to an otherwise typical suburban house plan. This was the allusion for which many homeseekers were searching (39).
Concept Constructions Pty. Ltd.
The Garden House
The Oriental House
The Australian House
Concept Constructions Pty. Ltd. was established c.1970 as a project house builder which offered a top quality architect designed home of 16-35 squares (40). The idea behind the firm was that there should be no standard floor plan or basic prices. Each house was to be designed to suit the particular requirements of floor layout, size of rooms and budget limitations. In this 1971 context, a 30 square house could cost from $25,000 to $45,000 depending on the type of fittings and finishes used. The Company commissioned three leading architects to design three individual design concepts: The Garden House by Guilford Bell (fig.560), The Oriental House by S.G.L. Baker (from St. Ives, N.S.W.), and the Australian House by John and Phyllis Murphy (fig.561). The three houses built for display were situated in Canterbury Road, Forest Hill, on the corner of Deanswood Road. Each house was very different, a graphic description of the differing approaches to design at the time.


The Garden House had high courtyard walls built close to the street with a pyramid shaped pergola over the entry. The essence of this house was privacy where the whole block was walled. The Oriental House was a complex of courtyards, gates and oriental finishes and landscaping. The Australian House complete with verandah and corrugated iron roof resembled an old-style farm homestead.

Fig.560 Guilford Bell, architect, "The Garden House", Project House for Concept Constructions Pty. Ltd., Forest Hill, Victoria, 1971.
In 1970, the "X-2 House" designed by Peter Carmichael of the Melbourne firm, Cocks and Carmichael and built by Civic Construction Co. (Aust.) won an award in the N.S.W. Project House Design Awards for 1970 and 1971 (41) (fig.562). The simple three bedroom house extended its living/dining and bedroom spaces into well integrated and useful courtyards, maximizing the opportunity for outdoor living and entertainment. Raking wing walls and a 9ft. wide batten pergola defined the main terrace area to the north, screened from the entry and directly adjacent to the living areas. The pergola raised above the level of the adjacent gable tiled roof begins to dissolve the edge of the house as a series of sticks and fins. The master bedroom and en-suite shower room shared a large and private courtyard. There is a courtyard also off the dining room. The house is divided into two distinct zones, one being the living room, master bedroom, dining room and entry comprising the formal
entertaining area. The kitchen acts as a buffer between this zone and the day-to-day family activities in the family room, children's bedrooms, bathroom and laundry. The use of a three foot module allowed an easy task in the repositioning of rooms and size adjustment according to site and client. The house is solid brick both inside and out. Oregon beams and rafters supported a concrete tiled gable roof. The ceilings were lined in Californian redwood. Vaulted ceilings gave an air of spaciousness to the living areas whilst a flat ceiling ensured intimacy in the dining room and bedrooms.

The "X-3 House" again designed by Peter Carmichael also won an award in the N.S.W. Project House Design Awards in 1971 (42) (fig.563). The "X-3" was a development of the locally developed Sydney three level house where on a sloping site the house is split over three different levels with two storeys on the lower side of the slope. Raking panels of Californian redwood boarding and brickwork reduced the scale of this tri-level house. Once again the cultivation of outdoor space via private dining court, solar deck and integrated carport enriched the basic well planned shell of the house.

The most advanced project house designed by Cocks and Carmichael was the Civic Growth House designed for Civic Construction Co. (Aust.) in 1974 which has Carmichael's mature aesthetic match his beach house designs of the same period. The Civic Growth House concept centred on the notion of flexibility. The client was provided with a modular grid and a series of components, for example, the intended number of bedrooms. The casual eating area, family room, and importantly courtyard grids, were to be an integral part of the composition (43) (fig.564). This game enabled people to develop their own

Fig.563 Cocks and Carmichael, architects. "The X-3 House", Project House for Civic Construction Co., N.S.W., 1970.


43. John Barker, "Game all the family can play", (The Age - R. A. I. A. Citation Award No.28) The Age, 30.5.1977, p.20.
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The players, potentially all members of the family, were provided with a kit containing coloured squares representing rooms or outdoor living decks that could be arranged on a grid board divided as a small scale representation of a 3.6 metre structural system. Sizes of elements within the grid are related directly to the post and beam structural system used in the Civic Growth House. More rooms could be added easily after the first stage of the house was complete. The system could be faced in brick, concrete block, timber or asbestos cement, internal walls and external windows were non-loadbearing and allowed internal flexibility. The display Growth House built at the corner of Burwood Highway and Terrara Road, Vermont had a flat steel deck roof, bagged brick walls, structural plywood floor and timber framed windows. The plan when built included courtyards and decks off each major living space and a private court off the master bedroom and a greenery off the family room. The Civic Growth House returns to the freedom and glamour of the post-war image of indoor-outdoor living and the feathering of the building into the landscape and the use of the outside as outdoor rooms. The plan of the Growth House today still remains one of the most sophisticated to come out of the post-war era.
An interesting aside to these very rigidly controlled market-oriented designs, was the need and demand in the 1960s for housing with industrial complexes in hot and arid climates in rural Australia. The architect designed project home was in these unusual circumstances quite special, and an important and successful model. In 1957, planning began for the township of Weipa on the Cape York Peninsula in Queensland. At the time Weipa possessed one of the finest single deposits of metal grade bauxite in the world. From the outset, the office of Don Hendry Fulton was appointed as architects and town planners (44). These architects had previously worked in arid climates, having planned Mary Kathleen, a township created for a limited life, yet earned a reputation for fresh and purposeful design. Fulton's design for Weipa likewise had to adjust to the climate, develop a series of mixed dwelling types and use a limited palette of available and appropriate building materials. The resulting houses and their layout were the result of a careful study of climatology, and the physiology, and psychology of people in climatic extremes. Insulation, shading, building materials and techniques were thus considered and earlier similar township developments were examined. Aluminium decking, concrete block walls, concrete slabs, maximum glazing with adjustable louvered units from floor to ceiling, 5 foot roof overhangs, with 2 foot fins incorporated in structural blockwork piers as vertical shading components were elements chosen in response. A house plan extrusion of maximum one room in width, of regular shape with the axis running east-west enabled maximum advantage to be taken of natural air movements, and allowing maximum air movement when mechanically assisted (fig.565). The east-west orientation optimized and regulated the shading of the long north and south walls, and reduced the extent of walls exposed to low

Fig. 565 Don Hendry Fulton, architect. Workers Housing, Weipa, Queensland, c.1965.

angle sun from the east and the west. The single room width enabled uninterrupted outlook from all rooms and was readily extendible. This was a project house completely different from the suburban norm both in location and in type.

The project house from 1965 - 1975 in many respects was a general improvement upon the type but few inroads had been made in reversing the ominous and relentless spread of the suburbs. Nor had there been any studies toward an understanding of the suburbs. The prevalent ideal was to retreat behind private screen walls and to create ever increasingly private oases and to become more and more reliant on the motor car. The concept of street life was ignored. Louis Kahn's idea of the community of the street was anathema to this true sub - urbanism. Between 1965 and 1975 there was no overturning of the suburban paradigm. All the architects and promoters of project houses had assumed the status quo and capitulated to market demand and public inertia. There was however one exception and that was the Merchant Builders phenomenon, crucial to the understanding of the project house in Melbourne as an instrument of suburban change. In contrast the project by the majority of builders did not seek a radical shift but understood the type and affirmed it as a single hermetic entity. The quality of domestic architecture was improved, but on an urban scale, there was no change.

The architect's project house of the 1960s and 1970s was important. The general standard of domestic design improved. But expectations of what a house might contain were raised by the house merchandisers to an extraordinary degree. The repercussions of this marketing strategy are still being felt. The basic building envelope has now reached such a size so as to make the most basic home available on the market an unrealistic alternative to rented accommodation. The anonymity and wasteland of suburbia still exists. Perhaps the suburbs are irredeemable with present building regulations, local government controls and the development strategies of selling land and building houses. Overall the architects' participation has been limited.

Advanced architectural design and direction were thus made available to many buyers by being shared among them all. Although this was one of the most hopeful developments of the 1960s, houses so produced still represented only about
five per cent of all houses built. With solid fortitude
Australia's home was still overcoming most attempts to
make it better (45).

What the Merchant Builders company was to do was to
radically question the nature of suburbia both in terms of
form and landscape. Merchant Builders brought a new
dimension to the land and house package. Previously and
even now issues of suburbanism were not being addressed
or completely understood, such as the problem of density,
the question of an architectural language for the suburbs,
the solutions for privacy and orientation. Most of all, the
other cheek was not turned, accepting suburbia as fait
accompli and trying to understand it. Merchant Builders
intended to transform and supplant what many saw as
suburbia's embarrassing mediocrity.

45. Boyd, loc. cit.
Chapter 6: The Merchant Builders Phenomenon: Radical Alternative or Market Coup?

The Merchant Builders Phenomenon: Radical Alternative or Market Coup?

The phenomenon of the Melbourne-based project house building firm, Merchant Builders Pty. Ltd. which was established in 1965, is generally regarded as a success story of the architect's involvement in the speculative housing market in post-war Australia. A series of houses designed by some of Melbourne's most notable domestic architects (1) were to popularize so-called good design and apparently transcend that much maligned malaise of suburbia, popular taste. Most importantly of all, the Merchant Builders phenomenon legitimized the concept of buying, not just a house but a complete environment: the integral house and landscape package. The now famous cluster housing developments built by Merchant Builders, "Elliston", Rosanna, 1969 and "Winter Park", Doncaster, 1970 were posited as ideal suburban enclaves, enviable retreats from the supposed anywhereville, nowhereville of the endless monotony of suburbia. The individual house as object on its quarter acre block with its exotic planting, and front and backyards, was eschewed in favour of an integrated environment based on Australian native landscaping and a discreet non-assertive brick domestic architecture of suppressed architectural pretensions.

As discussed previously the idea of the project house in post-war Australia was not new. Robin Boyd's extruded rectangular project house, the 1955 "Peninsula House", had been extremely popular in Melbourne. The most successful inroad into the popular market came in New South Wales with the Sydney project house building firm of Pettit and Sevitt with designs dating from 1961 by Ken Woolley and Michael Dysart, and a project house designed by Don Gazzard for the 1961 Carlingford Demonstration Village organized by Lendlease (2). Jennifer Taylor cites these two Sydney examples as the pivotal establishment of the project house as a successful marketing alternative to the typical builder's house (3). At the same time Merchant Builders was formed in Melbourne, another local architect Geoffrey Woodfall was designing for Consolidated Homes Industries Pty. Ltd., the "End Gable" and the "Gambrel" project houses which became some of the most popular models in Victoria in the next ten years. Concurrently Peter Hooks, Robin Boyd and many other Melbourne architects in Melbourne were also designing project houses.

1. Sydney architect, Terry Dorrough, also designed houses for Merchant Builders Pty. Ltd.


What separates the Merchant Builders' designs from other project houses was the attempt to provide high quality **special** houses. Most architect-designed project houses were simply updated versions of the builders' hipped tile roof vernacular. But Merchant Builders explored the integration of quality landscape and quality house. In Sydney, beneficent conditions of bush landscape, views and a sloping site lent immediate character. In the relatively flat geography of Melbourne, an interesting landscape had to be created. Landscape architect, Ellis Stones, was employed by the firm to work on every major project of townhouses, low density housing schemes and the various display centres. A free landscaping service was provided with each house to encourage a coherent environment that replaced the hard surfaces, front fences and exotics of the suburban front garden with rocks, gravel paths, the retention of native trees and an informal layout of native plants (4).

At the time, this concept of a mass marketed project house sitting snugly on a bush site was not countered by any opposing view. No assertion was ever made that the Merchant Builders house deconstructed the suburb and the street as a public entity, that beneath the veil of landscape lay an impoverished architecture fulfilling only a market opportunity. There were many unanswered questions. Was the Merchant Builders house irrelevant to popular culture and detrimental to an understanding of the Australian **suburb** as a crucial and undeniable part of Australia's urbanism? Did Merchant Builders merely fill the gaps at the bushy edges of the outer suburb, and tackle the townhouse infill of the inner suburb and ignore the morass of suburbia that had always in Australian architectural circles been left in the "too hard" basket? Or was it a radical and visionary alternative? Between 1965 and 1975 it was the latter.

The Merchant Builders House was not based on what suburbia was, and in this sense, the concept was radical. Status and security to be derived from accepted styles, the distinct front boundary, the side fence, the front gate and the front door, all the communal signs of the suburb, were rejected in favour of discretion and anonymity. The more uncharitable might say that the house was starved of architectural pretension beyond its physical presence. At the other end of the scale, the Merchant Builders House was the logical successor to Walter Burley Griffin's vision for a sensitive Australian house and its integration with the

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4. For a description of Ellis Stones's landscape design philosophy, see Ellis Stones, *Australian Garden Design*, Melbourne, (first edition 1971) 1973 and *The Ellis Stones Garden Book*, Melbourne 1976. A protege of Edna Walling, Stones was also a regular columnist for the *Australian Home Beautiful* and many of his ideas were popularized via this magazine in the late 1960s and 1970s.
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landscape (5). It also fulfilled Robin Boyd's idealized vision of the post-war suburb and his advocacy of a Victorian Type - a house with correct orientation, privacy, one that made full use of its site, an economy of means, simple unadorned living and a harmonious relationship with the landscape.

The architect-designed project house reveals the conflict between typical suburban values and those of the professional and academic milieu of architecture and planning. The post-war architect was reared on the idea of providing the better environment and invariably had an aversion to popular taste and the suburban aspirations of the working and middle classes. The 1960s project house reinforced the reformist culture of the 1950s. The Merchant Builders house ignored the community of the street, the individuality of the detached house and the notion of an urban landscape where the wild and untamed Australian flora seemed to have no part. For a critic such as Robin Boyd (6), the Merchant Builders House was the high point of the 1960s boom in project housing and seemed to carry with it potential for the redemption of the Australian suburb.

The firm Merchant Builders Pty. Ltd. was created in 1965 by David Yencken and John Ridge (7). Both men had not been trained in architecture. John Ridge owned the Boston Timber Company and David Yencken jointly owned and operated the Black Dolphin Motel at Merimbula which had been designed by Robin Boyd and built in 1959. The firm began with a group of display houses designed by architect Graeme Gunn who was to be associated with Merchant Builders for over twenty years. Inspired by the success and quality of the Pettit and Sevitt houses in Sydney, Ridge and Yencken asked Gunn to design three prototype houses to fill the architectural void in the Melbourne project housing market (8). Ellis Stones who had worked with Gunn on his design for the Dawson-Grove House, Frankston, 1962, began his association with Merchant Builders by providing the landscaping for these first houses (9). Stones consequently supervised the landscaping of all Merchant Builders projects until his death in April 1975.

The Terrace House, The Studio House and the Courtyard House were built as display homes at the corner of Springvale Road and the Boulevard, Glen Waverley in 1965 (10). They were three very different examples of the
architect-designed project house which was attempted to perfect the typical three bedroom rectangle. A consistent palette of materials was applied to all three houses: brick veneer (often reclaimed hand-made bricks or clinkers), concrete slab, plasterboard wall linings, sawn oregon fascias and internally exposed roof beams, Western Red cedar window frames and metal deck roofs. The aesthetic was simple and unabashedly reticent in regard to architectural pretension. The client could furnish and add character at will to these informal shelters. The materials and textures of these houses challenged the pressed red and cream bricks and orange terracotta tiled roofs of the suburbs. Their rural earthiness was a radical alternative.

The Studio House was a split level house designed for a sloping site with a raised bedroom block within an all-encompassing unequal gable (fig.566). The Terrace House was designed for an east/west facing block. It was a linear design that ideally would have its long living room side oriented to the north (fig.567). The Courtyard House was designed for privacy on a south facing site and owed its inspiration to Gunn's Richardson House, Essendon, 1963 with its concealed court and deep inset windows to give the impression of mass (fig.568). Cross Section commented favourably.


12. The Patio House designed by Charles Duncan was also featured at the Holly Green Close display centre at Donvale. See "For indoor-outdoor living", Architecture Today, October 1972, p.19.
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Gunn's three prototype houses ... have an atmosphere of architectural quality that so far none of the other commercial developments have been quite able to match, even if in regard to detailed planning and finishes improvements could be found (11).

The three prototype houses were an immediate success. An initial target of 20 houses in the first year of operation was well under the 50 orders that were received. In the second year a further 100 houses were built (12). Merchant Builders expanded their range with new designs by Gunn for the Attic House (1966), Two Storey House (1967) and highly acclaimed Cellar House (1969) which was featured at Merchant Builders second display centre at Winter Park, Doncaster and a later estate at Gillards Road, Mt. Eliza (13).

Concurrent with the success of the individual display houses, Merchant Builders moved into group housing, town housing, cluster housing and developmental consulting. The best known townhouse development built by Merchant Builders as developers was the complex of six townhouses in Molesworth Street, Kew designed by Graeme Gunn in 1969 (14). These semi-detached two-
storey townhouses with private ground level courtyards and large cantilevered balconies took advantage of the elevated site to gain magnificent views over Yarra Bend Park to the city. Built in concrete block with concrete floors and timber framed skillion roofs, the grouping of houses was relaxed and non-demonstrative and was accompanied by the rambling landscaping of Ellis Stones. With unadorned walls, private courts and simple cubic masses, Gunn's grouping of the houses resembled a Mediterranean village. The blend of rigorously truthful construction, bluestone paving, Australian natives and the muted grey of the blockwork made this an innovative landmark in Melbourne residential architecture both in terms of its density and aesthetic. The small scale urban aims of Team 10 had been realized in Kew. Gunn's proposals were neither suburban nor of the bush. They suggested an agglomeration of dwellings that had no precedent in Melbourne architecture since the speculative bungalow courts of the 1920s.

An earlier Merchant Builders development in Yuille Street, Brighton, 1967-68 packed eight townhouses onto a small site (15) (fig. 569). Enclosed courts and careful window placement ensured privacy and a subtle spaciousness. Given its density, the Yuille Street development was an urban composition. The problems of adjacency and

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15. Cross Section, March 1969. Other townhouse developments in Melbourne designed by Gunn and built by Merchant Builders are located at Sorrett Avenue, Malvern, 1967; Grange Road, Toorak, 1967-68 (Cross Section, November 1968); Yarra Grove Hawthorn, 1968; and "Kensington Close", Kensington Road, South Yarra, 1969.
plumbing pipes extending upward visibly from the roof lines added richness rather than too cool repose. Materials were oatmeal bricks, stained timber and asbestos shingles. Numerous developments followed, all highly successful and carefully integrated by consistent landscaping and choice of materials.

Merchant Builders' two best known attempts at reconciling the density of the suburbs but maintaining the desire for single storey detached houses, were the cluster housing developments, "Elliston", Rosanna and "Winter Park", Doncaster.

"Elliston", Rosanna
In February 1969, Merchant Builders announced their latest cluster housing project (16). "Elliston" was to be a series of Radburn clusters grouped alongside a park (fig.570). It was to consist of 300 houses on 53 acres of the Rosanna Golf Links in Heidelberg and to be developed over three years. Another 48 acres were retained as parkland which
the Heidelberg Council acquired at no cost to the ratepayers. The Council subsequently engaged Ellis Stones as landscape architect for the park's development (17) (fig.571). The design team for the houses consisted of Charles Duncan (fig.572), Graeme Gunn (fig.573), Jackson and Walker (Daryl Jackson, partner-in-charge) (fig.574) and McGlashan and Everist (David McGlashan, Partner-in-charge) (fig.575). Each architect designed a series of at least four houses in order that a wide choice of house designs be given to the prospective homebuyer. A rigid palette of forms, materials and details was enforced in each series to produce a coherent and unified environment. At the time it was hoped that this consistency of detail would be carried into the surroundings by providing a free landscape advisory service and submerging telephone and electrical services below ground. In the first stage, houses were erected on individual plots with further development planned to take place in Stratum Title form. The site was laid out by the architects, Earle Shaw and Partners and the landscaping was designed by Ellis Stones after whom the development was named.

Fig.571 Ellis Stones, landscape architect. Landscape plan for a typical block at "Elliston", Merchant Builders Estate, Rosanna, Victoria, 1969.


Each house had adjacent outdoor court spaces, a separate family room, open living/dining room and two bathrooms. Construction was solid brick or brick veneer with new pressed or second-hand bricks. Windows were timber framed. Pergolas and brick wing walls concealed these polite and discreetly anonymous houses from the street. This was an architecture of subdued good taste, heightened privacy and of little pretension. The street was negated and the house a self-contained introverted haven. "Elliston" turned its back on the suburbs deliberately to posit an alternative of homogeneity and an integrated landscape of garden and house.

Despite the grand vision and idealistic intentions, "Elliston" sold slowly. Only about 70 of the projected 300 houses were completed. After three years, Heidelberg City Council sold off the remaining sites to individual homebuyers and the vision of a large scale harmonious development was lost. Judy Trimble has suggested that the homebuying public had found the houses to be "radically homogeneous" and that the desire for more freedom of self expression and emotional appeal was reflected in the poor marketing.
figures (18). Though each house was quite different to the trained eye, the lack of distinguishing detail features and the power of the familiar seemed to dog the large scale attempt at an aesthetically harmonious residential development. Robin Boyd had experienced the same problem at the ill-fated Appletree Hill and Fountain Gate estates. The power of the Melbourne homebuyer's habit of choice dictated a resilience to homogeneity in dwelling type and how one's house was to look.

Winter Park, Doncaster
The first stage of the Winter Park Strata Title development on its six acre site in Doncaster was begun in 1970 and completed as a cluster of five houses, the first stage of an eventual cluster development of 20 houses (4 clusters) grouped around common access courts and facing onto a large park (19) (fig.576). Consequently only four car access points were required from the surrounding roads. Each dwelling was sited on less than quarter of an acre. The houses were all refined versions of the original Graeme

Fig. 574 Jackson and Walker (Daryl Jackson, partner-in-charge), architects. Prototype house for "Elliston", Merchant Builders Estate, Rosanna, Victoria, 1969.

Fig.575 McGlashan and Everist (David McGlashan, partner-in-charge), architects. Prototype house for "Elliston", Merchant Builders Estate, Rosanna, Victoria, 1969.


Fig. 576 Site plan of "Winter Park", Merchant Builders Estate, Doncaster, Victoria, 1970-.

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Gunn-designed standard project homes for Merchant Builders and the landscaping was co-ordinated by Ellis Stones.

Each cluster of five houses was made up of five different house types: the Studio, the Courtyard, the Cellar, the Two Storey and the Terrace House. Each of the houses were simply planned and of brick veneer construction with a mix of terracotta tile and steel deck roofs, a discreet and low key vernacular of earthy toned muted good taste, the now typical recipe of the Merchant Builders house. In 1970, the parti of the single family house had been perfected. Living/dining spaces were assumed as was the family room, the parents’ bedroom complete with its own en-suite separated from the childrens' bedrooms. Carports and pergolas added visual interest to the complex. The cluster concept had achieved basic financial economies by grouping car access, parking and the basic site servicing to dwellings but also allocated open space more efficiently across the site. Greater privacy was made possible by better definition of space within and around the dwelling. This was achieved by careful co-ordination, landscaping, placement of carports, screens and communal car and pedestrian access zones. The space economy achieved by clustering dwellings permitted a large communal parkland shared by residents. This open space was immediately accessible to all dwellings, providing a safe, large, childrens playspace which could be easily supervised from each house. The communal parkland was controlled and maintained by corporate ownership - including all residents in the development (20).

Winter Park was proposed as an alternative to existing suburban patterns (fig.577). The reallocation of what normally had been high maintenance private garden space to collective parkland maintained by the corporate body rather than as an individual responsibility was an attempt to provide a public amenity. The strata title of Winter Park provided for common ownership of the driveways, courtyard and parkland by a corporate body formed from the individual home owners at the same time as the strata subdivision was registered (21). The development was innovative and marked the high point of Merchant Builder's David Yencken's idealistic hopes for an alternative vision of suburbia. Winter Park was a demonstration model to the people of Melbourne of the possibilities of the cluster concept and was built prior to the Cluster Titles Act and Interim Cluster Code implemented in 1975 which was established by Yencken on behalf of the Victorian Government (22). Winter Park was subsequently built in four stages over ten years. By 1981, Gunn's various house types could be seen in an ideal context of mature natural landscape, semi-public parkland and with a diverse range of house forms.
System Built Houses

In 1971 a competition, jointly sponsored by the Gas and Fuel Corporation of Victoria, Beneficial Finance Corporation Ltd., Merchant Builders Pty. Ltd., and the Royal Australian Institute of Architects (Victorian Chapter) Housing Service, was held with the aim of producing a minimum cost three bedroom house (23). The design was to be based on a rationalized planning and construction system which could also allow for flexibility and variety in siting, layout and future expansion. The construction system was to be based on currently available materials and components (24).

Terry Dorrough proposed three different structural systems with his winning scheme: one based on a light steel post and beam frame with foam core infill panels; the second on load bearing foam core panels with a timber roof structure; and the third on conventional timber frame in standardized pre-cut panels. Maximized living space in a minimum sized house was the aim. Within 12 squares, three bedrooms plus study or fourth bedroom, two bathrooms and a family room were fitted. Merchant Builders built two of the houses: a version of the steel frame and panel construction, and the other on a conventional timber system.

The timber framed house was a simple rectangle split in half down its long side into two 12 foot wide zones. One half was devoted to living with kitchen separating the formal and informal living spaces. The other half was devoted to sleeping, and another service block, the bathroom and laundry, separating the master bedroom and study from the children's bedrooms. Large sliding panels were used instead of conventional doors. The rectangle was therefore ideally sited north/south with brick veneer end walls facing east and west. The construction system involved a concrete slab on ground, 75mm timber stud walls of repetitive sizes, prefabricated window walls in standard height 2.44 m sections, exposed timber rafters with pine boarding above, metal roof deck and plasterboard interior lining. This house was reminiscent of the compact plan of Robin Boyd's Peninsula House though now with a family room, ensuite and study. The concept was also the same: an extruded repetitive form. Marketed as the Open House and initially built at the Mt. Eliza display centre, this design has since become one of the most popular houses of the Merchant Builder range.

23. The assessors for the competition were Ken Woolley, Geoffrey Woodfall, Daryl Jackson, Graham Whitford, all architects and David Yencken of Merchant Builders.

The steel framed house was considerably more experimental (fig. 578) recalling the steel framed Case Study houses of Raphael Soriano and Pierre Koenig in California (25) in the 1950s and the more recent experiments by Richard Rogers in London (26). The structural system was based on a slender steel frame of 50mm square section columns and 100mm x 50mm beams, clad in asbestos cement faced foam core panels, aluminium sliding doors and windows, and self supporting insulating ceiling panels. The exhibition house which was built was a stretched elaboration of a "basic plan" and included the addition of a large family room and a screened-in garden room separating the childrens section of the house from the main house. The thinness and slim aesthetic of this house with its primary colours used in the decoration, red for the steel frame and lime green for the roll down blinds, made this an unusually bold experiment by Merchant Builders.

Fig. 578 Terry Dorrough, architect. Steel Framed System Built House for Merchant Builders, Victoria, 1971.
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Since its inception in 1965, the Merchant Builders House seemed to be an ideal palliative to the typical suburban house. Gunn and Yencken had discovered an intellectually inoffensive vernacular that was popular and desirable. It could be built cheaply and sold at a competitive rate as good design. They had apparently succeeded in creating Robin Boyd's goal: a popular architect-designed house. In many respects the Merchant Builders House realized the romantic dream of a primitive vernacular which now was speculatively built complete with its own pioneer landscape of Australian natives.

The Merchant Builders estates, Elliston and Winter Park, became the idealized enclaves similar to the 1930s neo-Georgian cluster of houses in St. George's Court, Toorak with its houses by Marcus Martin and Tribe, and Billson and Mewton (27). Instead of taste associated with the morals and respectability of the Georgian and Colonial era, this was a new breed of transformed good taste. The rural virtues of the bush were brought truly into the suburbs. Ideas of metropolis or suburb were sidestepped. The blend of ruralism and the honesty of Arts and Crafts ideals was complete. Cultured symbolism within and without the house was entirely purged. The architecture of Elliston and Winter Park was at one with nature but at odds with an urban framework. The difficult dichotomies of suburb/bush and suburb/city had reached no further resolution but were deftly leapt in a revolutionary way.

In the 1970s Merchant Builders capitalized on the new desirability of the inner suburbs with their urbane lifestyles, and also on the untramelled bush surrounds of Eltham, Donvale, Doncaster and the Mornington Peninsula and their attractive environmentally responsible lifestyles. What of the morass of suburbs between? Merchant Builders was not to touch this delicate subject. Instead they provided some of the most sophisticated project houses on the market which could be inserted innocuously into pre-existing suburban fabric (28). Merchant Builders actively encouraged the removal of typical suburban ideals from the homebuying psyche and were remarkably influential in terms of other project house firm's designs. Cobble bricks, stained timbers, rockeries and the odd Australian native seemed to suddenly become the ubiquitous palette of the quarter-acre block.


28. One of the few sympathizers of the suburb in the 1970s was R.K.H. Johnson. See R.K.H. Johnson, "Suburbia in Evolution: Community and Privacy", Architecture in Australia, December 1970, pp.867 - 870. Johnson in this article suggests examining the suburb, using the techniques suggested by Christopher Alexander and Serge Chermayeff in Community and Privacy: Toward a New Architecture of Humanism (Penguin, Harmondsworth, 1966) but altering them to Australian conditions to allow freedom and choice and the level of privacy desired by the inhabitants themselves. This technique involved not a rejection of the suburb but analysing its constructively and capitalizing on its benefits.
In the late 1960s and 1970s, real estate developers in league with eager architects built numerous blocks of walk-up flats in suburbs such as Caulfield and St. Kilda which were over-scaled and offered little in terms of amenity either for the inhabitant or the street. The softly scaled and coloured offerings from Merchant Builders however seemed to be a healthy concoction of what had always been desired in architecture: good sense, simplicity and responding to colonial ideals of sun, shade and without any label of style whatsoever! Their houses were picturesque yet without stylistic pretensions nor were they culturally loaded.

By 1975, some Melbourne architects were a little edgy over the implications of the Merchant Builders house and its purported success. New interest in the suburb and its values were beginning to emerge. Issues of visibility and legibility as against privacy were raised: the signs of home, the front fence, the front door, the roof, the gate, and the garage. The Merchant Builders House had created utopian pockets of new solutions. The Vermont Park Estate in 1976 was the latest. It involved new house types by Gunn and Dorrough and the cluster plan was designed by the newly formed landscape team, Tract Consultants. This proposal was the latest attempt by Merchant Builders to lower the costs and reduce the scale of their houses to make the concept available to a wider public (29). The years ahead would test the resilience of both suburb and proposed palliative. If anything was certain, the Merchant Builders House had been a profound catalyst in the concerted return and general upsurge of Arts and Crafts values in the Melbourne suburb. Time would tell which force was the most resilient: the purifying simplicity of the Merchant Builder house or the suburb and its celebration of individualistic choice and overt images of home or whether an alliance of sorts would emerge. For the moment, the Merchant Builders houses were selling well.

CHAPTER SEVEN:

STYLE: REACTION AND RE-EMERGENCE C.1965 - 1975
Rough and Ready, Baroque Ad-hoc: 

Vintage Borland! All the usual elements are there - odd angles, exciting spaces, semi-resolved details; clothed with timber, seagrass matting and wire mesh. The effect is like having a good party - nobody knows how it happens but everyone has a great time (1).

The architecture of Kevin Borland is an important Melbourne phenomenon of the late 1960s and 1970s. His beliefs in participatory design and the primacy of the user, his free and easy egalitarian methods of delegation of design within the office, and his bushman-like experimentation with structural techniques were to influence a generation of young Melbourne architects. Linked with active left-wing political interests, these firmly held beliefs resulted in a rough and ready timber architecture, a baroque ad-hoc celebration of vigorous functional and structural expression which was especially attune to the bush site and exploratory lifestyles of the 1970s.

A crucial factor of Borland's architecture was the way he worked. The idea of collaboration and the nurturing of younger colleagues was important in the cross fertilization of ideas, and the enriching of the design process not only for the client but the designers themselves (2). After leaving Geoff Trewenack in 1965 after a partnership which had lasted since 1957, Borland started practice on his own. In 1969 he collaborated with Daryl Jackson on the award-winning Harold Holt Memorial Swimming Centre Malvern (3). In 1974, Borland, Max May, Philip Cohen and Osric Spence formed the Architects Group as a means of undertaking large scale non-residential commissions while each architect carried on their domestic work separately. In 1977, the Architects Group was dissolved and Borland went into partnership with Bernard Brown.

Between 1960 and 1975, there are three themes which characterize a Borland house design: the process of participatory design; structural experiment; and the joy of making form. Each theme is intimately connected to the other. There is no pre-conceived formal aesthetic philosophy. Borland's architecture is a process of discovery.


2. The list of people who worked at various times in Kevin Borland's office c.1965 - 1977 included Max May, Bernard Brown, Peter Williams, Bobby Brook, Mary Lockley, Jennifer Shannon, Alison Rowe, Dinty Reed, John Patrick, Lindsay Holland, John Kenny, Rod Hunter, Paul Smith, Tom Adams, Philip Cohen and Gordon Cope Williams. I am indebted to Bernard Brown for this information.

3. Jackson had previously worked briefly for Borland drawing perspectives and had taken care of Borland's practice when Borland was overseas in 1966 on a Copper Industry Scholarship. The two architects also taught together at R. M. I. T. Jackson designed the Harold Holt complex and Borland carried out the contract administration. Interview with Daryl Jackson, 11th August 1988.
1. participatory design

In 1962, Kevin Borland began designing a hall for Preshil School in Kew. It was the first of a series of five buildings which in 1972 were awarded the R.A.I.A. Victorian Chapter Bronze Medal (4) (fig.579). The low cost timber buildings were the result of an intimate process involving user, client and architect. The Preshil Hall marked a turning point for Borland: the consolidation of his design philosophy of a free, informal client-oriented architecture. The educational process at Preshil was highly influential in Borland's development of this philosophy. The task oriented educational policy where students and teachers worked together to develop and solve a particular problem was used by Borland to inform his architectural process.

At Preshil we have tried to create an informal, not very rigid building which reflects the non-rigid informality of the teaching. I feel that an architect can't design without the client being involved, and the pupils were very much involved. They did little plans and discussed with me the sorts of things they'd like. I involved them in every stage: the planning, the drawings, and they looked over the job and discussed progress and by doing this with them I hope they can understand how an architect really works.... They needed a bit of a catalyst and I provided them with choices and discussed and observed. Observing the fact that all kids love to climb and be on different levels, I designed a building that would reflect this, by use of levels, and low spaces for example. They like the comfortable feeling of the low scale - its almost the womb-like syndrome (5).

This intimacy with the client and the translation of children's desire to climb, and the excitement of different levels and volumes was to be translated into Borland's house designs of the 1960s and 1970s. The domestic client was taken on a programme where children, parents and architect would all collaborate to produce a design. The result was a rich orchestration of intimate spaces, diverse materials, and a structural aesthetic that could be adapted easily to the idiosyncrasies of client, budget and the process itself. Roughness and rugged detailing were inherent to these unfixed ends.

A critical text for Borland was the 1963 publication (available in Australia in 1965) of Serge Chermayeff and Christopher Alexander's Community and Privacy: Towards


7. Ibid.  
8. Ibid., p.254.  

Fig.579 Kevin Borland, architect. Preshil School, Kew, Victoria, 1962-.

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*a New Architecture of Humanism* which stressed the idea of a "Science of Environmental Design" (6). The authors quoted Eric Gill saying that "Beauty will look after herself" (7). It was a thesis advocating an extension of the various hierarchies of organization of the human habitat... toward the neglected realm of the private: the innermost sanctum, the room of one's own, indoor and outdoor, to balance the places of domestic and civic scale... (8).

Borland was to clarify his own position by stating,

Architecture is an understanding of purpose, the development of spaces to reinforce the need for each of us to have choice and opportunity to be together or separate; the need to ensure that those spaces are a reflection of the human condition, that respond to and display responsibility to that condition, endow our relationships with meaning and integrity. Then we will have an architecture that befits society, does not exploit its weakness or aberrations, but truly results in benign environments the lie of which restores man to his proper function in architecture - anthropocentric architecture (9).
2. structure

Inventive structure is a trademark of Kevin Borland's architecture, and has been since 1952. Even today Borland is experimenting with log pole and perspex infill construction. In 1952, Borland designed the Rice House at Eltham, an adventurous design of Ctesiphon arches that derived much from the contemporary work of Oscar Niemeyer in Brazil, particularly St. Francis Assisi Church at Pampulha or the more local example of Harry Seidler's Williamson House, Mosman, 1951. It was a bold structural-functional answer to the problem of the house where the walls and roof became one. Borland followed this design with an entry in the R.V.I.A. Small Homes Service housing competition of 1953 with a house sheltering under a draped reinforced concrete roof, a development from the Rice House and a solution recalling Twitchell and Rudolph's Healy Guest House, Sarasota, 1950.

Borland began experimenting with timber pole construction in the 1960s. The Freedman House, Mt. Eliza, 1965 was built on a 10 foot module with a draped solomit ceiling and a concrete ground floor slab (10). The whole house was built of rough hewn timber including linings both inside and out, and for columns, timber poles were used. The rationale behind the choice of structure was economy. The pole construction resembled that of the farming fence; i.e. pole and timber girt construction with vertical timber lining to either side. It was a simple technique which avoided the large quantities of timber involved in standard stud frame construction. The draped ceiling also avoided the large quantities of timber required for standard ceiling joists. The draped solomit liberated the ceiling from the roof, and the wires binding the straw together became the tension members to support the weight of the material. Borland was to refine the use of pole construction in years to come (fig.580). In each case, concern for experiment was a sincere attempt to alleviate an economic or construction problem rather than be part of an aesthetic premise. Structure could provide the means to overcome inherent problems of site and economy. In the case of the Gallager House, Kew, the site, once a rubbish tip determined that the house be elevated on percussion driven timber piles (11). The number of piles was kept to a minimum for economy and exposed timber trusses were designed to span the relatively large distances between piles.


11. John Barker, "House that grew from a rubbish tip", The Age - R.A.I.A. Citation Award No.25), The Age, undated clipping.
3. form making

The Borland technique of making form is a process of uninhibited discovery led by the vagaries of construction, client and site. The participatory process of design meant that the resultant building was an ad-hoc composition, pliable in the hands of both architect and client - an agglomeration of parts according to function and the intimate requirements of the inhabitants. Such a process consequently determined the means of construction: rough sawn timber, pole construction, wire mesh, natural galvanized steel deck or corrugated iron, pine lining boards, bolted timber joints, exposed concrete block walls as wing or party walls. All were materials appropriate to the bush. All were analogous to the adaptability and changeability of the architectural model as a technique for creating form. A model was easily discussed with clients. Idiosyncrasies on plan such as decks, window seat pods, extra cupboards, stairs, overhangs, extensions and the capturing of particular vistas could all be accommodated. Consequently there was a tendency to create interesting and unusual sculptural forms. The scale of the house was generally broken down and a picturesque composition of functional expression resulted without any formal preconceptions.
These random compositions were not unlike the freedom of Desbrowe Annear's Eaglemont houses with their taut skins and projecting bays or the organic freedom of the work of Finnish architect, Riema Pietila, whose buildings, Borland admired (12). Borland's buildings were rougher and more expressionistic than the contemporary Sea Ranch and its associated houses in Northern California by M.L.T.W. and architects such as Esherick, Homsey, Dodge and Davis, which had begun construction in 1965 and received heavy publicity into the late 1960s and early 1970s for advanced design and sympathetic integration of buildings into a natural environment. Early hints of Borland's free approach to form are found in the MacHutchinson House, Park Orchards, c.1960 (fig.581). This house consists of three linked octagons in plan. Each octagon was roofed by a corrugated iron hyperbolic paraboloid with walls of Mount Gambier limestone. The edge of the house had fringed eaves of hyperbolic paraboloid pergolas formed by the stepping out of the polygonal plan and stepping up of the parapet. The form of the house was softened by this bulging elaboration of the edge. Borland's interest in free

Fig.581 Kevin Borland, architect. MacHutchinson House, Park Orchards, Victoria, c.1960.

12. Interview with Kevin Borland, 13th July 1988. On a visit to Europe in 1966, Borland was impressed by Pietila's Dipoli International Conference Centre, Institute of Technology, at Otaniemi, near Helsinki, Finland which had just been completed. Although there are many buildings on this campus designed by Alvar Aalto, Borland found the Pietila buildings more exciting and exuberant pieces of architecture.
form arose from the simple logic of the system of construction and proceeded to gain in elaborated expression as the building grew to completion (13).

The Paton House
For Borland, the Paton House, Portsea, 1969 (fig. 582) was the second major turning point of his personal design development after the Preshil experience. This house was to influence all following commissions (14). The brief given to Borland was for a relaxed non-maintenance beach house. The result was an agglomeration of spaces, colliding and focussing at the entry hall and stair which were at 45 degrees to all the remaining spaces of the house. Borland attributes the inclusion of the 45 degree angle to Daryl Jackson (15). Andrew Metcalf has since described the use of the 45 degree angle in Melbourne as the "chamfer style" but gave no reason for its appearance (16). In Daryl Jackson's work, the diagonal owes its appearance to Jackson's interest in Louis Kahn's architecture and his space creating techniques employing the diagonal (17). Borland's introduction of the 45 at the Paton House extends the use of the diagonal to original ends.


15. Ibid. 1969 was also the year of Borland and Jackson's collaboration on the Harold Holt Pool.


Fig.582 Kevin Borland, architect. Paton House, Portsea, Victoria, 1969.
At the Paton House, spaces are grouped according to functional adjacency and sizes vary accordingly. The open square shaped living/dining and kitchen area is the largest space of the house with an overlooking mezzanine master bedroom, all within a large hipped roof volume with a triangular highlight window at the apex of the roof (18). The complex tightly clustered plan form generates unpredictable elevations cut by angular roof shapes and functional collisions on plan, a free and unpretentious composition. Framed in timber and clad in vertical clefted pine lining boards left to weather to a natural grey, the Paton House is a frank and tough shelter with a nest like interior, warm and humanly scaled. The only built-in colour appeared in the flush panel doors painted in yellow and scarlet enamel. The interplay of volumes, the sense of growth within the building suggest a concentration on interior space with the exterior left to occur as the brief dictated within. Echoes of M.L.T.W.'s houses at Sea Ranch resound through this design and others to follow, though Borland's compositions lack the order and repose inherent to the academic intentions of Charles Moore, Esherick and others in their approach to domestic design. Borland's beach houses have none of the symbolic allusions. They are fundamental, uninhibited and defy

Fig.582 Kevin Borland, architect. Paton House, Portsea, Victoria, 1969.

18. John Barker, "Relaxed Living" (The Age - R. A. I. A. Citation Award No.13), The Age, undated clipping; Howard Tanner, Housing in the 70s, pp.71 - 72.
analysis by association. In many respects they are untutored and closest to ideals of do-it-yourself pragmatism.

The Bland Flats
The Bland Flats, Aspendale, 1973 predate the more informal and free style of the acclaimed Crossman Flats at Launching Place of the following year. Five flats are packed onto a congested flat site with living spaces planned to take advantage of the sea views (19) (fig.583). Exposed materials, circulation elements, and simple volumes allowing free furnishing of the space within give this block of flats dramatic effect. Corrugated asbestos roofs, natural grey concrete block walls, exposed timbers to decks and balustrades, exposed oregon beams and precast concrete spiral stairs provide bold expressions of the individual architectural elements. A simple arrangement of the parts results in an expressive collection of functioning pieces of building.

The Nichols House
The Nichols House, Eltham, 1974 is a large sprawling house sited in unspoilt Eltham bush (fig.584). This house is an ugly duckling with awkward junctions of brick and timber, sculptural contortions of brick fins and heaped up skillion roofs and small and intimate spaces within. Built on a steeply sloping site, the house has five separate levels with a series of spaces ranging from the grand to the intimate in scale (20). The focal point of the house is the double height volume of the dining room adjacent to an
open kitchen and a raised playroom at the other end screened by a solid balustrade. Up another half flight of stairs, a long gallery overlooking the dining room separates the children's bedrooms and bathroom from the parents' quarters on top of the kitchen with a glazed opening that keeps an eye on the playroom below. The main living area is to the right of the entry up a flight of stairs and on the major floor level. It has a huge open fireplace, access to a deck on one side with controlled views to the north, east and west. Exposed oregon beams, internal timber linings and the complexity of the collection of spaces on plan and the interconnecting volumes give this house the impression of a huge piece of facetted sculpture or a ramshackle bushman's castle. This house is the quintessence of specific responses to every space. The children's bedrooms have little lofts above the sleeping areas which look out of large studio windows. Borland provided attention to outlook and orchestrated a whole complex of interrelationships that make up a large family home with growing children and the need for private and public spaces within the house. It is not a beautiful house but a rambling collection of individual and unpretentious forms. Once again comparison with two houses designed by architects,
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M.L.T.W. at Sea Ranch, the Rush House and Hines House (fig.585), both c.1969 (21) which had been planned with a controlling spine of circulation shows a resemblance to the organization of the Nichols House but Borland's mix of brick and timber sees a raw and excited departure from any basic model.

The Marshall House
The Marshall House, Somers, 1974 is another maintenance free holiday house (fig.586). View, slope and sun were the crucial determining factors of design. An elevated living/kitchen/dining room had views to the sea (22). The familiar palette of pine framing, pine lining boards, hefty timber balustrading, and galvanized steel decking appears. The stair and entry are again offset at 45 degrees to the major axes of the rooms. The plan is a deformed square over two storeys where functional requirements dictate the distortion and nuances of the plan. Exposed rafters protrude beyond the line of the eave. Awkward gutter and downpipe detailing, cut-out wedges and bays give this house a compacted vitality. The bulges and deformation are
like those of Annear whose Eaglemont house plans are
given similar contortions arising from functional
dispositions within.

The Crossman Flats
One of Borland's most interesting compositions was the
Crossman Flats at Launching Place in the Dandenongs,
1974 (fig.587). Three houses/flats interlock on a steeply
sloping site and spill down it in a carefully orchestrated
jumble of pine poles, pod-like bays, strutted eaves,
balconies and water tanks which sit beneath the building
elevated above its bush site (23). The familiar bush
vocabulary occurs: timber frame, treated pine cladding,
steel deck and shingles, timber windows and brick party
walls for acoustic privacy. Within each flat, split levels and
a sunken pit of the major living space create tree-houses in
the bush. The use of the 45 degree angle adds a rotational
quality, a dynamic torsional spin to these buildings. The
ad-hoc occurrence of angles, downpipes which bend
awkwardly and cutback eaves folding back and forth up
the slope of the roof give this building a sculptural quality. The

23. "74 Archi-Lotto", Architect,
November/December 1974, pp.10 -
11; Day, op.cit., pp.54 - 56.
building is fractured to reduce its large scale, and the expression of parts creates a picturesque composition essentially domestic. These flats are a community of buildings. The mix of rugged materials, simple craftsman's detailing and the free arrangement of form give a lively sense of empathy with bush pragmatism and a rejection of the status quo of the suburbs and the city.
The Colvin House

The ultimate Borland House of the early 1970s is the Colvin House, Warrandyte, 1975, one of his most vigorously expressionistic compositions (fig. 588). Another bush site provides the environment for a compacted wedge with a sloping roof pitching down to its apex so that all the water run-off spills into a corrugated galvanized iron water tank. The roof is simply a long skillion tapering down to a single point directly above the water tank on the low side of the site (24). The roof becomes an external expression of water collection in the same way as Boyd’s Finlay House or the later Briggs House, Lancefield, 1979 - 81 by Peter Crone. Within, the wedge-shaped volume is a fantasy of level change. From the entry area, a circular ramp leads down to the dining/kitchen room. Steps lead further down to the living room and more steps lead further down to a circular glazed end under the wedge shaped roof. At the centre of this curved bay is a pot-belly stove. Needless to say the house is a thermal nightmare with vast areas of glass in these living areas. The master bedroom under the highest part of the roof is a sleeping platform, reached by a

Fig. 588 Kevin Borland, architect. Colvin House, Warrandyte, Victoria, 1975.

spiral stair, the treads being planks cantilevered off an untreated log column. This house is Borland's most spirited deformation of the square.

Conclusion
The architecture of Kevin Borland in this period differs markedly from his houses of the previous decade which Borland concedes were deliberately intended to mimic Harry Seidler's designs after the failed Ctesiphon experiments and the structural bravado of the Olympic Pool (25). The tendency to experiment with structure never left Borland. The crucial personal catalyst of the Preshil commission and the rewarding result of a continuing client relationship over many years were to see Borland develop a position that was quite different from his counterparts of the 1950s. Robin Boyd was solidly committed to his notions of functionalism and the primary role of the architect. Peter McIntyre had entered the commercial world of highrise building and developing. Donald Fulton was designing large scale housing developments in northern Australia. Borland was an architect who was successfully putting into practise his political beliefs for the collective and the small scale, and providing a nurturing atmosphere.

for a new generation of architects eager to test their skills. In Borland's hands the house went back to that of the client. Choice was now the prerogative of the homeowner. Borland's design method was an idealistic process and one admirably suited to the laid back atmosphere of the early 1970s.

From the mid-1960s and well into the 1970s, the lure of the bush, as a retreat from the city and an ideal place for the living of alternative lifestyles came to influence suburban Australians. The bush was romantically regarded by many as a retreat from the anonymity of suburbia where one could do one's own thing, relax, live out one's dreams of informality and above all, avoid the stifling straitjacket of conformity which the suburbs apparently entailed. The relaxed and informal life of the bush became the inspiration for the search for an appropriate Australian architecture. A common palette of materials in the period c.1970 - 75 tends to mask individual differences between designers, so that critics easily label any house with bush materials or siting during this period as "nuts and berries". It is an easy dismissal of simple, unpretentious houses which fitted their purpose well and openly avoided the issues of urbanism, density and the progress of technology. Architectural fashion, artifice, and architectural language were all avoided in favour of the unpretentious and the freeform. The house was an accumulation of building episodes always on the way to completion.

Many of the bush houses in Eltham and other outlying suburbs of Melbourne were not designed by architects and were owner or communally built. By briefly examining three designers in this period one begins to understand the complexity of the bush house however and that there was considerable interest amongst architects in designing sensitively for the bush and searching for an appropriate expression of the Australian condition. Houses by Alistair Knox, Morrice Shaw, and Greg Burgess produce a revealing cross section. It must be noted that these were not the only architects practising in a bush vocabulary. The Paton House, Portsea, 1969; Marshall House, Somers, 1974 and Nichols House, Eltham, 1974 by Kevin Borland are significant examples, as too are the houses of other Melbourne architects such as Whitford and Peck, Russell French, the mud brick houses of Robert Marshall and the low energy houses of John Baird and John Cuthbert.

The common palette of materials of these bush houses is timber framed construction, treated pine poles, corrugated iron roofs or steel deck, earth toned bricks, mud-brick, fencing mesh as balustrading, simple window sashes, and
recycled materials such as cleaned brick seconds, railway sleepers and second hand timbers. It was a palette of making do, conserving energy and taking advantage of the resources at hand. When mixed with the silver green of eucalypts and the rich orange soil of the bush, the Australian house at last seemed to have come to terms with the bush. The city seemed far away.

**Alistair Knox**

The environmental philosophies of Alistair Knox blossomed again in the late 1960s and 1970s in an atmosphere of alternative living and concern for the environment. Knox had been designing and building timber, brick and mudbrick houses in the bush around Melbourne since 1947. In 1965 he built a new house for his family at Eltham (figs.589, 590 & 591). *Australian Home Beautiful* in November 1966 described it as,

"almost literally growing from the soil is this house that captures the country's soul" (1).

Hugh O'Neill also recently described this influential house.

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His own large home built for Margot and their five children in orchardist, Eddie Anderson's gully on Mount Pleasant Road, inspired hundreds of refugees from suburbia to invest in bush acres from Lower Plenty to Mount Slide and beyond, and engage Alistair in a joint building venture. Massive timbers salvaged from demolished warehouses or bridges were used with handmade adobe bricks (now available commercially) to support mezzanines and sunny highlights under his much loved expansive roofs. The resulting energy inefficiencies were ameliorated by heat absorbent terracotta floors, huge fireplaces of considerable thermal mass, and sensible home-spun garments (2).

The Knox House was extremely large and was planned as a vast rectangle of solid adobe piers with glass and timber infill panels. At the centre of the formal plan was a living room ringed by bedrooms and service spaces in the same manner as Walter Burley Griffin and Marion Mahoney's tiny "Pholiota", Heidelberg, 1919. The flat roof of the central living room was raised above the rest of the roof to provide clerestory lighting and two huge brick fireplaces sat diagonally opposite one another in this slate-tiled space of baronial proportions. The major internal walls of the
Knox House were adobe. The heavy roof beams are exposed. Furnishings such as folding doors are discarded church pew backs. Brick paving, jarrah floors, panels of second hand bricks and a soft leather curtain which separates the kitchen and main bedroom area from the living room are typical of the warm earthy textures and finishes of this house. There are five fireplaces in the house. Around the edge of this simple plan with its very simple gestures is a broad pergola dissolving the edge of the house.

By 1966, Knox had designed and built over 400 houses. With the assistance of landscape architects such as Ellis Stones, Gordon Ford and Peter Glass, his name became synonymous with a sensitive approach to building and the environment well into the 1980s (figs.592 & 593). His encouragement of a participatory building process aimed at rousing community spirit amongst family, builder and designer as well as conserving energy and building with materials in harmony with the land. The artistic circles in which he moved in Eltham lent a further romantic mystique to this man's simple philosophy of "timeless building" and
"as-found" materials. As his influence grew, many more houses were designed by him from his semi-embedded bluestone studio in Eltham (3) and his books, Living in the Environment, (1975), Alternative Housing (1980) and We Are What We Stand On (1980) were extremely popular (4). Alistair Knox died in 1986.

Escape from the materialist ethos of the suburbs was the political motive behind many who moved to Eltham and similar areas and took to earth building. The morality of conservation spawned the resurgence of a mud brick building and self-build tradition once again in the outlying bush suburbs of Melbourne.

Morrice Shaw

The Leon Saper House at Cottlesbridge, 1965 was designed by young architect Morrie (Morrice) Shaw and sited in bushland 25 miles from Melbourne (5) (figs. 594 & 595). Due to the excellent building quality of the local soil and the limited budget for the house, it was decided to use pise construction and second-hand materials. The client, a bachelor and potter, stressed the importance of secure intimate spaces and also the simultaneous need for


entertaining. The house became the literal translation of these demands. The fireplace and bedroom cells were the cores of the intimate spaces and were formed in curved mud-brick enclosures with low ceilings. The fireplace cell had a vast open hearth with built-in timber storage and bench seats. The bedroom cell contained a large foam mattress cut into a curved recess, providing a soft surface at floor level. The active zone of the house was the high spaced living area. Radiating timber beams formed two
mushroom-like roof umbrellas. The geometry of the roof was that of two intersecting circles with organic extensions on either side to provide extra functional space as required. Telegraph pole columns were located at intervals around the circumference of two intersecting circles in plan with rafters radiating from central poles. This organic anthropomorphic roof was sheathed in timber shingles, with its supports being weathered telegraph poles. All the furniture in this large flowing space was incorporated into the walls. The floor also undulated, free to buckle and depress, and the brick paving radiated outwards like an inner force slowly growing larger. Detailed drawings for the house were not prepared, and both architect and client attempted to let the building evolve during the building process. Freedom of choice was maintained at all times during the project. The large umbrellas enabled free and independent development of the living cells beneath. In Shaw's own words,

_The result is an environment where all elements, walls into seats, floors, are dynamically inter-related and provide constant stimulus of discovery, of new form relationships as well as satisfying all physical requirements_ (6).
The mix of natural materials, timber, pise and brick and the roof rising from the ground give the feeling of building as integral with the landscape. The huge sheets of glass were fixed between grooves in the timber posts. In parts of the ceiling there are slats to diffuse the light and glass also covers these areas as if one were sheltering beneath the shaded boughs of a tree. This is a remarkable house and contemporaneous with similar unpublished developments at the time in Northern California in Sausalito and Marin County. Shaw built the house with the owner and a few friends with the exception of the cedar roof which was laid by a roofing contractor. Collections of beer bottles set into the mud walls give areas of mellow amber light. This was a unique house in Melbourne quite different to the ever extending ad-hoc "Stonygrad", the house built by the artist Danila Vassilieff at Eltham in 1949. The Saper House is thoroughly controlled in its overall spatial and structural conception as opposed to the literally organic growth of the Vassilieff House (7).

**Greg Burgess**

In the first five years of practice between 1971 and 1976, Greg Burgess produced a large number of houses, 18 of note in this short period (8). A cursory look at these houses marks them as being "of the bush" with the familiar palette of frank timber pole construction, treated pine timbers, an uninhibited mix of materials and forms, and detailing that was resolved as circumstance dictated. However the apparent artlessness of these early designs prefigures a notion of transformed geometry as the basis for design that would inform his later work. Two important issues characterize these early Burgess designs: the idea of centre and the notion of organic growth from that centre.

The centre of each Burgess house is associated with a living space and a vertical axis, in many cases, a circular stair. It is a fertile centre, not only of circulation but also the vertical axis potentially provides light and the means to connect spaces, a vertical sensation of release as opposed to the containment of the horizontal spaces. From this accentuated centre, the rooms grow outward as required. The growth is organic and often in plan differentiated by the living space and stair shifted in orientation, that is, rotated, to heighten the importance of the seeding space of the centre.

7. For a description of "Stonygrad", see Wynn Scott, "Stonygrad - Home in a Quarry", *Australian Home Beautiful*, October 1949, pp.27, 76 - 77. In a brief discussion with the client, Leon Saper, 26th November 1988, Vassilieff's "Stonygrad" was said not to be an influence in the design of his own home at Cottles Bridge. Of formal interest to Morrie Shaw, according to Saper, were the exuberant curves and textures of the architecture of Catalonian architect, Antonio Gaudi.

Burgess’s first commission, the Weston House, Anglesea, 1971 (fig.596) demonstrates the structural clarity of pole construction gained from his brief experience in the Jackson and Walker office. The idea of separating the walls from the structure and a limited number of supports had for Burgess an appealing logic and simplicity. The central core of living room and adjacent stair is the growth centre of the house. A cruciform living space is the fixed base from which the agglomeration of other spaces occurs as required. Treated pine poles on a ten-foot grid connected by doubled oregon beams provide the structural framework with exposed diagonal cross bracing for rigidity. A cost saving was achieved by using non-load bearing oregon framed walls with studs at twice the normal spacing. At the time, Burgess described the house as,

an open-ended framework in which the client determines the detail planning requirements. The building becomes a flexible system rather than a static structure (9).
In this respect the client has the ability to transform the initial parti proposed by the designer. In Burgess's case, the cruciform plan and stair of the two storey house come first and the house grows from within, expanding to accommodate every need. The result is a free-form uncontrived design. Cantilevering decks and timber support struts occur not so much as an expression of structural truth but as accommodations of this free growth (10).

The Barlow House, MacRae (11) (fig.597) and Macleod House, Glen Waverley (12), both of 1972, develop the theme of a centralized living space with kitchen, living and laundry to one side, and sleeping block to the other. The placement of the living room at 45 degrees to all the other spaces of the house accentuates its importance as collective centre (13). The rotation of this space heightens the tautness of house perimeter where the sticks of verandah and decks become an armature to the inner growth force of the house. The Eaglemont houses, c.1902-5 of Harold Desbrowe Annear have the same taut skin-like armature controlling the pressures of the plan within. Like Annear, Burgess's houses have the same structurally explicit skeleton with a free form infill of mixed textures and fenestration.

Fig.597 Greg Burgess, architect. Barlow House, MacRae, Victoria, 1972.
Chapter 7: Environment and Participation: The Lure of the Bush House in Melbourne

A clue to the pronounced geometries of later Burgess houses can be found in the 1972 house for Kathy and John Hawkins, a large polygon in plan built at Gisborne on a sloping bush site (14) (fig.598). At the centre of the three level house was a spiral stair, encased on the lowest level in brick and flanked by two cylindrical water tanks. On the upper level, rooms opened off this central shaft. A sundeck to the north expanded beyond the geometric shape of the plan to form a roof for the carport below. From the central fulcrum of the stair, structural floor beams and floor joists spread around like spokes to enclose the rooms. The geometric purity of Roy Grounds' cylindrical Henty House, Frankston, 1952 is recalled. At the top of the lantern volume of the stair at the Hawkins House is a bedroom/study surrounded by a band of clerestory windows overlooking the treetops. The Rockman farmhouse renovation at Yanakie, 1973 (fig.599) also took the notion of tower and centre as the basis for its development. The original farmhouse had a virtual square plan and Burgess gave the house an identity and a centre for its subsequent growth by inserting a staircase tower and new first floor sitting room and lookout above. It was the Rockman House which gave the greatest and strongest
recognition for Burgess of the power of the vertical centre and the control of volume (15).

The Balde House, Emerald, 1973 further accentuates Burgess's ideas of growth and organic unity and indicates experimental moves toward a premeditated transformation of geometry to accommodate the growth pressures of the spaces within (16) (fig.600). Burgess's philosophy at this stage is simple and undeveloped. The form of these houses are brought to fruition by participatory effort through an intimate client/architect relationship that frequently involved the use of architectural models in the decision making process. The Balde House was divided into two zones. The centre of the living zone was a circular stair. Spaces bulged off this centre in dynamic curves of mud brick to form living, dining, and kitchen alcove spaces (17). Above sat a study. In contrast, the sleeping zones of the house were simple rectilinear spaces in a simply planned bedroom block. Over the top of this free-form plan was a relatively regular roof. The concept of two opposites, a regular
system meeting a free-form system could produce exciting results and it is from these early houses that Burgess explores the results with growing realisation of his own method of design.

A continued sense of organic growth, where the plan is distorted and loses the orthogonal control of the so-called chamfer, occurs in the Heath House, Warrandyte, 1975 (18) (fig.601). A central cylindrical stair once again is the core of the design. Polygonal shaped rooms, wedge shaped rooms and rectangular spaces are collected about the stair and a circular pantry roofed in glass. Each room is considered as a unique entity with its own decks, shading or aspect but opening back onto the central lifeline of the house, the stair. The resulting complex is startlingly fluid and compacted. Decks and pergolas, and differing overhangs give the sense of an ad-hoc free-form design.

The catalyst for coercing Burgess’s loose philosophy of centre and organic growth into a deeper and more specific design philosophy occurred about 1976 when the young Adelaide architect, Richard Munday entered Burgess’s office (19). To that date, Burgess had relied on what had become a relaxed formula of design. The two architects clashed intellectually which caused Burgess to think deeply about his own ideas and begin a process of self examination. The Becker House, Eltham and Don Scott House, Eltham (fig.602) both of 1976 both signal a move by Burgess making form with a specific interest in geometry. From 1976, Burgess starts to develop a more rigorous aesthetic position and not to rely solely on issues of the 1970s, those of client participation and free form-making. The house still retains the theme of central living.
space and vertical axis. The Amalie Holden House, Strath Creek, 1978 (fig.603) and the May House, Kangaroo Lake, 1978 show the definite development towards a new interest in geometry. The seeds for later years are planted.

The houses of the bush have been much maligned in recent years. For the architect in the mid-1970s, the freedom of the bush site and enlightened client coincided with a political commitment to environmental concerns and the primacy of the user in the design process. This was a dramatic turnaround for the traditional architect-client relationship. No longer was the architect the sole artiste. The process of participation was regarded as a crucial political responsibility. The discovery of form was uninhibited and the architect was to be the skilled catalyst in the operation of achieving a home. The way that these houses evolved had much to do with helping people to do what they wanted to do and giving them more. Participation was an essential part of the process, working directly with clients to improve the quality of life, and importantly much was about the heightening of one's senses. By 1975, the tide was turning. Architects began to experiment once more with artifice and pretensions to composition. The lack of intent behind the architect's own hand had begun to irk many designers even though the mode of design had suited perfectly the release of the reformist political climate of the Whitlam years of 1972-75. International publications in the late 1960s and 1970s of the work of Louis Kahn, Robert Venturi, Charles Moore, and the New York Five were persuasive in their overt return to visual and aesthetic preoccupations.
The legacy of the houses of the bush was a free form of expression via the process of additive composition. The houses of Knox, Shaw, and Burgess are some of the most sophisticated responses to the bush. The Eltham tradition flourished and the romance of the self sufficient, self build lifestyle continued and perpetuated a retreat from and disdain for the suburbs. The idealization of the single family house did not change despite the liberal intentions of client and architect, and the socialistic leanings of participation and collective living. If anything the dream of the single family home as individualistic haven intensified. The overwhelming desire for a simple unadorned lifestyle in a rustic handcrafted environment extended its influence to encompass not only the mud brick houses of Eltham and Warrandyte but infiltrated the design of project houses such as Graeme Gunn’s Merchant Builders houses. The Australian bush also crept inward to the gardens of the inner urban terrace houses of the social intellectuals of Carlton and Fitzroy. It seemed that the bush had designs on even the city itself.
The Return of Artifice: Melbourne and the so-called Chamfer Style

The rash of 45 degree angles appearing in Melbourne architecture in the late 1960s and 1970s both in plan and section deserves some attention. In the design of the house between 1969 and 1975, the chamfer was remarkably pervasive. Its contribution has yet to be questioned, as also the intention behind its use. When combined with a palette of building materials such as concrete block, angled glass, natural galvanized steel decking, untreated timber boarding, log pole construction, the chamfer provided a recipe for sculptural form that was adaptable to specific site and client requirements; sculptural volume within and the admission of light into the internal spaces of the building via the much vaunted cathedral ceiling. The chamfer was a compositional tool to explore the parti for other reasons than function alone, a revival of the craft of spatial and formal manipulation for the architect and indicative of the years of change ahead.

The major protagonists of the chamfer were the inheritors of the first stream of New Texturalists (Graeme Gunn, Bernard Joyce, Kevin Borland and Daryl Jackson) and their experiments with the 45 degree angle and the dumbbell plan (a developed bi-nuclear plan which entails a spine with the rooms hung off). Their designs involved the search for three-dimensional sculpted volume. These young architects included Max May, Peter Crone, Peter Williams and Gary Boag, Baird Cuthbert, Genser Shepherd and Associates, and Morris and Pirotta (1). Of interest is the association with the two major teaching institutions in Melbourne. Graeme Gunn, Daryl Jackson, Bernard Joyce and Kevin Borland were all associated with teaching at the R.M.I.T. (2). Max May, Peter Crone and Peter Williams were students there. Edgard Pirotta studied at the University of Melbourne.

Of influence from overseas were the concrete block houses of English architect Colin St.John Wilson and more particularly the early houses of Richard Rogers and Norman and Wendy Foster in Cornwall (3). Another vital catalyst to the emergence of the 45 degree angle in domestic architecture in Melbourne was the publication of Moore, Lyndon, Turnbull and Whitaker's Sea Ranch Condominium #1, Northern California (fig.604) in the
Chapter 7: The Return of Artifice: Melbourne and the so-called Chamfer Style

May 1966 issue of *Progressive Architecture* (4). The work of other associated Bay Region architects such as Joseph Esherick, George Homsey and Richard Peters must also be considered of influence at this time (5). The collected shed roof forms of Sea Ranch came at an opportune time when the making of urban form was a major issue in all facets of architectural design. Charles Moore's places within spaces provided immediate appeal in the search for an appropriate form for the house and a restoration of concepts of shelter and permanence. Moore's houses at this time also partly realized the attractive theoretical and formal ideas of Louis Kahn (6) which had experienced by 1966 little visible application to the small scale, one-off domestic commission. One of Kahn's major contributions was his use of the diagonal to extend space and fragment the square. In his project for the Morton Goldenberg House, 1959 (fig.605), Kahn made use of the diagonal to give the rooms a size and shape which they "wanted to be" as well as retaining the order of the square central courtyard. The house was able to explode outward and was freed from the "geometrical bondage of the square" (7).

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Fig.604 Moore, Lyndon, Turnbull, and Whitaker, architects. Sea Ranch Condominium #1, Northern California, U.S.A., 1965-


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Fig.605 Louis I.Kahn, architect. Project for the Morton Goldenberg House, 1959.
Another influence to note is that of English architect James Stirling, his architecture and his rendering techniques.

Buildings such as the Engineering Building, Leicester University, 1959; History Faculty Building, Cambridge University, 1964; Florey Building, Oxford University, 1966 (fig.606) employed red brick wing walls, angled industrial glazing and revered the tectonics of industrial architecture. The 45 degree angle was used as an ordering device overlaid onto a grid or as a major organizing axis on plan. The chamfer appeared also in the axonometric drawings of Stirling's buildings. These axonometrics in simple back-lined ink technique gave the building the impression of a precisely constructed machine. The spectre of Le Corbusier's idolization of the machine and 19th century French architect Choisy's view of architectural history as the logical consequences of developments in building technique, much elaborated upon by Reyner Banham in his book, *Theory and Design in the New Machine Age* (8), all seem close to such deliberations. In Melbourne in the early 1970s, presentation drawings for houses were predominantly axonometric. Crone, Morris and Pirotta, Baird Cuthbert and many others were drawing axonometric projections to explain the massing, spatial break-up and textures of their houses.

The emphasis amongst all of these diverse influences was the idea of the small scale, of non-suburban ideals and delight in the tectonics of the object. The house tended to be an urban model, or vaguely alluded to the factory made object or to vernacular rural architecture. The anonymity of the middle ring of suburbs was seen as a barren area for research both in terms of site size and layout and its particularized vernacular. This suburbia was disliked by Melbourne's arch-adjudicator of taste, Robin Boyd and...
was highlighted by his 1960 book, *The Australian Ugliness* (9) and later periodical articles which despised over the all-powerful suburb (10).

In *Architecture Australia*, January 1982, Andrew Metcalf cited the "chamfer style" as characterizing the work of Borland, Jackson, Crone, May and Gunn (11). Though not defining any stylistic principles, a collection of phrases and terms used by him to describe Kevin Borland's Nichols House, Eltham 1973 (fig.607) serves to indicate what he meant.

The Nichols House is the rural shed par excellence as it manipulates lean to forms of ordinary timber construction into an icon of bush domesticity - anti-modern and expressionistic. With its constant use of the chamfer in both plan and section and the bucolic materials it is everything that the city of Melbourne is not: irregular play (versus the Melbourne "grid"), chamfers (where every street on the grid forms right angular intersections) and undulating (where the city is flat) (12).

After this statement, Metcalf goes on to use the term chamfer style without any further elaboration. His apparent definition avoids the compositional and spatial applications of the chamfer, of which there were many, and the presence of concrete block as a crucial building material of the period.

An interesting benchmark for the establishment of the "chamfer" in the domestic vocabulary of Melbourne architects in a broad sense is the list of award winning houses in the 1972 R.A.I.A. Victorian Chapter Awards (13). The 1972 awards list does not give a complete story
but is revealing in that it depicts a fascinating cross section through two generations of architects and demonstrates that the seeds of the chamfer as a tectonic device had definitively taken root.

The list of award winners was as follows:

House of the Year:
Fletcher House, Brighton - architect: Edgard Pirotta (1971)

Citations:
Featherston House, Ivanhoe - architect: Robin Boyd (1967)
Mason House, Brighton - architect: Bernard Joyce (1971)
Abrahams House, Brighton - architect: Peter Crone (1970-71)

The Paton House, 1969 is regarded by Borland as a critical work in his career. It is the first time that he believes he had used the 45 degree angle consciously to manipulate two overlapping squares in plan and provide interconnecting volumes (14) (fig.608). 1969 is also the year of Borland's collaboration with Daryl Jackson on the design of the Harold Holt Pool, Malvern.

The Featherston House, 1967 is a period specimen in 1972 (fig.609). Robin Boyd had died in October 1971 and this house with its strong dominating conceptual idea of floating platforms within a large volume had become a theme no longer as important as the chamfer.
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Fig.609 Robin Boyd, architect

The Mason House, 1971 was constructed in exposed single skin concrete block (fig.610). The plan is a dumbbell with wing walls and the chamfer used only in the volumes over the living areas. The plan was conceived as a spine with rooms saddlebagged off it. Peter Crone worked closely with Bernard Joyce on the design of this house (15).

Fig.610 Bernard Joyce, architect.


The Hickey House was a tour-de-force in 45 degree angle planning built for the artist Dale Hickey at Eltham (fig.611). The house is a collection of sculptural prisms. The 45 degree angle is used to create courtyards and wing walls as well as manipulating indoor space. By comparison Kevin Borland's 45 degree angle planning distorts internal space to meet specific functional requirements. Consequently it appears that the 45 degree angle can be used to different ends though giving the appearance of a consistently used formal device.

The Fletcher House was a sophisticated design by young architect, Edgard Pirotta (fig.612). The chamfer allowed interconnecting volumes between first and ground floors.
In plan, the 45 degree angle was used to create the shortest route between entry hall and living space. Angled glazing was employed on the south face of the house to form a gallery. This house was also built in concrete block.

The Abrahams House was one of Peter Crone's first houses (fig.613). Chamfered volume and chamfered plan occur. At the point of entry a private blinker wall to the rest of the house forms an embracing wall to a west facing court. Built in clinker brick and roofed in slate, the Abrahams House predates by just a few years Crone's sophisticated concrete block house designs.

Between 1969 and 1975 when Peter Crone's Coakley House is built in Hampton, the chamfer became the leitmotif of many young Melbourne architects' work. Borland, Jackson, Gunn and Joyce were to maintain their interest in the 45 degree angle and developed its use in larger non-residential commissions of the 1970s. The
following discussion examines not these architects but younger architects, and their houses between 1969 and 1975.

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**Morris and Pirotta**

The Fletcher House designed by Edgard Pirotta was a large house and contained the complete recipe for suburban living of the post-1970 era (16) (figs.612 & 614). The parents bedroom was situated at the front of the house with its own en-suite and dressing room. Dining and living room were separated by a fireplace while above there was a mezzanine study open to the dining room below. The house was organized off a linear spine which bent at 45 degrees to avoid the carport and provide an entry hall which gave no immediate indication of the spatial delights beyond. The spine was conceived as a skylit gallery rather than as a passage and was elevated above the north facing living and dining rooms. Natural grey concrete blocks were used internally contrasting with the primary reds and blues used in the furnishings and fittings. Unlike the idea of an architecture that blended into its surroundings, Pirotta's forms were compacted. They had an urban density rather than the free informal forms of the bush. This house is amongst the first accomplished images in Melbourne of International Brutalism. The diverse set of volumes make this an exemplary house of the period.
The Silbersher House additions, Camberwell, 1975 and urban infill houses in North Melbourne and Richmond (fig.615), 1970 - 76 designed by the partnership of Morris and Pirotta extended the application of these bold sculptural forms to inner urban sites (17). Half round stair towers and muted allusions to forms by Le Corbusier, discrete collections of prisms, and the highlighted junctions of form meeting form characterize these agglomerative designs.

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Fig. 616 Morris and Pirotta, architects. Batrouney House, North Balwyn, Victoria, 1975.

The Batrouney House, North Balwyn, 1975 was a completely new house (18) (fig.616). The dumb-bell plan was made complex by a series of split levels and mixture of stair and ramps. An acrylic skylight over the ramp was a piece of industry used in the home. Colours were bright primary reds which highlighted handrails and mullions and recalled the primary colours of Piano and Rogers's Pompidou Centre, Paris, 1971 - 77. The concrete-block walls were bagged and painted white. The chamfer occurred only in volume. This house exemplified confident sculptural play.

Fig. 617 Morris and Pirotta, architects. Molnar House, Glen Waverley, Victoria, 1976.

The Molnar House, Glen Waverley, 1976 is Morris and Pirotta’s grandest and most expressive scheme of the period and is one of Melbourne’s largest off-form concrete...
and concrete block houses (19) (fig.617). Combined with angled glazing and a bulbous circular stair, a plan that stepped back and forth and with two vast elevated decks, this is indeed the *maison-brut* par excellence. Industrial technology had been brought to bear on the domestic commission. Like Harry Norris's "Burnham Beeches", 1930 - 33, the Molnar House is a period specimen rather than a house design pushing the limits of program or aesthetics. The vast 60 square house is built of Monier grey concrete block with reinforced concrete floor slabs throughout. Entertaining, living and bedrooms spaces in this three level house are large and deftly organized about the circular stair tower. The strong primary reds and blues are typical of the bright pop colours of the time. Even without the service quarters of the pre-war years, this house is of palatial size. Peter Corrigan was to say of the Molnar House,

*The imagery is not polite. It does not attempt to flatter or provide a polished reflection of more darker truths. In our affluent eastern suburbs it is not particularly endearing (20).*

As with other Morris and Pirotta designs, the Molnar House is sculpturally separate and disdains the conformity of its neighbors. It is an additive agglomerative design of solid walls, balustrades, decks and tower. Unlike the slim reductive chamfering in the houses of Peter Crone or Max May, this is additive, rich, jagged and overtly distorted for three dimensional effect.

19. John Barker, "No-compromise design isn't everybody's dream of home", *(The Age - R.A.I.A. Citation Award No.1, Series 6, The Age*, undated clipping.

Max May

Max May initially trained as an engineer before completing his architectural studies at the R.M.I.T. His houses have a robust structural emphasis. Building elements double their function. The house becomes a vigorous interchange of form, structure and materials as opposed to the structural-functional containers of space of the 1950s and 1960s. May's houses are an unabashed collection of sculptural highlights and simple unadorned volumes. Collision and joy in the pieces of architecture and their fortuitous connections are part of May's interests as well as the slick machine-perfect detail of early Corbusian houses.

The Veale House, Blackrock, 1974 is typical of May's work. A dumb-bell plan entered from the middle separates the house into two sections split by a kitchen dining, and bathroom above (21) (fig.618). At either end of the dumb-bell on the first floor is a master bedroom and ensuite and two children's bedrooms at the other. On the ground floor, a studio living room is opposed by a family and utility room. The link between the two areas on the upper floor is treated as a bridge with angled glazing between the two functional and physically discrete solid brick enclosed ends of the plan. The chamfer is replaced by curving brick wing walls to embrace the spaces within.

A related house design was the Mears House, Kallista, 1973 - 74 built on a heavily treed site and designed in conjunction with Peter Crone (22) (fig.619). This was another dumb-bell plan with a double storey core of bathroom and laundry separating bedrooms and cellar at one end of the house and master bedroom and living/dining/family/kitchen at the other. On a steeply sloping site this wing-walled plan and its banks of angled
glazing was an attempt to minimize intrusion onto the site and create high internal volumes. The chamfer in plan was used to provide courtyard space and reduce wall lengths of the bi-nuclear plan. The angled walls also directed visitors to the house, from the high side of the slope above, down to an entry deck. On entry, a gallery bridge connecting the two separate bedroom areas overlooks the entry hall. The parents' study and bedroom overlook the family and dining areas.

Max May's best known house of this period was designed for builder Ken Rattle (23) (fig.620). This all-timber house at Harkaway near Berwick was built in 1974 for "relaxed living and entertaining that was easy to keep tidy with three children". The solution was a series of interlocking spaces on two levels enclosed by angular walls of timber and glass. It is the interlocking or collision planning which makes this house significant in 1974. The conscious intermeshing or splicing of form was a new phenomenon and its formal complexity was resolved by client consultation using architectural models. The diagonal pine boarding used inside and out as the dominant walling material was also a feature that would be rapidly repeated in

Figure 620 Max May, architect.

architect-designed and project houses in Melbourne. Large areas of plate glass were reinforced by glass ribs to avoid breaking the clear lines of their huge open expanses. On the ground floor plan, a service block of kitchen, laundry, and bathroom has displaced around it the 45 degree rotated spaces of living, dining and family rooms. It is as if the service block was rotated within an overall square. Two major fin walls at 45 degrees direct the views of the house out to the landscape on one side and on the other, garage and stables and enclosing courtyard fin wall are orthogonally aligned with the service block. Chamfered volumes in plan and the extension of fin walls beyond the envelope of the building resulted in a complex composition of diagonally boarded timber buttresses or fins. The glass simply became a skin to demarcate an interior. The house is a tour de force of planar collision and intersection with gabled roofs and timber boarding that diffuse its abstract conception. Though the interior volume was certainly complex and visually arresting, acoustic privacy in this house would be extremely difficult to control.

Traces of the complex compositional ideas for the Rattle House can be found in the two Mills houses built on a
family property at Skye in 1973 (24) (fig.621). Like the Rattle House, these houses sit on rural blocks and immediate affinities with farmhouse buildings are suggested. The Mills Junior house is a simple reinterpretation of indigenous forms. The skillion verandah attached to a simple rectangular plan is elaborated by 45 degree angle bays which broaden the width of the house. The Mills Senior House is more complex. It is a collection of sculpted cubic prisms organized along a diagonal axis.
and arranged structurally according to a grid of posts. The sleeping prisms are expressed as enclosed timber clad forms while the living spaces of the house have glazed walls and dynamically shaped skillion roofs. Over the living room there is a butterfly roof which opens to the sky with verandah roofs attached. In many respects this process of separation and the overlay of geometry recalls a similar process undergone by Colin St.John Wilson in his design for the Cornford House, Cambridge, 1966 - 67 (25).

The Trachsel House renovation, Hawthorn, 1974 perhaps best represents Max May's engineering background. A huge bridge truss in rough sawn oregon supports a corridor and bedroom wing above a glazed indoor swimming pool in an extension to a Victorian house (26) (fig.622). This is a gutsy solution lacking elegance but full of verve. The extension becomes a glazed ghost of the polychromatic brick original.

On a suburban block in Kooyong for Merchant Builders Pty. Ltd. in c.1974 (27) (fig.623), Max May used the chamfer to create four double storey townhouses and to allow orientation of the living spaces to the north so that each could be given individual identity. The theme of wing and party walls provided a simple and economic structural formula for the design of the four interlocking houses.
The Ereaut House designed by Max May in association with Peter Crone at Belgrave, c.1975 elaborates the dumb-bell plan by stretching fin-walls outward from it and using circulation bridges and paths to create volumetric interest within (fig.624). Set amidst a pine forest, the gallery link to the billiards room hovers above the ground. The Ereaut House is an attempt to explore the new formal manipulations of the East Coast U.S. architects, the New York Five (28). Hints of sophisticated planimetric composition are introduced. The chamfer is used to inflect the arriving visitor to the front door which sits at the confluence of the two angled walls. Upstairs the dumb-bell plan denotes the separation between children's and parents bedrooms and below a double height volume over the dining room increases the spatial drama and denotes this separation. Deck spaces are created by left over slices of the chamfer and are not additions to the overall volume (29).

Max May and Peter Crone used the 45 degree angle in glass and wing walls to minimize wall length and explore spatial and structural articulation in visual terms. Directional and aesthetic reasons were the contrivances to achieve formal interest rather than exclusively rely on the
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Fig. 624 Max May and Peter Crone, architects, Ereaut House, Belgrave, Victoria, c.1975.

Orchestration of complex pressures at work on the plan and the spontaneous result. By contrast, Kevin Borland used the chamfer to enable the addition of bays and extra space on plan. Form was allowed to occur in an untutored and ad-hoc act of spontaneity. For May and Crone, there was an aesthetic intent behind the making of form.

Genser Shepherd and Associates
Together with Edgard Pirotta's Fletcher House, 1971 and Kevin Borland's Paton House, 1969, the Hickey House, Eltham designed by Vaso Tsemelis in the office of Genser Shepherd and Associates in 1970 rates as one of the foremost examples of the chamfer appearing in the design of the house (fig. 625). The artist client gave the designer carte-blanche, requesting only "a house of individuality" (30). The Hickey House is a sculptural tour de force in 45 degrees. This house also has a dumb-bell plan with bedrooms and studio forming each end. Plan and section were chamfered to produce clean triangular prisms devoid of fussy detail. The collection of forms then were disposed down the sloping bush site in a crystalline mass. Within, the spaces were simple and unadorned. The use of highlights and the collection of shed roofed forms recalled

the composition of M.L.T.W.’s Sea Ranch Condominium #1, but the strident use of the chamfer resembles other American experiments such as young Yale graduates Bill Reineke and David Sellers’s series of Tack, Bridge, Reineke and Pope Houses at Prickly Mountain, U.S.A., 1966 (fig.626) all of which were bold experiments in the sculptural qualities of the triangular prism (31).

Fig.625 Genser Shepherd and Associates, architects. Hickey House, Eltham, Victoria, 1971.

Peter Williams and Gary Boag

The design for the Robert Fordham House in Maribyrnong, 1972 from the young firm of Peter Williams and Gary Boag was a rugged version of the chamfer and agglomerative planning of Kevin Borland (32) (fig.627). The construction of log poles, board and batten pine siding and the side elevation of decks, stairs, chimneys and highlights give the impression of a complex plan within but the house has a conventional plan with chamfered ends and rotated attached blocks. The chamfer was used to facet the house to provide an outlook from every room, especially those rooms close to the boundary which would otherwise have overlooked the neighbor's property.

John Baird, Cuthbert and Partners

A significant house designed by architect, John Baird and his younger partner, John Cuthbert was that for artist, Leonard French in Beaumaris, 1973 (33) (fig.628). The client required studio space for himself as well as a spray deck and library. Like Bernard Joyce's Mason House, the chamfer occurred in section to provide interconnecting
volumes between ground and first floor. The plan was an elaborated dumb-bell with a gallery spine on both levels connecting a very large double height living block to the double storey bedroom and studio block. The materials used were exposed concrete blocks, natural galvanized steel deck, concrete slab and slate paving. On a typical suburban site, with such a palette of materials and the client requirement for large areas of internal wall space, this house appears as a private fortress.

Peter Crone
In 1972, Peter Crone won an award for one of his first houses, the Abrahams House, Brighton, 1970 - 71 (figs.613 & 629). It was a large house built of clinker bricks with a slate roof. A gallery overlooking the family and living rooms within a chamfered roof section and 45 degree angled blinker walls give this design a massive appearance when seen against Crone's later Huebner and Coakley Houses. The plan of the Abrahams House is based on an L-shaped spine with the double height
Fig. 629 Peter Crone, architect. Abrahams House, Brighton, Victoria, 1970-71.

34. John Barker, "It's individual - in clinker and slate", (The Age - R.A.I.A. Citation No.32), The Age, undated clipping; John Barker, "Brighton house takes top award for 1972", The Age, 27.11.1972, p.16.

35. Day, op. cit., pp.158 - 161; "Three storey design is House of the Year", The Age, undated clipping; "B. H. P. House is Top Building", The Age, undated clipping; "Three storeys on two acres provide treetop - height views", (The Age - R.A.I.A. Citation No.39), The Age, undated clipping.

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chamfered volume of the living room embraced by the arms of the L. The densely planned service areas owe much to the planning clarity of Bernard Joyce's architecture (34).

By comparison, Crone's award-winning Huebner House, Olinda, 1974 built on a steeply sloping block in the Dandenong Ranges is significant as one of the most skilful uses of the chamfer (fig.630). The effective resolution of decks, bridges, mezzanine levels, blockwork and angled glazing is rare in the 1970s (35). Built of concrete block with wing walls and copious amounts of angled glazing, this house is one of two domestic types frequently employed by Crone: the multi-level centralized core house and the stretched spine house where rooms are saddlebagged off a circulation spine.

Designed by Crone whilst travelling overseas on a Haddon Scholarship in 1972-73, the Huebner House sees a return to the pre-World War 2 years of accomplished reformulation and assimilation of diverse sources both local and international. Whilst in Europe, Crone had seen and been inspired by many things. Of particular interest to him was the concrete block and angled glass vocabulary of
Richard Rogers and Norman and Wendy Foster's Brumwell House, Creek Vean, Foeck, Cornwall, 1966 (fig.631) and Skybreak House, Radlett, Hertfordshire, 1966 (fig.632) and the two priest's houses designed c.1952 by Le Corbusier just below Notre de Dame du Haut, Ronchamp with their bold colourful super graphics and use of off-form concrete and sod-roofs (36). The Huebner House was planned originally to be built in off-form concrete but economy dictated the use of concrete block (37).

In the Huebner House, there are three important themes which would inform Crone's later works. The first is the promenade architecturale. One enters the three level Huebner House from a bridge at mid-level. One side of the bridge is a solid balustrade, the other a pipe railing. The projecting angle glazed gallery visible from the bridge contains the laundry equipment concealed behind boldly painted doors. The front door is painted in the shape of the working drawing symbol for an opening door. Corbusian colour and graphics are recalled. One descends or ascends the central return stair which is the internal focus of the composition. Each corner along this path becomes the...
The second theme is that of densely planned service blocks accessible from the *promenade architecturale*. Tightly-planned zoned pods of laundry, kitchen and bathroom are attached to the concrete block fin walls which enclose the central circulation core of stair and promenade.

The third theme is the directional encompassing of the exterior by wing walls and the deft use of the chamfer to encompass space. The chamfer in section provides volumetric interpenetration over the three levels. At the top is a study which overlooks the living area. On the entry
level are the kitchen, dining, living and laundry areas. The dining and living spaces form an L-shaped directional field stretching out into the landscape. The stair and access to other spaces sits between the two major fin walls which form the L. The only chamfer in plan forms an embracing entry and blinker to the kitchen. On the ground floor are three bedrooms, storeroom, ensuite and bathroom.

In the same way that Mario Botta’s House at Riva San Vitale, Italy, 1972 - 73 is a vertically manipulated cube so too is the sculpted prism of the Huebner House. The vertical stacking of services, the bold and colourful graphics, the efficient zoning of space, the singular use of materials make this a rich extension of modernism. The typically Melbourne assimilation of diverse sources ranging from British Brutalism, the spatial principles and graphics of Le Corbusier, and the tectonic manipulations of the New York Five, blended with the planning legacy of Bernard Joyce and Crone’s own meticulous skills, mark this house as a distinctive return to the eclectic techniques of the 1930s.

Crone’s prizewinning Coakley House, Hampton, 1975 is a sleek urbane suburban design encapsulating almost all of its suburban block (39) (fig.634). Concrete block is again the principal material with natural galvanized steel decking, angled glazing and limed timber. On the floor, black rubber Pirelli sheet is used, inspired not only by Le Corbusier’s steel and glass Pavilion, Zurich, 1965 but also by the client’s desire for a dust-free house. Stainless steel benchtops are used in the kitchen. All the materials are hard-wearing, requiring no maintenance, and allude to a non-suburban industrial vernacular of steel and concrete.

Fig.633 Le Corbusier, architect.
Villa Savoye, Poissy, France, 1929.

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41. John Barker, "Design that provides a series of views", *(The Age - R.A.I.A. Citation No.36)*, *The Age*, undated clipping.

This house has a dumb-bell plan with a central kitchen/bathroom/laundry block separating the parents suite and living rooms from the children's playroom and bedrooms. A circulation spine bending back and forth through the house has public functions to one side and private to the other. The typical brief for a small family is handled elegantly with economy and assurance. The chamfer in plan reduces area and when combined with south facing highlights over the master bedroom and living areas, there is a sculptural manipulation of the saddlebagged spaces off the dumb-bell spine. By providing dominant lines using wing and fin walls, the house stretches into the garden and back into the house again, providing privacy from the street and enclosing outdoor space. Crone ensures that such walls are of contiguous materials such as the timber lined front fence which passes within and out again as the external wall to the kitchen and bathroom block (40).

The Jenny Hood House, near Benalla, 1976 is a central block type sitting on a sloping rural site (41) (fig.635). The timber sheathed box has a deck at its lower end sitting...
Peter Crone's and Max May's houses represent the re-emergence of artifice and aesthetic intent in the design of the house. The process of reformulation of diverse modernist influences to achieve a specifically local architecture prefigures a return to a more determined architectural formalism in the late 1970s. The importance of the chamfer is in the diversity of its application and that it was used by architects as a means to enrich the box and

above two corrugated iron water tanks. Sightlines and framed views gave rise to the sculpted form and location of openings. The shell of the building can be read as a description of the activities within. The chamfer is used to direct views, control light and scoop the volume up from the ground floor to the bedrooms above. This house like the Coakley and Huebner House prefigure more sophisticated compositions such as Crone's Porritt House, Mt. Martha, 1978 (fig.636); Green House, Williamstown, 1979 and Briggs House, Lancefield, 1979 where the transformation of Le Corbusier and the New York Five is more assured, complex and original.
reach a visual satisfaction beyond the demands of function. Many of the houses which employed the chamfer however were frankly sculptural, brutal and verging on the ugly exuding a raw energy that was refreshing and sometimes frightening. Peter Corrigan was to say of Morris and Pirotta's Molnar House that it,

involves a current "style" or vernacular of blockwork, battered glazing and metal deck roofing. Last year's Bronze Medal Winner by Peter Crone or the French House by Baird and Cuthbert are only two of innumerable examples. To date this "language" has tended to possess a rather innocent local charm, and has aimed at discreet intrusion. It is polite. The Molnar House by comparison has a harsh poetry that is raucous (42).

Concrete block, angled glazing and steel deck denoted not traditional domestic imagery but that of industry and the reverence for the industrial product. The motives are modernist: industry and images of the machine, high technology, the plan as generator, the manipulation of the object and the axonometric drawing to show its meticulous workings. The results however were not the finely tuned white painted renditions of Le Corbusier by the New York Five nor the dry tectonic expositions of Stirling or Foster. They were more like the Melbourne experiments in the 1930s with the devices of the then new International Style: textural additive compositions sensitively sited and in muted dilute colours blending the rustic forms of Sea Ranch, the diagonal of Louis Kahn and the last strains of British brut to achieve an idiosyncratic tectonically adept local architecture that avoided domestic pretension, and yet again sidestepped the challenge of the suburbs. The house was about to enter a new dimension of compositional experiment. The vocabulary was anti-suburban like that of the bush architects but it veered away from specific domestic imagery. The art of construction, finely crafted detail and the manipulation of the object were to be celebrated. Style and the tradition of eclecticism that had been lying low for over thirty years was about to resurface in earnest.

With an economic recession in 1973 and the overwhelming success of the project house as a relatively affordable package, the patronage of architects by a wealthy upper middle class began to reassert itself in the mid-1970s. The architect seemed to be left with little to say. While the market persevered with a well tried and perennially desired type, architects either became facilitators in a process of participation in the bush or they began to return to artifice and aesthetic intent in the design of an object called home. A new generation of young architects emerged, excited with the new emphasis on style and tectonic manipulation and what appeared to be a return to the architect as architect, and not architect as sociologist, planner, statistician or psychologist.

Chapter 7: The New Stylists - The Re-emergence of Assimilation and Reformulation in the Modern Melbourne House

Important in this surge of architectural literature from the United States was the emphasis on the visual basis of design, what American architectural critics, Vincent Scully, Sibyl Moholy Nagy and William Jordy discuss in various articles between 1953 and 1965 as the pictorialism of post-war American designers (1), the "graphic sensibility" (2), "the specifically American preference for visual rather than rational values" (3) where "the appearance of technological building materials and mechanical equipment in America becomes immediately ornamental" (4). The pictorial and the notion of architect as instrument of artifice and aesthetic intent pervades American literature on architecture in the 1960s, fuelled by Vincent Scully's rigorous campaign to illuminate the Stick and Shingle Style and its omnipresence in 1960s domestic architecture (5).

Social issues and ideas encouraging a return to humanism also proliferated from the North American shores. Christopher Alexander and Serge Chermayeff's *Community and Privacy: Towards a New Humanism in Architecture* appeared in 1963 and was reprinted in 1965. Christopher Alexander's seminal work, *A Pattern Language* was published in 1977 and became a major text in architectural education circles.


The houses of three Melbourne architects, Cocks and Carmichael, Peter Corrigan and to a lesser extent Norman Day, give clues of post-1975 developments of the exploration of artifice. In many respects, their work is the catalyst to what had been a ground swell amongst Melbourne architects against the functionalist ethos and its truthfulness to structure and materials. Melbourne architects did not reject those dearly held ideals but felt compelled to search the middle ground between the two philosophical extremes of the structuralism of Robin Boyd and the

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experiential unfixed architecture of Kevin Borland. As always, this middle ground involved the Melbourne habit of architectural experiment: the tradition of assimilation and reformulation of diverse local and overseas sources that worked within the bounds of taste, style and fashion.

Norman Day

Norman Day graduated from the University of Melbourne in 1970. Between 1967 and 1971 he worked in the office of Romberg and Boyd. In 1971 he commenced private practice. Few houses were completed before 1977 as Day was busy writing about architecture. In December 1976, he published a book of recently built houses in Victoria entitled *Modern Houses Melbourne* (6). His survey of houses depicted an impressive breadth of architectural thought extant in Melbourne in 1976. In style, Day’s brief volume was little developed beyond description and photographs of the houses, and a short essay. His book resembled the not so influential *Houses of Australia*, 1948 by George Beiers (7). Yet the mood of the two books was entirely different. The Beiers book was a glamorous publication of large and expensive homes around the country. The book suggested stability, security and a wealthy clientele. By contrast Day’s collection of houses, though confined to Victoria was at the time the widest range of designs collected and published in Australia, being largely the result of Day’s selection from the weekly *Age* - R.A.I.A. House of the Week Citations (8). It was a virtual catalogue. The cross section of houses exhibited relatively modest means and aspirations. *Modern Houses Melbourne* was consequently a frank picture of the architect designed house in Melbourne on the edge of change in 1976 with early houses by Peter Crone, Cocks and Carmichael, Max May, Edgard Pirotta, Edmond and Corrigan, Greg Burgess and Day himself, and complemented by houses of older generation architects such as Neil Clerehan and Kevin Borland.

Day’s own designs between 1971 and 1977 are indicative of this mood of change. His houses exhibit catholic interests which were not to be fully developed until his second house for himself in Armadale in 1977 but are glimpsed in 1976 in his drawings for the Gunner House, Roland, S. A., 1975 which appeared in the introduction to *Modern Houses Melbourne*.


8. *The Age* - R.A.I.A. House of the Week Citation Awards were a crucial part of weekly articles in *The Age* Newspaper contributed by the Director of the R.A.I.A. Housing Service. Photographs and plans of the award-winning houses accompanied the articles.

Day's first houses, the Matron's House, Malvern Private Hospital, 1972 (9) (fig.637), and a house for himself at Hawthorn, 1973 (10) would at first appearance seem to show the influence of contemporary North American architecture, particularly that of two New York Five architects, Charles Gwathmey and Richard Meier. Their neo-Corbusian aesthetic of cubic form, pipe handrails, curving white walls and sculptural cylindrical stairs is present in these two houses. Day's interpretations are lame and inadequate copies, both in technique and resolution. Day however cites the major influence in the design of these two houses as a primitive interpretation of the pure forms of the International Style and the white painted cubic forms of Robin Boyd's Milne House, Toorak, 1966 (11).

A half round stair cylinder and a cubic prism punctuated by simple window openings comprise the tightly planned Matron's house which was restricted to an 8 metre width by setbacks and courtyard access to the hospital. Built in bagged brick painted white, this (despite Day's explanation) is a backyard version of the Gwathmey Studio, Amagansett, New York, 1967 - 1967 designed by Charles Gwathmey (12) (fig.638). The entry face of the
The Modern House in Melbourne 1945 - 1975

house is dominated by the architectural cliche of the 1970s, the sculptural stair cylinder with the half round landing at mid level internally and given a shadow-lined connection to a dominant rectangular prism. The precision of the American designers is missing compromised by a brief which intended the building to be used for consulting rooms at a later date and a building technique at odds with the thinness of the original.

Similarly Day's own house, Hawthorn, 1973 (now demolished) would seem to draw succour from the New York Five but instead is fragmented into a series of attached (Day refers to them as plug-in) forms disposed in a picturesque manner about the site (fig.639). Generous overscaled glazing and simple cut-outs lack the sophisticated sculptural play of the American houses. The interior is treated as a series of floating platforms enclosed by walls recalling a similar planning technique of Robin Boyd. Day admits to vernacular Turkish architecture and also the collected forms and stepped platforms of Boyd's Milne House and Featherston House, Ivanhoe, 1967 as sources for the forms of the house (13). Frei Otto's own home and studio at Warmbronn near Stuttgart, 1967 designed by Otto in association with Rob Krier, is also cited as an influence with its free plan of floating platforms

Fig. 639 Norman Day, architect.

13. John Barker, 'Tailor-made for his family' (The Age - R.A.I.A. Citation No.24), The Age, undated clipping. Interview with Norman Day, 24th January 1989. The Day House was recently demolished to make way for a tennis court.
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and adjustable living spaces (14). Internally the Day House attempts a fluid interplay of volume. A double height family room on the lower level separates the two bedroom areas upstairs and on the ground floor, this space separates the dining/kitchen from the studio with level changes up to each. The bright yellow pipe and matching balustrades are the only inbuilt colour in the design which is otherwise entirely white. All furniture was movable in this warehouse like space. Stereo and bar equipment could be pushed around to subdivide the large space for separate activities. The living room was a free plane able to be altered as desired.

Fig.640 Norman Day, architect. Gunner House, Roland Flat, South Australia, 1975.


16. Ibid., pp.15 - 17. A comparison may be drawn with the Gunner House and the spine composition of William Turnbull’s Tatum House, Monterey Bay, 1973. The Aberdeen House extension, Hawthorn, 1976 also moves away from the pristine white architecture of the New York Five to a mix of vernacular and contemporary forms where an addition to a Californian bungalow was an earthy mix of brick, industrial angled glazing and attached verandah in corrugated iron. See Day, op. cit., pp.103 - 105.

Plug-in spaces also occur at the Rayson House project, Bulla, 1973, where the rooms of the house are separated out entirely with bridge connections between (15). In the Gunner House, Roland Flat, South Australia, 1975 (fig.640), Day consolidated all of these ideas: context, architectural language, and the trays of space. Built in the Barossa Valley in an area of old ruined farm buildings, the original scheme was to find an old wall and use it as the basis of a new house design. As a suitable one could not be found, a new L-shaped brick wall became the controlling spine onto which the spaces were plugged. In Japanese Metabolist and Archigram fashion, timber clad boxes were attached to the free-form wall. A water tank was also attached. Sleeping zones were placed on one side of the wall and living spaces off either side of the base of the L. Verandah elements are attached to the forms of this house making allusion to old homestead forms (16). The search for linguistic and symbolic meaning in addition to space and structure in the Gunner House indicates a shift in Day’s thinking. Ideas of context and an overlay of influences were to appear increasingly in his work. Encouraged by recently returned Yale graduate, Peter Corrigan, Day, in his
buildings and articles for *The Age*, began to investigate Pop Art and the writings of Robert Venturi and Charles Jencks (17). For Day, change in the design of the house was imminent.

**Cocks and Carmichael**

In 1968, the partnership of Robin Cocks and Peter Carmichael was formed. Their firm established itself with the successful marketing of the award-winning X-2 project house in Sydney for Civic Construction Co. (Aust.) (18). The feature of this gabled solid brick house was a timber framed courtyard pergola which was elevated above the eaves line as a separate structure. The lounge, kitchen and family room all opened onto this courtyard with its pergola shelter which became a high "ceilinged" outdoor room. This device was also used on the Adler House, Balwyn, c.1969 (19) a large two storey brick box eroded by split skillion roofs and a pergola room on the first floor balcony facing a swimming pool. Yet it was two beach houses, one designed by each principal of the partnership, that went beyond the formal similarities to the so-called Sydney School of textures, dark stained timbers and terracotta tiles toward new ideas of aesthetic intent and reasserted eclectic assimilation (20).
The plan of the Falk House, Aireys Inlet (21) was one of startling clarity in 1972 and reveals Peter Carmichael's interest in the early beach houses of Charles Gwathmey with their vertical boarding, large expanses of glass and the concept of the house as a finely crafted and detailed piece of sculpture (22) (fig.641). The Falk House was a holiday house, elevated on 12" telegraph pole pilotes and sheeted in vertical timber boards. The uncomplicated plan was open with full height glass to the south to give uninterrupted views of the ocean even from the north facing solar deck on the other side of the house. The sun blinkers, the huge expanses of fixed plate glass and adjustable air hatches for cross ventilation, built-in seating in the living room, the careful modulation of structure to match the planning within mark this as an important house for 1971. "Simple, hard-edge and fuss free" was the description used by Peter Carmichael for the house which was elevated to take advantage of the coastal views towards Lorne (23). The open space beneath the first floor was used for car-parking, mechanical equipment and storage with wide timber stairs leading to the upper level. Projecting side walls enclose the sun deck on two sides giving protection from the wind and privacy from the neighbors. Recessed downlights, the absence of cornices and skirting, the blending in of the

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18. Robin Cocks graduated from the University of Melbourne in 1965 and Peter Carmichael in 1966. The X-2 series, designed to compete with the Sydney firm Pettit and Sevitt houses by Ken Woolley, Michael Dysart and others, was the winner of the N.S.W. Chapter 1970 Project House Design Award in the $16,000 award category. See Cross Section; September 1970.

19. "Low corner site dictated design", (The Age - R.A.I.A. Citation No.8) The Age, undated clipping.
cupboards with the internal lining of vertical boards, the built in fireplace with its stainless steel fire canopy make this house an accomplished and austere return to the stylish tenets of the modernist vocabulary.

The Woodley House, Sorrento, 1974 (24) designed by Robin Cocks took a similar theme of inflated scale, cut-outs from a cubic mass and sculptural attachments that formed decks and sunshading devices (fig.642). This holiday house was designed as a two storey timber clad structure with the upper floor level calculated to maintain a 360 degrees outlook over dense foliage to the bay on one side and the ocean on the other. The walls of the upper living area were devoted almost entirely to large areas of sliding plate glass opening onto generous living decks which almost doubled the living spaces within. The Woodley House recalls Charles Gwathmey's design for his father's house, Amagansett, New York, 1965 - 67 (fig.643) and the Cooper House, Orleans, Massachusetts, 1968 - 69 with its semi-circular curving balcony and sense of rotation in the plan derived from external projections of deck and circulation space. The increased scale, the simple rectangular volumes make the Cocks and Carmichael houses airy relaxed and dynamic sculptural compositions in bleached vertical cedar lining boards. Window frames were aluminium to avoid bulky frames and chair rails. These houses are concerned with the revelation of volume and the dominant planes of the interior. The element of surprise as one moves through the house, the framing of views, the sculptural deck and stair access with solid balustrading are all part of the experience of the house as a piece of form.

20. Peter Carmichael's own house in Albert Park, 1971 was also an innovative design shift for the partnership. On a difficult inner urban site, the house is an arrangement of simple cubic forms and walled courtyards. The brick walls are bagged and painted different colours. Privacy, courtyard living with a roof garden opening off the main bedroom suggest the glamour of former years sought in the design of the post-war house. The uncomplicated forms and clean direct planning herald a return to the gracious lifestyle plans of Cleerehan and other mature Melbourne modernists. Day, op. cit., pp.138 - 140; This house also appears in Anne and Peter Latrielle, New Uses for Old Buildings in Australia.

21. John Barker, "Fuss-free retreat at Airey's Inlet", (The Age - R.A.I.A. Citation No.11) The Age, undated clipping; see also Day, op. cit., pp.116 - 117.


23. Barker, loc. cit.


25. John Barker, "Expressionist design has elbow room on three acre site", (The Age - R.A.I.A. Citation No.36) The Age, undated clipping ; see also Day, op. cit., pp.121 - 123.

The Johnstone House, Mt. Eliza, 1974 (25) develops the notion of plan rotation and departs from the visual source of Charles Gwathmey (fig.644). The composition concerns
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Fig.644 Cocks and Carmichael, architects. Johnstone House, Mt. Eliza, Victoria, 1974.

26. John Barker, "Bridging the generation gap without splitting the family" (The Age - R.A.I.A. Citation No.40) The Age, undated clipping. The Fink House, Greensborough, c.1975 - 76 has a similar ragged northern edge with a long stepped window wall that encloses family, dining and living areas. See John Barker, "Timber deck stretches out into the foliage of trees" (The Age - R.A.I.A. Citation No.30), The Age, 5.7.1976.

the shifting and intersection of form. The siting is not aerial. The house nestles within the bush and the materials are mixed: brick work, horizontally lined timber fascias and a timber clad first floor study. Extending fins, wing walls and outriggers recall the feathered edges of Richard Neutra's houses. The motif of the outrigger beams resting on posts beyond the perimeter envelope of the house allowing a mitred glass corner became a trademark of the Cocks and Carmichael one-off house, as it was also in the houses of Richard Neutra and locally in Melbourne, those of John Adam. The Johnstone House explores geometry and the intersection of circulation axes via a simple twist of one side of the house and stretching an elevated walkway out into the landscape to cover an arboretum and provide an elevated deck. Like Max May's houses, the results of such wilful shifts create interesting spatial and tectonic results within. At each corner of the C-shaped circulation route through the house, the spaces are important: kitchen/family room/playroom and entry/living dining. It is at these locations that the intersection of form and volume becomes the opportunity for finely detailed tectonic drama.

Externally colours are grey and muted grey green, typical of Cocks and Carmichael's intention of introducing warmth via colour and texture to blend subtly with the bush. Like Peter Crone and Max May, there is an intention to introduce manipulative skills to the form of the house in addition to the satisfactory provision of spaces of the home and a politely harmonious colour coding with the landscape.

The Smith House, Mornington, c.1974 (26) also has a feathered edge to its prismatic forms and a first floor study sheathed in timber (fig.645). The master bedroom has its own ensuite and court and like the Johnstone House, this part of the house is almost a self contained unit. The plan is
a composition of planes and a fragmented glass skin to the north, with generous eaves and deck over. Internally a diagonal on plan implies a subtle rotation of the living spaces towards a view and the north facing garden. The house is eroded on this face with the stepping of the exterior wall. The south facing load bearing walls are white painted bagged brickwork and ceilings under the metal deck roof are lined in slim pine boards. The bold horizontal fascias and the study timbers are stained grey to produce a complementary colour scheme to the bush landscape surrounding the house.

A sense of free additive growth was fully exploited with Cocks and Carmichael’s Civic Growth House designed in 1975 for Civic Construction Co. (27) (fig.646). A consistent theme of courts and sliding glass doors, open plan and self contained zones is employed using a 3.6 metres square module. Clients could design their own house. The design was a kit of parts aimed at giving the project house buyer ultimate freedom in the design of their own home. This house was one of the most advanced and sophisticated project houses to emerge from the 1970s.

The blend of bush silver and grey, mixtures of brick and timber, meticulous detailing and sophisticated planning techniques created a distinctly local extension of the modern house in Melbourne. The airiness of the beach, and the generosity of glass and space of these houses answers the glamorous promise of post-war living, a sort of California 7/70
recipe to the modern home. The Cocks and Carmichael houses extended a tradition of beachside designs such as David McGlashan's Grimwade and Carnegie Houses, Osborn McCutcheon's "Crackers" at Mt. Eliza and the structural roof expositions of the Mornington Peninsula houses of Chancellor and Patrick which blended the organic siting and textures of Frank Lloyd Wright with the structural clarity of Richard Neutra. The rigour of project house design and construction experience lends the Cocks and Carmichael-designed houses an assured anonymity appropriate for clients to inhabit at will. Though intimately concerned with site and aspect, the manipulations of the plan are relaxed and discreetly conceal their contrivance and intent. These houses do not rigorously follow the tectonic rules of Le Corbusier nor do they have the control of the New York Five but are imbued with an overall informality. Pretension is nowhere to be seen. The house grows according to need. Plan and articulation follow accordingly. Sophistication is rendered in the high quality of finish and detail. Andrew Metcalf's criticisms in Architecture Australia in January 1982 (28), are ill-founded and weak, and do not investigate the houses as comfortable, light and uninhibited spaces for family living. Context is an issue in these houses but not in an overt deferral to the suburbs in terms of signs and symbols. These houses are concerned with an extension of the modernist tradition on Australian terms. Colour, fragmentation and non-assertive gestures dilute the image - they conform to the safety of a perceived good taste in the bush.

Peter Corrigan

Peter Corrigan left Melbourne in 1967 on a post-graduate scholarship to study church design at Yale University, New Haven, Connecticut in the United States (29). After completing his studies, he worked in several major architectural offices on the East Coast of the United States (30) and in 1972, he sent back an article to Australia on the American architects and theoreticians, Robert Venturi and Denise Scott-Brown. Titled "Reflections on a New North American Architecture: The Venturis", the article was published in Architecture in Australia in February 1972 (31). Corrigan's experience in America had hardened his respect for the Australian suburb and confirmed for him its uniqueness. Its hard gritty reality was pleasing to him rather than embarrassing. Venturi had been a lone voice in the wilderness in his call for an urban America, for the discovery of the strip between the CBD and the last
hamburger stand on the back blocks. For Corrigan, the writings and theories of Venturi and Denise Scott Brown were to be of continuing sustenance for his own experiments with the Australian suburb.

Corrigan returned to Melbourne in 1974. His experience and articulate philosophical commitment, albeit frequently concealed by a theatrical and recalcitrant demeanour, was the catalyst for the general ground swell of change and unrest within the architectural profession in Melbourne. The return to overt symbolism, the renewed interest in artifice and context was to gather strength. It was not a simple switch. There were many other sources and reasons for change. The transition was gradual but overwhelmingly significant. By 1979, the effects would be clearly felt. By 1980, it would be complete.

Corrigan's architecture should not be misunderstood. Corrigan had not brought the devices and style of the United States back with him. He did not bring back Post-Modernism, nor did he bring back a complete stylistic baggage as had so often been the case in the 1930s with young architects returning from their Grand Tour of Europe. He returned with a renewed faith in the role of the architect as designer. Writing in 1972, he felt the Venturis had given the answer because,

*The Venturis had been quite singleminded in espousing the theme that "The architect's ever diminishing power and his growing ineffectualness in shaping the whole environment can perhaps be revised, ironically, by narrowing his concerns and concentrating on his own job". This is not the simplistic proposition a superficial reading would suggest. The phenomenon of diminishing power is nowadays generally accepted by all professions. The architect's particular expertise is still in the shaping of his environment, in the making of its forms. And it is of only additional value if he happens to be a gifted amateur in such fields as ecology, economics, sociology, mathematics or psychology (32).*

Moreover, Corrigan was able to articulate his new ideas in buildings: many of which had been latent even in the houses he had designed before his departure to the United States. Ironically it was not houses which Corrigan designed on his return from overseas which were to be influential, but churches, most notably the Resurrection

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32. Ibid., p.58.
Although Corrigan had returned and began to design confidently for the suburbs, the seeds of his architecture were embedded in several house designs executed before his departure to America late in 1966. They reveal four recurring themes existent in Corrigan's architecture: the aggregation of parts, the pathway, and the centre and the enclosure of external space. A fourth theme, what I have in 1986 referred to as the binding element of catechism (34) was to emerge strongly after Corrigan's return and within the blaze of publicity that intentionally surrounds his buildings. There is a theatricality in the early houses that makes them unusual in Melbourne in the 1960s. They rebel against prevailing good taste, politeness, and also the skill in detail and finish of traditional architect-designed houses. Corrigan's houses were exuberant moody castles in the bush. They had a pinched awkward quality, high ceilinged corridors and deliberately ugly bricks. These were heavily modelled houses highly wrought with tortured floor plans and ungainly eaves and brick piers. They were precocious works, designed to attract attention. Another important quality of these houses was the obvious familiarity with overseas sources such as Louis Kahn, Charles Moore, Robert Venturi and the quirky plug-in connections of Archigram.

The Kenyon House, Lilydale, 1963 was comprised of a set of broken hip roof forms (35) (fig.648). The children's bedroom block was a tower with a pyramid roof topped by an elaborate television antenna. Another antenna topped the living room block further up the slope. These celebratory aerials recall Venturi's similar gesture placed atop the Guild Church, Keysborough, 1975 and St. Joseph's Church, Box Hill, 1976 (33) (fig.647).

33. St. Colman's Church, Mortlake was also designed in 1974. These churches were all designed and executed in association with Corrigan's new partner Maggie Edmond.

34. The four recurring themes of Corrigan's architecture are elaborated upon in Philip Goad, "Peter Corrigan and the CATECHISMIC Method", Unpublished paper, January 1986. A catechism is an instruction by question and answer. It may also involve a series of questions put to anyone with the implicit hope that something may be learned from such questioning.

35. Drawings from the Yale folio by Peter Corrigan. Cross Section, February 1967 described the Kenyon House as "lacking most of the material choices and detailing conceits that characterize the work of most young graduates getting "with it", this house has a special kind of vernacular calm that comes of collecting fairly obvious and normal spaces together, breaking connections through the walls between and surrounding them so that they are gently linked to each other and to the fine old garden site".

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House, Philadelphia in 1960 - 63. Floating timber decks off each major internal space, and a definite front and rear entry denoted access from all points and doubled circulation routes. Each space within was a different shape and size. An external ramp leading to the common room adjacent to the bedrooms spaces was like a drawbridge.

The bungalow addition for Don Hume, Fenwick Avenue (at the rear facing Hume Street), Kew, 1965 was a tiny self contained bedroom and bathroom unit sitting above an existing brick garage (fig.649). The two schemes for the unbuilt project (36) both show similarities to the hipped roof and cantilevering form of Venturi's Fug House project, 1959 (fig.650), Charles Moore's Jobson House, Big Sur, 1961 and also to the tight sinuous plans of Harold Desbrowe Annear's houses at Eaglemont with their protruding bays and sliced back eaves.

Fig.648 Peter Corrigan, designer. Kenyon House, Lilydale, Victoria, 1963.

Fig.649 Peter Corrigan, designer. Bungalow additions for Don Hume, Kew, Victoria, 1965.
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The Mercovich House, Burwood, 1965 was an agglomeration of skillion roofed forms described by Cross Section as "contrarily ingenuously complex" (37) (fig.651). A TV aerial and vent pipes featured prominently. This house also had a definite back and front and was multi-levelled within. The whole interior was a stage set of levels with a snug at its centre. Corrigan rejected the rational organizing circulation spine and the structural grid. Materials however are frankly expressed. Roofs and forms meet, collide and residual external spaces are created by spontaneous agglutination.
The McCarthy House, Lilydale, 1966 was a large brick house consisting of a series of spaces twisted and cranked around a courtyard (fig.652). The house was an agglomeration of wing walls and spaces arranged around a centre rather like an Italian hill town (38). The house was like an exploded version of Louis Kahn's Morton Goldenberg House but once again Corrigan doubles the circulation route with an internal and a courtyard route around the centre. Every part of the building was given expression. Brick fin walls predominated in this castellar fantasy. Every space within was different with protrusions, recesses and bays. Large pipes plugged into the house from an entirely separate water tank building.

Similarly the plan of the vast Trinder House, Corio Bay, 1966 (fig.653) exploded around a central court and stair. The major living spaces fanned dynamically outward like a windmill, echoing the gestures of the plan of Peter McIntyre's Brunt House, Kew, 1953 (39). A passage to the five bedrooms which fanned outwards, followed the organic shape of the central court and was roofed in glass rather like a crystalline spine. The fireplace chimney resembled the nozzle of a sealant gun and was a humorous Pop touch to this exuberantly formed house. A similar

Fig.652 Peter Corrigan, designer.

39. Comparisons with the Trinder House can also be drawn with the Owen H. Tolf House project, Lake Koshkonong, Wisconsin, 1958 designed by Bruce Goff. See David De Long, Bruce Goff: Toward Absolute Architecture, M. I. T. Press, Cambridge, Mass., 1988. Corrigan’s entry for the 1965 Small Homes Competition entry bears a strong resemblance to Peter McIntyre’s entry in the 1953 Small Homes Service Competition. The design focuses on a central food preparation area with the remainder of the house fanning out to form a multi-sided polygon.
theme of court, fin walls and double rotating circulation informed the Schmidt House, Eltham, 1966 (fig.654). This house was a wild array of cut-out walls, cut-back roofs, and circuitous rambling access to the public spaces of the house (40). More than any other scheme this house was like a 1960s castle in the bush. The Hosking House, Donvale, 1966 (fig.655) also fits into this category and blatantly parodied the clinker brick architecture of Wrightian exponents such as Charles Duncan and Chancellor and Patrick, an architecture for which Corrigan had little regard. Chunky weatherboards and clinker brick were exposed internally in this multi-level house and externally, the house read as a fortress of stepped horizontal weatherboarded walls (41).

These houses, many of them unpublished, hold clues to Corrigan's later architecture. The Resurrection Parish House, Keysborough, 1974, designed in association with his partner Maggie Edmond, though not a typical house, shows similar themes of the centre, the path and aggregation of parts, though now with an infusion of the abstract timber planes and cut-outs of Charles Moore, a
Fig. 654 Peter Corrigan, architect. Schmidt House, Eltham, Victoria, 1966.

Fig. 655 Peter Corrigan, architect. Hosking House, Donvale, Victoria, 1966.
Corrigan focussed his attention on the Australian suburb. He did not reject the suburbs but sought to plumb its innermost heart and find optimism there rather than despair. The importance of Corrigan lies not with the houses he designed immediately on his return but the catalyst that his work provided in reviving the vigorous habit of assimilation and reformulation of diverse sources, and most importantly of all, the infusion of a new politic, that of the suburbs. The idea itself was revolutionary but the process of change was evolutionary: study what one has and learn from it. Corrigan's other important contribution was the harpoon he aimed at architectural good taste. The idea of casting aside genteel tastes and etiquette was one derived from Pop Art, of turning convention on its head and finding richness from the result. It was the beginning of further change to the house in Melbourne. The architect-designed house was about to emerge from its former chrysalis of good taste and textured anonymity in a much changed state.
By 1980, Edmond and Corrigan's McCartney House, Kew (fig. 657) shows the rapid development in the five years following 1975. This house celebrates the original vision of the middle class ideals of the garden suburb. The front garden, the glorified garage, the tower, elaborate sense of entry, the rotational quality of the so-called Melbourne Queen Anne house: all have returned to Kew. To compare the Melbourne Queen Anne styled Arthur Norman House, Adeney Avenue, Kew, 1909 - 1910 by Ussher and Kemp (fig. 658) with Corrigan's McCartney House is to see the idyllic ideals of the garden suburb reinstated. But that is another story. In 1975, the designers of the modern house...
in Melbourne were about to revise its self-image of politely transformed modernism. Melbourne architects would attempt to return to the pre-war tradition of creating a home in Melbourne, an unabashedly free-style tradition that drew on Arts and Crafts ideals of materials, structure and elementary composition in plan, and an unashamed eclecticism that amongst architects would and still does remain a hushed and fearful topic.

1975 is an appropriate time to conclude this study. In December of that year, the people of Australia witnessed the demise of the Federal Labour Government under the leadership of Prime Minister Gough Whitlam. In the short space of three years, his government had made sweeping reforms in health, the arts, education, immigration and foreign policy (1).

Before 1972, Australia had been governed by the conservative Menzies Government and various Liberal Party leaders for over twenty years since 1949. Between 1945 and 1949, a Labour Government under Ben Chifley had been in power in Canberra. For over 25 years, there had been little political unrest within the community and the architectural profession in Melbourne. The immediate priorities after World-War 2 had been economic recovery and the rapid production of single family houses, singularly powered by the Menzies brand of liberal capitalism and the embracing of American idealism and consumerism in the 1950s and 1960s. The only flurry of political interest in the years after 1945 was the drama of the Beaufort House project which had aimed at large scale prefabrication of steel-framed houses for post-war diggers. The scheme was effectively scotched by one of the few architects in State Parliament, Liberal member Robert Bell Hamilton in 1949.

Simultaneous with the ousting of the Labour Government in financial scandal in 1975, within the architectural profession, unrest amongst its younger members had begun to brew, foreshadowing changes and battles to be fought ahead. Between 1975 and 1980, significant changes were wrought in four areas of Melbourne's architectural life: conservation; the local chapter of the R.A.I.A.; architectural discourse and criticism; and architectural aesthetics. There are various signal events in these turbulent five years which were to set a course for architecture in Melbourne in the 1980s and mark 1975 as a logical termination date for this study.

The most public of these issues was conservation and the battles over the rich 19th century building stock in Melbourne that was being and had been rapidly depleted during the 1960s urban building boom. One of the Federal Labour Government's chief contributions to the built environment had been the formation of the National Estate

1. For example, the Australian Council for the Arts was instigated in January 1973.
Chapter 7: Architectural Diaspora - Professional Crisis in Melbourne Architecture

and the Australian Heritage Commission. Beginning in May 1973, Gough Whitlam announced the appointment of a Committee of Inquiry into the National Estate which subsequently recommended the establishment of a permanent body, the National Heritage Commission.

The National Estate was to include national parks and nature reserves, buildings and urban conservation areas, caves and geological formations, archaeological and aboriginal sites, the coastline and inland waters, urban parks and gardens and scenic areas of all sorts (2).

In mid-1975 the Australian Heritage Commission was formed by the Federal Labour Government. On a local level the Collins Street Defence movement was formed in September 1976 by members of the architectural profession under the direction of Evan Walker and Professor Charles Robertson. Their aim was to redress the progressive decimation of one of Melbourne's premier streetscapes. In the local monthly Institute magazine, Architect, regular features by Dr. Miles Lewis, Peter Williams, Graeme Butler and Ray Tonkin reflected the resurgence of interest in local architectural history (3). The "Treasure Hunt" articles featured buildings of the 1920s and 1930s such as Francis House, Lyric House and the Port Authority Building. Brief biographies and interviews with Melbourne's elder architectural statesmen such as Osborn McCutcheon, Geoffrey Mewton, Best Overend and Louis Williams also appeared in Architect. In May 1977, another Melbourne group concerned with conservation and architectural history, the Council for the Historic Environment was formed. Controlled development, planning guidelines, ideas about context and historical styles all experienced new appreciation with the rise of conservation in the late 1970s.

The second area of change was the shifting morale of the local Chapter of the R.A.I.A. An example was the extraordinary meeting held at the Last Laugh Theatre Restaurant, Fitzroy in March 1978 to discuss openly "ways in which architects and designers might better understand their role in, and contribution to, the manufacture of the built environment" (4). Organized by Graeme Gunn (Dean of R.M.I.T.'s Faculty of Architecture), Norman Day and Peter Corrigan, and the result of informal discussions held between younger members of the profession late in 1977, over 100

2. Miles Lewis, "Saving Our Saviour", Architect, March 1976, pp.1-9. An Interim Committee on the National Estate was established in 1974 under the chairmanship of David Yencken. In 1975, this Committee in addition to other duties, was responsible for the overseeing of grants to conservation projects.


4. Daryl Jackson, "Lost chance at the Last Laugh", Architect, August 1976, p.6. The primary issues for debate elaborated at the meeting by Graeme Gunn were a) the need for people who express concern for the quality of the built environment to share ideas and objectives; b) to recognize that communication can act as a catalyst for social change and an increased awareness of the impact of physical design on social structure; c) to encourage new methods of working and new educational processes; d) to see the importance of critical review and analysis of proposed and completed work as a way of generating a better context in which to work; e) the form of communication to be debated and argued e.g. meetings, workshops, seminars, broadsheets, magazines, etc.
architects, students and invited guests attended the meeting which was chaired by Evan Walker and Len Hayball (5). Many present at the meeting (and many who were not (6)) saw its aim as formulating proposals for an alternative to the Institute. The meeting resulted in a shambles of disorganization and controversy. The entire event smacked of complacency on the part of the established sector of the profession and vain attempts by the younger generation to promote critical reappraisal. These attempts were abortive but instrumental in formulating a cohesive group of younger architects with common aims of reform and change. The formation of a powerful group dynamic was to be paralleled by an increased upturning of conventional taste, the firing up of various levels of debate (7) and foreshadowed the entry of various members of the profession into politics (8).

The character of architectural criticism in Melbourne also changed. In 1975, Norman Day joined the editorial board of Architect, the official magazine of the R.A.I.A. Victorian Chapter. In May 1976, he became editor. The magazine developed a lively critical stance which culminated in late 1977 with Norman Day's dismissals as editor and the resignation of Daryl Jackson from Chapter Council in protest at the moves by the Council to rid themselves of Day (9). The lack of profound criticism in Melbourne prompted the beginning in July 1979 of the discourse magazine Transition by young Adelaide expatriates, Richard Munday and Ian McDougall. The first editorial of Transition is indicative of the mood of change in Melbourne:

"Transition could be one signal that there is a stirring in the bushes, that, as some would have it, an 'identifiably Australian culture is emerging'. That may be just a wild guess of course, or no more than the personal maturation of the work of a small group of writers, actors, artists and one or two architects. But whatever, it is appropriate that there be the means to record and comment upon the event (10)."

Munday, McDougall and others also began The Half Time Club in 1979 with the aim of bringing together young graduates with the purpose of talking openly about architectural issues primarily those of design. A mood of change also pervaded the architect-designed house between 1975 and 1980. There was a shift in commonly held aesthetic ideals and this was most directly exhibited in

5. Special guests included Senator John Button, Professor Patrick McCaughey (Monash University), David Yencken (Chairman of the Australian Heritage Commission) and Lance Wright (visiting editor from the British magazine, The Architectural Review). Minutes of the meeting, courtesy of Norman Day, Architect.

6. For illuminating correspondence regarding the meeting, see Neil Clerehan, "Pst!", and Daryl Jackson, "Tsk!", Architect, October 1978, p.5.


8. Another example of such a shift to alternatives was the Fitzroy Housing Repair Advisory Service instigated by Peter Elliott, Willy's Span and Eric Richardson in 1975. See "Alternative Architect: Peter Elliott", Architect, November 1975, pp.1, 18.


houses designed by young architects. These included Edmond and Corrigan's McCartney House, Kew, 1980; Peter Crone's Briggs House, Lancefield, 1978; and Norman Day's own house in Hawthorn and also his Pizzey House, Kew, 1978. A crucial catalyst for the onswell of change was the 1979 Four Architects Exhibition held at the Powell Street Gallery, South Yarra. This historic exhibition featured the work of Edmond and Corrigan; Peter Crone, Greg Burgess, and Norman Day. Loosely based on the concept of the New York Five, this gang of four did not however adhere to a philosophy based on a studied exploration of the grammatical canons of Le Corbusier. Rather, the message of these four architects was a plurality of approach that could happily co-exist and be cross-fertilized within the local architectural culture. Common to all four was an architecture resonant with reference and celebrating the act of architectural manipulation. Though Charles Jencks had visited Melbourne in 1974 (11), it was not until 1980 that the new wave of exploration in architectural language had effect. In 1980, at the R.A.I.A. "Pleasures of Architecture" Convention in Sydney, the work by all the Melbourne protagonists who were invited to exhibit their rebuilding of a John Verge-designed house in Edgecliff crystallized formally the architectonic discussions of the 1970s. Melbourne architects went Post Modern. Included in the list were the Four Architects (Edmond and Corrigan, Day, Burgess and Crone) and other Melbourne architects such as Daryl Jackson who began to broaden their architectural vocabulary and again assume the role of the architect as prime designer of the built environment.

Instead of the interruption of war in 1942, which had curtailed building and encouraged architectural change by force of circumstance, in 1975 there was a need for architectural self-reflection and a reassessment of the political position of the architect after the rush of excitement of the Whitlam years. The heroic visions of high rise living and the tower block were irreparably impaired by the perceived social disasters of the Housing Commission of Victoria and the physical damage wrought upon the inner suburbs of Melbourne by insensitive urban renewal. The promising urban reappraisals of Daryl Jackson and Evan Walker's City Edge Housing in South Melbourne and Earle Shaw's Carlton Housing Co-operative scheme were given only fleeting attention and became architectural anomalies by the 1980s. Instead of the virtual stoppage of building in

1942 which induced a singular political aim and achievable goal, that of the single family house, in Melbourne in 1975 and immediately afterward there was confused and inarticulate grasping at issues. The questions of the social and visual art of architecture experienced diaspora, a scattering of ideas that would eventually be consolidated in new expressions for the modern house in Melbourne.
CHAPTER EIGHT:

CONCLUSIONS: STRUCTURE, SURFACE, SPACE, SPIRIT AND STYLE - THE MODERN HOUSE IN MELBOURNE 1945 - 1975
Conclusions: Surface, Space, Structure, Spirit AND Style

Surface, Space, Structure, Spirit AND Style - The Modern House in Melbourne 1945 - 1975

In 1970, Robin Boyd described his houses in terms of four essential qualities: **surface, space, structure** and **spirit** (1). These qualities embodied essential principles to which he had rigidly adhered throughout his career. They were the simplified tenets of his idea of what a modern house ought to be, what the title of his book, *Living in Australia*, was meant to encompass. But his purified notion of what architecture should be, left out one other quality which, when added to Boyd's four, can be used to analyse the house in Melbourne over the thirty years between 1945 and 1975, and provide the basis for a qualitative assessment of that much prized object, the single family home. That fifth quality was **style**. It was the notion of style which so many architects in the post-war years either strove to cast off, as in Boyd's case, or in vain tried to master, as they came to terms with the difficult task of providing the post-war generation with a new domestic architecture.

Style can be defined as the collective characteristics of the artistic expression or way of presenting things or decorative methods proper to a person or school or period. J. Mordaunt Crook has recently described style as,

*a conscious system of design, a visual code based on tectonic preference, a post-vernacular language of forms* (2).

The question of style is unavoidable. Post-war architects in Melbourne have preferred to ignore the validity and presence of style. A **manner** of designing has not been accurately defined for the post-war house in Melbourne. This thesis includes discussion of style, its visual code, and the language of the forms of the house.

What follows, is an examination of each of the five essential qualities based on the outcome of the preceding chapters which described the results of thirty years of domestic design in Melbourne. The pre-war period will also be discussed. The concluding fifth quality, the elusive and much feared word **style**, will be examined with the intention of seeking out the **manner** by which Melbourne architects design, and will conclude this thesis.

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Surface
The design of the Melbourne house has always involved elaborated surface: a vigorous interest in texture and colour, both inside and outside the house. In the 1930s this interest was all pervasive. In the houses of the period revival styles of the Georgian, French Provincial, Spanish Mission and the Tudor, the elaboration of exterior surface and the inclusion of authentic stylistic details were essential signifiers of domesticity (Chapter 1). The selection of details such as carriage lamps, regency canopies, oriel windows, cordoba tiles, corbelled gable ends and Georgian porches and their deliberate placement upon often planar surfaces was necessary to the acquisition of a desired domestic image. In Martin and Tribe's neo-Georgian Van Staten House, South Yarra, 1940, surface elaboration was minimized to comprise an elegant composition of surface. When such a house appeared in the 1930s, it was regarded unanimously as being essentially modern, despite its period trappings.

Similarly, the penchant for elaborated surface was not limited to the period revival house. The modernist house in Melbourne of the 1930s was not the machine-made image of Le Corbusier's Villa Savoye nor the sleek stucco planes of Richard Neutra's Californian houses. Geoffrey Mewton's Stooke House, Brighton, 1934, Roy Grounds's "Wildfell", Upper Beaconsfield, 1933 and Donald Ward's winning entries in the Centenary Homes Exhibition, 1934, all employed emphasized brick coursing, mixed materials, finishes and stripes of colour (Chapter 1). A richness of surface was included in the search for a new domestic vocabulary. Furthermore, this regard for surface was not limited to the house. Norman Seabrook's MacRobertson Girls' High School, South Melbourne, 1934, frequently advocated as signalling the advent of modern European architecture in Australia, was itself a textural assembly of horizontally raked cream brickwork, terracotta details and splashes of blue and vermilion.

The so-called Victorian Type which emerged in the 1930s, hailed by Robin Boyd as the progenitor of the "Victorian Modern" house (3), also employed an array of textures and surface changes (Chapter 1). Cited as modern houses, these designs were also highly textured and not the machine-made cubes of the International Style. Instead, their impure handcrafted sense of surface and composite construction was crucial to their modernity. Once again,

materials were mixed. Roy Grounds’s "Lyncroft", Shoreham, 1934, was built of concrete block, vertical rough sawn timbers, log pole columns and corrugated iron roofs. Norman Seabrook’s house for himself at Croydon, 1941, was timber clad with wide horizontal weatherboards, corrugated iron roof, and a massive brick fireplace. The open plan, generous glazing, and the removal of barriers between inside and out, were accompanied by a rich array of local textures. The modern house was immediately local in physical terms but progressive in its layout.

World War 2 and the philosophical force of the Modern Movement momentarily dampened the tradition of surface elaboration as accompaniment to the developing modern house in Melbourne. The stripping of detail from the house was an economic necessity in the immediate post-war years (Chapter 2). Yet the prefabricated houses of the late 1940s, such as the Beaufort House and those of the "Operation Snail" programme, strove visually to resemble the textures of the traditionally built house. The machined house could not escape the woodsy image of the cottage (Chapter 3).

The post-war versions of the so-called Victorian Type were described by Robin Boyd as a warm and woolly organic architecture (4). Weatherboards, rubble rock walls, corrugated asbestos cement sheet roofs, polished timber floors, fibrous plaster turned the wrong way for effect: all renewed the tradition of textural elaboration. In the difficult circumstances of post-war shortages of materials a habit of improvisation was born and with that, a delight in the simple, the unpretentious and the honest. The post-war houses of J.F. Spears, Seabrook and Fildes, Roy Grounds, John Mockridge and Godfrey Spowers, Hughes, Mewton and Lobb, were admired for their rough stone fireplaces, exposed rough sawn timbers, simplicity of colours and their whitepainted window trim (Chapter 3).

Elaborated surface extended to the house designs of immigrant architects, Frederick Romberg and Fritz Janeba (Chapter 2). These architects brought to Melbourne not a purified International Style but a regionalized modernism where texture, colour and overtly domestic building elements were retained. In the case of Romberg, the project for a house at Heidelberg, 1943, was a rich array of Swiss Heimastil materials and details and the aerial forms of the

International Style. Abstraction was not complete. The house was an intimate reflection of locality and personalized design sources.

After 1945, there were two common approaches to surface. The first was the notion of an abstract surface, where the wall, floor or roof became a plane, an abstracted sculptural element of an abstracted purified form. The second was the frank exposure and legibility of the material of which the wall was constructed or sheathed to conceal a structural frame.

The East Coast International Style of Walter Gropius and Marcel Breuer emerged authoritatively in Australia through Sydney architect, Harry Seidler, but in contrast in the hands of Melbourne architects, Arthur Baldwinson (in the late 1930s), Douglas Alexandre, Kevin Borland, and Robin Boyd, the intended vocabulary of abstraction and planar forms of the style was transformed into a roughened fuzzy version of the original (Chapter 5). In Alexandra's Kotzman House, East Ringwood, 1952, rafters were exposed, balustrades were timber instead of steel, and the framed construction was graphically explicit. Materials were revealed as matter rather than concealed as form. The Melbourne house was not a sculpted collection of abstract forms. It was a vigorous collection of visually legible building materials.

In the 1950s, colour was vibrant and intense as replacement for material surface texture gave way to manufactured smoothness. This use of colour, instead of the expressed nature of the material, was highlighted in the structural functional houses of the 1950s (Chapter 5). Despite the replacement of traditional building materials with those of industry and the mechanistic rationale of houses such as Peter and Dione McIntyre's house in Kew, 1955, a dramatic injection of colour defused the engineering imperative of the structure. Colour became the new signifier of surface, though definitely not a sign of domesticity.

The wall surface in the 1950s was never intended to be a decorative veneer. Veneer, it would seem, was evil! Sophisticated surfaces were extravagant and indicative of bad taste. But interest in elaborated surface re-emerged regardless. The exhibition house in Melbourne in the 1950s demonstrated a concerted injection of elaborated texture
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albeit in a vulgar and unsophisticated, but desired, marketable and popular form (Chapter 4). The prejudice of the architect against veneer was partly moral and also partly aesthetic snobbery. As well as being structurally untruthful, veneer was supposedly the layman's expression of decoration. Veneer signified the apparently moribund tastes of the man in the street, a taste which the architect felt he had an undeniable right to change or at least improve upon. In addition, abhorrence of veneer owed much to the writings and buildings of American architect Frank Lloyd Wright and the moral imperatives of the emerging New Brutalism in England where innate material surfaces and structure were lovingly and painstakingly exposed.

Honesty of materials was a virtuous notion. To practice otherwise was to run the risk of untruthfulness and offend a moral principle. Robin Boyd highlighted this point in his 1960 book *The Australian Ugliness* with his description of Bates, Smart and McCutcheon's Wilson Hall, 1956, the first high quality crafted public building in Melbourne since 1945, as "the crowning jewel of Australian Featureism" (5). Disowned by architects, but loved by the home-owning public, the feature wall was an attempt by home-owners eager to inject decoration back into the home. But for architects, a fear of "featurism" remained. By 1975, the rugged use of materials and the determined exposure of material surface was morally still in force (Chapter 7). Reverence for rough honest textures owes much to Ruskinian notions of savage beauty and rugged truthfulness. Necessity of circumstance and a philosophical commitment to truthfulness of materials perpetuated ideals of surface and texture begun by architects of the 19th century and early 20th century, such as Viollet Le-Duc and Hendrikus Berlage. For the most part, even in 1975, the eschewing of elaborated surface was a commitment to the discreet repression of rich ornamental elaboration which apparently connoted bad taste (Chapter 7). The flowery wallpapers of suburbia and the crazy paving veneer walls of triple fronted brick veneer houses were the bane of every clear thinking morally sound architect!

Consequently, the desire for rough textural interest, as against abstraction, and its ubiquitous reappearance in the 1960s was the legacy of a continuing commitment to Modernism. Truthfulness of surface and texture was paramount. The houses of Graeme Gunn, Brine and Wierzbowski, Daryl Jackson, and Romberg and Boyd, all

revelled in the textural delights of brick, exposed timbers and warm-toned floor surfaces as part of the Brutalist reassessment of post-war Modernism (Chapter 6). Colour was superseded by fully exposed surfaces. The Wrightian stream of Geoffrey Woodfall, Charles Duncan, Jorgenson and Hough, and David Godsell all exaggerated and increased this concern with surface. Even architects with more rigorous modernist leanings such as David McGlashan, Neil Clerehan, and Don Fulton, who tended to minimize their palette of materials (Chapter 6), and others who went to the opposite extreme of material inclusion such as Peter Corrigan (Chapter 7), were all exponents of materials of rich surface interest, doggedly avoiding the notion of veneer. The absence of a codified domestic style required a heightened injection of surface elaboration into the finish of the house.

Fundamental to the notion of elaborated texture was the connection to a rustic image of dwelling, the *villa rustica*. In the 1930s the vision of the modern Melbourne house encompassed a bush and an urban expression of house (Chapter 1). Between 1945 and 1975, it was to be a predominantly rural image of texture that informed domestic design. Crucial to the post-war villa was the notion of the picturesque. In Jennings sales catalogues of the 1930s (Chapter 1) and the Small Homes Service articles from the late 1940s (Chapter 3), the practical and efficient plan was matched with the harmoniously sited perspective image of the new home, continuing a tradition which had emerged with the pattern books of the early 19th century. The house was depicted in these books, set within its own garden setting, hence rendering the house as an important object to be visually manipulated for picturesque ends.

An exception to the rugged interest in matter and tactility is the notion of surface in buildings by Guilford Bell, where surfaces were intended in many cases to conceal the material nature of the wall. Surface was an earthly pleasure to be transcended. Bell's houses have a quality of sublimity, a sense of "pleasing gloom" (6). Yet the siting of his houses invariably lend his conceptions a rarefied notion of the picturesque. Bell's houses are aesthetically perfected villas set romantically amidst the landscape or discreetly inserted into an urban framework (Chapter 6). This was a feat which the white walled houses of Boyd and Norman Day, and the forays of Cocks and Carmichael into the vocabulary of the New York Five in the late 1960s and

early 1970s did not achieve with their attempts at abstraction (Chapters 6 and 7). Their houses remain resolutely of the picturesque.

Space
The treatment of space in the modern Melbourne house has been a process of compartmented agglomeration. A tradition of additive planning has bypassed the volumetric aspirations of Mies van der Rohe's unitary flow of horizontal space. From the block massing of Roy Grounds's houses of the 1930s, such as the butting of rectangles of space at "Lyncroft", Shoreham, 1934 (Chapter 1) to the simple functional adjacencies of the 1940s so-called "Victorian Type" and its asymmetrical L-shaped plan (Chapter 3), to the tortured plans of Peter Corrigan (Chapter 7), space in Melbourne architecture has been a constant theme which has avoided the large scale open plan and the uninterrupted flow of horizontal space. Even a dramatic experiment in spatial planning such as Robin Boyd's Featherston House, Ivanhoe, 1968 comprises an interlocking series of platforms floating in space (Chapter 6). The spatial boundaries are intentionally not defined yet neither is there infinite spatial flow.

The spaces of David McGlashan's "Heide", Templestowe, 1965 neither completely open nor completely closed, are typical of the Melbourne sense of space. Nearby in architect John Reid's house in Templestowe, 1964, the careful delineation of square zones via log poles is made complex by the intrusion of planar walls. Spatial singularity is foiled in a typical Melbourne tendency to elaborate and not simplify (Chapter 6). The houses of Brine and Wierzbowski, Graeme Gunn, the contained pods of Peter Crone's spaces, all continue a tradition of undefined limits to spatial boundaries of the exterior edge of the house, providing both intimate and open spaces within. The houses of John Adam and of Chancellor and Patrick feather into the landscape with overrunning beams, pergolas and roof overhangs and mitred glass corners. The boundaries of the wall dissolve at the edge of the house, while within, there are solid delineators of wall and fireplace. The picturesque interiors of Max May's Rattle House, Harkaway, 1974 and of Cocks and Carmichael's Johnstone House, Mt. Eliza, 1974 also maintain the indefinite status of the house edge with their outriggers and wall collisions. The agglomerative additive spaces of Kevin Borland's houses, the outcome of an intimate client-architect process,
and the conscious central growth of Greg Burgess's houses both produce a similar sense of spatial addition (Chapter 7). All of these houses have a lineage in the programmatic functionalism of Harold Desbrowe Annear’s Eaglemont houses of 1903 - 4 and Robert Haddon's own house, "Anselm" in Caulfield, 1906. Functional adjacency and its formulation and manipulation supersedes sophisticated spatial flow. The resulting external form is again inevitably one of a picturesque outline. Irregularity of silhouette, and a conscious search for the harmonious positioning of parts are part of this plastic deformation.

Despite the size and volume restrictions of the immediate post-war years which encouraged the reduction of internal walls and enforced the freeing up of the plan, the tradition of agglomerative planning remained. In the late 1940s, the small house was invariably considered as a basic economic shell onto which more rooms and living spaces could be added over time. Addition and agglomeration were assumed. Economy of space was prized and consequently extravagant space and certain traditional spaces such as entry hall and separate dining room were discarded (Chapter 3). The decision to retain cottage proportions of space continued throughout the 1950s. Roy Simpson, Guilford Bell and Neil Cleerehan, in just a few houses, are three architects who do not defer to this humble spatial pragmatism (Chapters 5 and 6). Even in the sophisticated structural gestures of Robin Boyd's all encompassing roofs, the spaces underneath were invariably modest compartments informally arranged (Chapter 6). Similarly along the sophisticated architectural promenades of Peter Crone's Coakley House, Hampton, 1975 and Huebner House, Olinda, 1974, space is compartmented off a spine or clamped to a central core (Chapter 7).

As an architectural issue of some importance, a spatial tradition in Melbourne architecture has not been adequately addressed. In Living in Australia, Boyd discusses his fascination with the cell and the great hall, the result of opposing desires for privacy and freedom (7). In many respects, this dichotomy pinpoints the attitude toward space in Melbourne architecture. The fickle climate and the need for both external living space in summer and internal retreat spaces in the winter months led to a pragmatic reassessment of experiments which had free spatial abstraction. Mies van der Rohe's notion of an uninterrupted horizontal layer of space, his spatial aim of beinhahe nichts, "almost nothing", 7. Robin Boyd, Living in Australia, p.47.
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was bypassed in favour of the gradual closure of the open plan, due not only to reassessment of the International Style from the late 1940s well into the 1970s, but also the emerging concerns for energy, climate control, and the impractical effects of the open plan on family life.

The harnessing of outdoor space was one of the fundamental priorities of the the post-war house plan. The attempt was to harmoniously integrate house and landscape, and grasp extra space in a time of post-war shortages and economy of means (Chapter 3). The house was intentionally extended into the landscape to overcome the internalized nature of the typical suburban box, to negate and break out of the contained object on its quarter acre site, and to capitalize on the entire area of the site and gain appropriate orientation for catching the sunlight.

For Boyd, Gunn and Grounds, there was a great interest in Japanese architecture, in its spatial adjustability, and the tradition of delimitation of the house boundary. Screens, and controlled vistas, courtyard living and the notion of a controlled external environment made ambivalent the distinction between inside and out. Unlike Sydney examples where the idea of a view was often the *raison d'être* of the planning arrangement of the house, amidst the flattened scale of Melbourne's suburbs, the importance of the private courtyard space was a high priority in the territorial network of Melbourne's suburbs. Roy Grounds's Hill Street House, Toorak, 1953; Gunn's Richardson House, Essendon, 1963 and Stradwick House, Kew, 1963; Boyd's McClune House, Frankston, 1967; Montgomery, King and Trengove's House, Balwyn, c.1960; Clerehan's Fenner House, South Yarra, 1964; and Bernard Joyce's design for a speculative house, Gordon Grove, South Yarra, 1968 were all courtyard houses where the entire site was harnessed and boundary distinctions of the domestic container released (Chapters 5 & 6).

Again the rarefied sense of space of Guilford Bell, his compositions of contained formality were the exception in Melbourne (Chapter 6). By contrast to the majority of Melbourne architects, Guilford Bell's spaces are purified, static and determine the parti. The sequence of spaces is tightly controlled. The implied process of living within is formalized, ritualized and above all cultivated. In many respects therefore, Bell's sense of domestic space is rare in post-war Melbourne. His sense of propriety transcends
even those masters of formality of the 1930s, Marcus Martin and the Freeman brothers. For the majority of Melbourne houses however, cottage-scaled space and informal internal movement was essentially the domestic norm. The spatial hierarchy was that of the picturesque suburban villa, despite the intentional mantle of modernism.

**Structure**

Structure and the house can be examined from two standpoints:

The first is a philosophical commitment to a notion of architectural progress as inseparably connected to technological progress. The second is the decision to employ expressive structure related to circumstance and occasion with no direct link made between architectural progress and technological progress. The two are not equated.

In the 1930s, investigation of different structural systems for the house in Melbourne was not a high priority. Structural experiment for local architects did not constitute a philosophical commitment to a new age or zeitgeist as it was for modernists in Europe. In Melbourne, structure was the outcome of need, circumstance and the progressive appearance on the market of new materials and construction techniques. Geoffrey Mewton's Stooke House, Brighton, 1934 was frequently cited as the apogee of the revolution in 1930s modern domestic design (8). But in fact, the Stooke House was a solid brick house painted white, with raked horizontal courses and a parapet to a built-up roof which contained a roof terrace. The only technological advance, and one which was not unusual for the time, was the use of steel framed windows. Likewise, Roy Grounds's "Ranelagh", Mt. Eliza, 1934 although planned to have a prefabricated steel frame, was built as a standard timber-framed house clad in asbestos cement sheet (Chapter 1).

For the most part, the architect-designed house of the 1930s used the same techniques of construction that the building industry commonly used. Solid brick, timber and brick veneer were used as propriety and circumstance required. Priority was given to the accoutrements of style and composition. Structure took a subservient role.

World War 2 changed that and accelerated experiment with structure on two counts. The first was circumstance. The

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second was an emerging commitment to a faith in structural progress. With acute shortages of traditional building materials such as bricks and terracotta tiles after 1945, the architect searched for alternatives to the status quo of the suburban vernacular. Not only was it necessary to propose alternatives, but with the moral force of the shift towards an understanding of the International Style, it was inevitable. A resistance to the structural techniques of the speculative builder developed, to the extent that brick veneer walls when built, were now intended to symbolize planes, skins, or abstract sculpture. The hipped roof brick veneer bungalow was shunned by an anti-suburban psychology which celebrated new structure and new materials. Thus arguments for the skillion, the flat roof, the window wall, tensile structure, prefabrication, and the reduction of mass were happily justified with arguments of economy and morally boosted by the truth of explicit structural expression (Chapter 3).

Between 1945 and 1950, emphasis on structure was largely circumstantial. The prefabricated steel Beaufort House and its timber colleagues such as the Winwood House and those of "Operation Snail" were the outcome of the desperate search for numbers in housing (Chapter 3). The mud brick houses in Eltham by Alistair Knox and others had as much to do with a cheap and readily available building material as with the artistic community who built them (Chapter 3). The houses of the so-called Victorian Type and their humble use of exposed structural and cladding timbers, rubble rock walls, corrugated iron and asbestos cement, were all part of a search for economic alternatives in a time of severe materials and labour shortages. The location of these houses in the outlying bush suburbs of Warrandyte, Croydon, Beaumaris and the Mornington Peninsula confirmed this pressure of circumstance (Chapter 3).

Melbourne architecture in the 1950s experienced the modernist idolization of structure and its elevation to the raison d'être of the house. Nowhere more explicit was this than in the structural - functional Melbourne houses such as Kevin Borland's Rice House, Eltham, 1952 and its Ctesiphon sprayed concrete arches, Peter and Dione McIntyre's steel framed and cantilevering triangular house for themselves in Kew, 1955 and Robin Boyd's steel arched bridge, the Richardson House, Toorak, 1954. These houses are the apogees of Boyd's lifelong epithet:
"The only real progress in architecture comes from structural progress" (9). It is these houses which depart most radically from Melbourne precedent and tradition. They are unique and anomalous landmarks in the development of the modern Melbourne house.

By contrast, the 1950s houses of Chancellor and Patrick such as the Macadie House, Frankston, 1953 and Freiberg House, Kew, 1959 are closest to the prewar years of accomplished assimilation and reformulation of diverse overseas and local elements (Chapter 5). However they exhibit the distillation process induced by the economic strictures of the post-war years and the nature of their sources. The skilful blend of the structural clarity of the houses of International Style architect Richard Neutra, with the organic siting, planning and rich array of textures of Frank Lloyd Wright, indicates a typically idiosyncratic amalgamation of disparate ideas, resolution of opposites, and the injection of continual variety into the developing modern Melbourne house. The vision was not a pure one. The structural frame is clear but it does not dominate nor does it rule the disposition of the spaces within. It is but one part of a complex set of issues each addressed with vigour.

A continuing theme of structural and compositional concern in Melbourne was the propensity to express the discontinuity of wall and roof, the desire to express the line between sky and building. This need to define the silhouette as opposed to the spatial delimitation of the horizontal plane appears frequently in the modern Melbourne house after 1945. There is always the emphasized horizontal line between roof and sky. For example, in Robin Boyd's houses where the roof is treated as a floating parasol such as "Pelican", Mt. Eliza, 1956 and the McClune House, Frankston, 1969, and in Roy Grounds's own house, Hill Street, Toorak, 1953, also in the bold structural expressionism of the underside of the eaves of any Chancellor and Patrick house (Chapter 5). Again the wall and roof discontinuity is found in the hovering planes and overrunning beams of John Adam's houses, and in Charles Duncan's interpretations of the houses of Frank Lloyd Wright (Chapter 6). Even in Guilford Bell's elegant pavilions, his only concession to structure is the clear expression of wall and roof. The floating roof is a continuing theme amongst many Melbourne architects' work. In the horizontal topography
of Melbourne, this theme heightens the physical value of wall and roof, both overt elements of shelter.

A theoretical reassessment of International Modernism in the 1960s mooted a dismantling of the utopia of structural-induced architectural progress. Architects however continued to religiously expose structure but tranquillized its effect on the house. The legacy of the 1950s structural-functional houses, the rule of constructional clarity, was to remain an ever-present theme in Melbourne domestic architecture until the late 1970s.

Daryl Jackson's Parsons House, Red Hill, 1959 was a gabled version of Boyd's Clemson House, Kew, 1959. It was also a cage of white sticks with a dark green building mass hidden underneath an all-encompassing roof. But the interior within was now integral and not separate from the roof above. Similarly, Graeme Gunn's Shoebridge House, Donvale, 1961 reinstated the graphic frame of the Clemson House but included the stylistic allusion, textures and detail of Japan, a free plan of sliding screens within, a gable roof instead of a butterfly roof without, and a plan which bulged out to encompass cupboard space between the frame and the external wall. In the same way, structure, function and form began to perceptibly merge when Boyd enriched the sculptural brick piers of the earlier McNicoll House, South Yarra, 1959 by doubling their function as structure with that of cupboard space within. Graham Gunn followed suit with the piersed storage walls of his concrete block Richardson House at Essendon, 1963 (Chapter 6).

Similarly, Geoffrey Woodfall's Breedon House, Brighton, 1966 though owing a debt to the organic planning and textures of Wright, maintained a strong structural raison d'être of doubled piers and scissored rafters. The structural frame was expressed but its presence was diffused by rich exposed textures, changes in level, and subtle domestic allusion. In John Reid's own house, Templestowe, 1964, two sets of four posts lay within forming squares inside and supporting the roof, concealed by a standard structure without (Chapter 6). Peter Crone's Huebner House used the theme of fin walls of concrete block. In these houses, structural expression was inherent but it was not dominant. In the Huebner House, angled glazing, super-graphics and
an architectural promenade were all of equal importance in contributing to the image of the home. Their inclusion was at once eclectic, modernist, experiential and picturesque (Chapter 7).

By the early 1970s, the search for a new monumentality via Boyd's rigorous structural expression and the off-form concrete expositions of Melbourne Brutalists such as Graeme Gunn and Daryl Jackson, was found to be difficult to maintain both economically and philosophically. The priority of structure and its potential to hold explicit meaning for the house came to be severely questioned. Despite strong desires to the opposite, the role of structure required a fundamental reassessment. By 1975, Robert Haddon's words in c.1908, were relevant.

A building should be thought out.....not in plan, nor in section, nor in elevation, but in mass and as a whole, an entity....Mass and line may be made to express the varying sentiments and emotions of man... Truth is not confined (to an) elongated cluster of uprising Gothic shafts or stately classic columns.... It may lurk in a kitchen chair as much as in a shrine.... treat the building in what may be defined as a naturalistic manner.... in this way, and in this way only, may we look for true development in our national architecture (10).

The tradition however of the post-war attitude toward emphasized structure was to remain. The legacy of the Modern Movement on the post-war Melbourne house was a coherent and visible structural rationale. It was a different attitude to the suffused structural expression of the 1930s. The importance of the frame and its vigorous manipulation, its exposure at opportune times, was to continue. Instead of the notion of structure however as guiding raison d'etre, its emphasized expression was added to the Melbourne list of heightened expressions of surface elaboration and spatial variety. In much the same way that 19th century English architect William Butterfield and John Loughborough Pearson, and American architects H.H. Richardson and Frank Furness amalgamated the bold expression of structure into their eclectic renditions of colour, surface and texture, so too did Melbourne architects, as release from the moral and aesthetic restraints of the International Style became more common.

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Spirit
The idea of spirit is difficult to define. In Living in Australia, Boyd himself has difficulty. He defined spirit as:

the quality which resides in a building that has been carried through each of the other divisions of technique with single minded devotion. It is a quality which develops when a sense of direction towards the realization of the vision permeates everything. Such permeation becomes the living psyche of the building, and it is conveyed to others only when an architect has a personal affair with his building...... and something of his own individuality, background and beliefs must inevitably enter the building (11).

The spirit of the modern Melbourne house between 1945 and 1975 would thus seem to be impossible to pinpoint. But the common denominator is exactly this phenomenon Boyd describes - a heightened expression of individuality embodied in the house envisioned as a retreat from the city. Each architect was determined to give each of his houses an idiosyncratic imprint. Instead of a stylistic authority embedded in period style, the personal trademarks of the architect became more critical than ever in the post-war years of stylistic fear. The modern house in Melbourne (and in many parts of the world) became the exhibition ground for displaying tectonic and spatial skill, verging on the glamorous folly. The house became a piece of abstract sculpture to be manipulated at will. At all times, the aim of individuality and the notion of home as territorial haven remained. Only the symbolic vestiges of domesticity were expunged.

The architect-designed house was either turned inward upon itself to become a haven of privacy or sat untouched as a picturesque retreat on an open site. Town houses by Neil Clerehan and Guilford Bell, although on urban sites, were inward havens of an outer landscape. Though potentially urbane, they in fact were retreats from the city built close to the city (Chapter 6). Meanwhile, the bush houses of Fritz Janeba and Kevin Borland, the country homesteads of Geoffrey Woodfall and the bush castles of Peter Corrigan celebrated the notion of the picturesque villa (Chapters 3, 6 and 7). The primacy of the individual was paramount and the spirit of the house was invested in an idea of self contained paradise, the enclave of a heavily

defended **private** yet **informal** lifestyle. It was the ideal of the **villa rustica**.

In the late 1940s, the new house, by force of circumstance, was a retreat from the city as many Melbourne homeseekers made a modest return to fundamental roots in the bush. Boyd's so-called Victorian Type in this decade was resolutely of the bush (Chapter 3). The spirit of Alistair Knox's houses in the late 1940s found fruit in the mid-1970s when political commitment desired flight from the city. The notion of participatory design coincided with a retreat not only from the bourgeois notions of suburb but of city as well (Chapter 7). The rustic house assailed the new suburbs of the 1960s and 1970s with exposed beams, and cobbled bricks and a bush landscape in and around the suburban house. The proliferation of the architect-designed project home such as Graeme Gunn's Merchant Builders houses and Geoffrey Woodfall's immensely popular C.H.I. project homes perpetuated this romantic image of the rustic house as it was located again within the suburbs (Chapter 6).

In the 1950s, the house had been the key to a glamorous new way of living - the barbecue, the butterfly chair and lunch on the patio (Chapter 4). This mode of living contained the manners of the luncheon in the formal dining room, but was played out in the sunshine, a pretence at rude rustic life. Release from the grim years of wartime rationing and drab colours of the 1940s encouraged in the architect-designed house a spirit of cosmopolitan drama and experiment. As this spirit of home was tentatively sought, the idea which dominated was that of houses as havens of individuality rather than as small parts of a greater communal whole. The individual house gave nothing to the street, the inhabitant revelled in escape. The idea of spirit revolved around ideas of unfettered individual choice and unconstrained availability, and an increasing notion that the house was not only a home but a commodity (Chapters 5 & 6).

The prime examples in Melbourne in the 1950s of Frank Lloyd Wright's utopian vision for the suburbs, Broadacre City however were the houses of Chancellor and Patrick. There were few others. The houses of this successful firm of architects acknowledged one of the strongest political commitments of the century, that of the American agrarian ideal of home and land ownership. A Chancellor and
Patrick house satisfied the constantly recurring dream of the Melbourne homeowner for a warm, comfortable, textural and spacious home, and above all this house was modern (Chapters 5 and 6). These houses were not a retreat from the street but substantial and visible indicators of house as home and as object of proud ownership. Common materials such as brick, timber, and tile, harmonious siting, and the accommodation of the necessity of the 1950s, the motor car, combined to produce some of the most desired houses in Melbourne.

Traditional domestic images were certainly modified and in some cases usurped by the aesthetic, moral and industrial imperatives of the Modern Movement and the effects of World War 2. Yet the pervasive spirit of the modern Melbourne house continued to be expressed in privacy and the unselfconscious eschewing of the expression of the collective. The continuing enforcement of land subdivision that perpetually creates the detached suburban house singularly maintains the spirit of the house as private haven. The efforts of large scale housebuilders such as A.V. Jennings and the Housing Commission of Victoria both before and after World War 2, and the rash of project house-building firms of the 1960s consolidated the resilience of this spirit (Chapters 1, 5 &6). The virtual absence of rigorous rationalist intent in Melbourne house design and the lack of a need for high-density urban living has maintained this spirit. A political ideal of "For Every Man His Home" has engendered in Melbourne the romantic spirit of the picturesque villa, at all levels, from architectural folly to the triple fronted brick veneer house of the suburbs.

Style
The fundamental manner of designing the modern Melbourne house has been the outcome of a tradition of the borrowing and reassembling of architectural elements. This manner has been the common theme throughout Australian domestic design. The rare occasions when this tactic of composition has not been the manner, have been the unusual and often highly publicized but isolated moments of postwar architectural history, such as the anomalous structural-functional houses during the 1950s. Even the triangle, square and circle houses designed Roy Grounds after World War 2 can be seen to have been derived from a rich eclectic base of neo-Georgian taste and a distillation of Wrightian plan motifs (Chapter 5).
Australian architectural production has been a creative reinterpretation of elements, planning techniques and details from everywhere: some reinterpretations of great imagination, others tending toward mere copying and replication. This progressive eclecticism has in some cases produced finely crafted and innovative amalgamations and in others, verged on the rough, crude, and naive. Specific stylistic labels are of little use in post-war architectural history because principles, let alone stylistic rules, were rarely expounded. As well, what seem to be original house designs in many cases are in fact compositions of borrowed and reassembled exotic parts.

Notwithstanding those difficulties of classification, the presence of a Melbourne style deserves exposure, at the risk of falling prey to criticism as was levelled at Lewis Mumford when he codified the Bay Region Style in 1948 (12). There have been two major expressions of what I shall call a Melbourne style between 1945 and 1975:

1. The first is the "lack of style" or artless or more simply the freestyle expression: the uninhibited organic design, the outcome of agglomerative planning with no overriding referentially acceptable or imperative visual code - the direct and vigorous functional interpretation of the problem. This is untutored and unconnected functionalism from first principles, dealing with the realities of site and systems of construction and services as found. The result has been an unconsciously picturesque composition of forms. The free and informal massing of the immediate post-war examples of the so-called Victorian Type; the houses of Kevin Borland from 1969 onward, and the houses of Gregory Burgess before 1976: all fall into this category (Chapters 3 & 7). Elaborated surface, compartmented space and muscular structural expression are all included in these houses.

2. The second expression, the more common and dominant Melbourne phenomenon, is the house that results from the direct and traceable borrowing and reassembling of elements. In the post-war decades, this expression was a veiled and successfully hushed-up eclecticism. Rather than there being derivative period styles with easily identifiable labels, a Melbourne style developed from individuals, an idiosyncratic amalgamation of personal styles: the Seidler, Breuer, Guilford Bell, or Grounds mode, or the Neutra or Wright mode. Rather than Tudor, Spanish Mission or

Georgian, there were now Grounds, Borland, Clerahan, Crone or Gunn: individuals who developed a recognizable set of details, planning and formal techniques which could be assimilated by other architects. This manner of design was concerned with a few respected buildings as a source for the conscious (or otherwise) infusion of elements into the domestic repertoire. But this habit was not new. Architects of the 1930s such as Best Overend, Geoffrey Mewton, Roy Grounds, Norman Seabrook, all considered to be at the forefront of the modernist design, were party to a compositional skill that also freely mixed diverse elements and assembled impure personalized designs (Chapter 1). After 1945, the list of Melbourne architects who continued in such a vein, is legion: Chancellor and Patrick, Robin Boyd, Douglas Alexandra, Roy Grounds, John Adam, Montgomery, King and Trengove, Charles Duncan, Geoffrey Woodfall, David McGlashan, Peter Crone, Peter Corrigan, Norman Day, Cocks and Carmichael and many many more. As with the first expression, elaborated surface, compartmented space and the use of muscular material and structural expression appeared in these designs. The legacy of the Second World War was the addition of emphasized structural expression to the habit of assimilation.

The two expressions of the Melbourne style described above, invariably resulted in undeniably picturesque compositions. In the 1930s such eclecticism was an acknowledged and respected manner of design, considered to be modern, not precluding developments but facilitating them. During 1945 - 1975, the idea of eclecticism went out of currency, unacknowledged and never discussed. The word eclectic became a pejorative term. By 1975, this Melbourne method was muffled by lack of exposure. Its method was not discussed and was unacknowledged. There are sources however, formal and decorative and in detail, also spatial for the post-war Melbourne house. But acceptance of the moral imperatives of the Modern Movement also forbade any talk of common themes, let alone the concept of style.

Interestingly the pursuit of a hermetic rationalist process was not developed by Melbourne architects. The structural-functional houses of the early-1950s were a briefly experienced phenomenon of theoretical rigour, before return to the habit of the the picturesque, formally manipulated object, the post-war villa rustica.
Boyd’s use of the four qualities, space, surface, structure, spirit to describe the house was an extremely apt analysis. But the inclusion of the word style serves to assist an understanding of a greater breadth of production. In many ways, Boyd’s notion in 1951 of a "New Eclecticism" (13) was achieved in Melbourne, a functionalism of the particular with a new and enriched architectural language which derived from the diverse paths of an apparently uni-directional Modern Movement. In Melbourne, the common techniques of heightened surface elaboration, spatial compartmentalizing and addition, and vigorous structural expression and the celebration of the act of plastic manipulation of the object are the patterns of method which comprise a local style. The preceding chapters have depicted this development which was in existence well before 1942.

The exception to the rule of picturesque composition in the Melbourne house are the sublime allusions of Guilford Bell’s houses, a latter day Hardy Wilson whose use of material and structure transcends the merely legible in search of a higher spiritual state of existence. The word, beauty, is uppermost in Bell’s mind. For the remainder of Melbourne’s architects, beauty has no direct part in the process. Firmness and commodity are the dictators of a pragmatic and resolute commitment to a modern vision of the house. But there is a style present, which has unconsciously developed its own visual code that has its own form of delight. Irregularity of outline, emphasized structure and texture, a scenographic experience of exterior, and rich spatial variety within - a muscular and gutsy aesthetic particular to the region.

Yet between 1945 and 1975, such a complex tradition in Melbourne domestic architecture was concealed by the moral, aesthetic and industrial imperatives of the Modern Movement, the effects of World War 2 and subsequent shortages of materials and labour. This tradition, an assimilation and reformulation of local and overseas sources into a distinctly regional domestic architecture based on Arts and Crafts ideals of honesty of structure and texture, was, however, perpetuated by the continued idealization of the single family detached house. But the concealment of such a tradition effected Melbourne domestic architecture. Whilst the modernist vocabulary enriched an eclectic base, exposure of the method by which

Melbourne architects design was stifled by a lack of self-conscious-examination. In short, there has been a paucity of discourse and critique in Melbourne on the notion of a local design tradition. This thesis has sought to expose that tradition and encourage a new self-consciousness about the way Melbourne architects design.
CHAPTER NINE:

ENVOIE - THE ARCHITECT AND THE IDEOLOGY OF THE DREAM
Envoie:
The Modern Melbourne House - The Architect and the Ideology of the Dream

Between 1945 and 1975, the architect-designed single family house was dominated by a penchant for form-making, a quest for glamour, privacy and little else. While Robin Boyd's energetic appraisals of the Australian home succeeded in elevating the architect's status to that of progressive form-giver and motivator of new living patterns, and had separated the architect from the building industry to be society's prime arbiter of taste, the single family detached house in Melbourne did not dramatically change in conception for thirty years. At no time was the single family house considered obsolete. Yet nor were its urban consequences critically investigated as an integral component of the urban morphology of Melbourne.

In the immediate post-war years in Melbourne, the architect designed house epitomized glamour. It still does. The goal of the Australian Dream, the ideal of individual home ownership has been glorified and perpetuated by the detached house and garden. Architects contributed to its gradual improvement and embellishment, from the austerity model of the 1940s to an extremely comfortable and generously spaced house that was accepted with alacrity by a thriving speculative building industry which further proceeded to provide the Dream at a more affordable capital cost than a house custom-designed by an architect. In the thirty years after 1945, the parti of the house was little changed. The second bathroom, the family room, the parents' bedroom separated from the children's bedrooms, the return of the separate dining room, all had been retrieved by around 1963 and little was added in the following decade. Overall, the house had gained the space it once had. The family had had a brief encounter with the open plan which in due course was found wanting. The Melbourne house plan closed to define more compartmented spatial functions once again.

All this is understandable. There was plenty of available space in post-war Melbourne for the spread of large scale low-density housing subdivisions. The mostly flat landscape of Melbourne encouraged the attainment of the Dream. Transport links of train lines and major roads were already in place to connect with the workplace of the central city. In 1945, generous financial terms were offered to the prospective homeowner. Even if materials and labour were
hard to find, many more people could afford a house by considering it as a long term proposition to be paid off over a period of at least twenty years.

By 1975, the Dream had endured but some aspects of achieving this Dream had changed. Demands upon the amenity and commodity of the house were greater. The house had grown in size, now cost more and financial terms were not so beneficent as the immediate post-war years. In thirty years, the perception of the importance of home ownership had not changed but the time span for owner-occupation had. The house was no longer an estate handed on as an inheritance to the eldest child once the parents were deceased. The house was now a commodity of considerable advantage. The image of the single family home had now not only a sentimental value, a powerful stamp of individuality and an ideological commitment to land-ownership and territoriality, but a monetary value. The ideal of the single family home was now focusing and fixed on the cash value of the house as a marketable commodity. Yet the perceptive boundaries of how one might dwell in Melbourne could not be expanded beyond this pragmatic edge.

The commitment to suburbia had become the ideology of urbanized Australia, resilient and resistant to all attacks and investigations by critical thought. In many respects the story of the post-war architect-designed house has been by default a suppression of urban alternatives, a condition not unexpected given the circumstances of immediate post-war Australia and the pressing need to revive the building industry and the momentum given to expediently providing suburban houses for returning servicemen.

While understandable, one must say that the Australian architect in no small part however has contributed to this end and has largely accepted the ideology that informs the suburban villa. Architects in the 1950s did not need to, or desire to question such a trend. The juggernaut of a singular notion of city development was well and truly implanted. Such a commitment in the history of the post-war Australian city however has rarely been acknowledged. A strange and uncertain ideological dichotomy has arisen. While the architect seemed to act in complicity with the idea of the unquestionable right and desirability of the single family home, that same architect along with architectural critics and authors has despised the general outcome of
conventional suburban housing. Apart from the significant experiments in cluster housing by Graeme Gunn in association with Merchant Builders and the 1960s flat building exploits (of varying degrees of contextual success) of Ernest Fooks and M.Benshemesh, in virtually no way other than in the formal design of the single house object has there been an attempt to come to terms with the overall context of the suburb itself and what the suburban house actually means in the context of the Australian city.

Between 1945 and 1975, the architect largely ignored the suburb in two ways: by either turning the house inward to create a walled haven of privacy or by the attempt to avoid the reality of the suburb, creating the landscape of the bush within the boundary of the quarter acre block. Both attempts to negate the suburb often increased the amenity for the inhabitant but largely forged the confirmation of the suburb as an anonymous dormitory enclave. The suburb which was untouched by the supposedly reforming hands of the architect was simultaneously accused of anonymity and sterility. Misunderstood, the suburb was not studied positively as a potential embodiment of desires, dreams and goals of the average homemaker. The question was never asked of those who lived there if a pejorative description of suburbia was justified. The existing suburban house type was criticized negatively by the architect and replaced with so-called better design that was largely illusive in terms of real change. Cluster housing and rows of walk-up flats did little to alter conceptions. Issues of house typology, the structure of the suburb and differing notions of density went largely unquestioned and indeed there seemed no pressing demand to think otherwise. Forms of inner-city living, as well as interest in the revival of the terrace house and row house type were resented by a disinclined populace who were content with the state of suburban things and entirely inclined to pay for the complex infrastructure of roads and services which perpetuated the onward stream of housing to the outskirts of the city. Societal pressures made the effort to be part of the homebuying and land-owning population of Victoria a lifelong necessity and an obsessive obligation.

This singular notion of city development had not always been the case. In 1942, the Australian city was on the brink of containing an urbanized population in the sense of a coherent mix of housing stock which in turn accommodated a diverse social mix. Two, three, and four storey blocks of
flats, semi-detached houses, versions of the bungalow court were all actively pursued as alternative types to the highly successful and desired single family home. In 1929-30, Alcaston House was built within the central grid of Melbourne. In South Yarra, St.Kilda, Caulfield and East Melbourne, and along Queens Road and St.Kilda Road, a new urban density was taking shape. Societal emphasis was not based only on the family. It was acceptable for women to live on their own, bachelor flats were popular and it was considered chic for couples to live close to the city or to the entertainment world in St.Kilda. The war stopped all that. The choice of housing type reduced dramatically. Attention was diverted back to the single family house. It was a political act and also one of practical necessity. The dire shortage of housing of all forms and the need to repopulate after the war meant that the social, political and capital goals of the post-war era were necessarily geared toward the family. In America and in Australia, the expanse of space on the outskirts of cities was ideal for large scale subdivision and rehousing the population at an economic rate. A house was a substantial economic outlay ensuring a stabilised and largely static population. The diversity of housing stock advocated by Walter Bunning in *Homes in the Sun* in 1945 (1), an even mix of high-rise apartments, two and three storey walk-up flats, row houses, semi-detached houses and single dwellings did not occur in the ensuing years burdened by restrictive planning controls and the political push for the single family home. Whereas architectural interest and popular demand had been spread over a number of different housing types and typologies pre-1942, in the years after 1945, the architect happily succumbed to developing the deified image of the dream home. Interestingly it was only one form of low density housing that was followed, that of the singular object alone on its site. Courtyard housing at the same density was not attempted nor was there an exerted effort to change the subdivision pattern yet retain similar densities. Experiments with cluster housing had little effect. Melbourne architects did not question this determination and pursued enthusiastically and competently to perfect the single family house in Australia, and indeed created one of the most sophisticated centres of domestic design in the world.

Unlike the problems encountered by British and European governments in post-war reconstruction, Australia and the United States perpetuated the desired model, the single

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family home. They did not as the Europeans had to, cast out the single family house as an object that was now too expensive, space extensive and unrealistic in the demand for rehousing after the war. A similar advocacy and implementation of a desired model had occurred in Britain after World War I where the spread of semi-detached houses speculatively built as "Homes for Heroes" (2) was to advance the horizontal spread of all major English cities.

In Australia, thirty years of town planning regulations and public perception instilled an unbending mentality regarding the nature of dwelling. The phenomena of hard-won territoriality, the family, the suburb and the sacred home on its own site became ingrained. The resounding success of the Federation villa had realised the concept of the garden city ideal and signalled the attainable Dream, highlighting the ensuing squalor of inner city nineteenth century terrace housing which occurred after the owners left to occupy their Federation villas and rented the terrace houses to the poor.

The history of the post-war architect-designed house in Melbourne has confirmed the same mentality ever since. Though driven by reformist ideals of the Modern Movement, post-war architects transcended the speculative vernacular formally but not perceptually within the idea of the city. The ideal of the bush was continually cited by the architect rather than that of the city, confirming an ideological commitment to the land, though conceding the necessity of the adjacency of the separate bush house and the workplace in the city. There was an unwillingness on the part of architects to cut all ties with the native landscape. The bush was rigorously denied in the outer suburbs which were the realm of the speculative builder and it was precisely this which architects did not wish to acknowledge, the peculiar urbanity of suburbia from which there was and still is no escape.

The architect's response to this peculiar urbanism was to sate the bourgeois thirst for privacy by turning away from the suburban street to claim the land of the entire site. Like Griffin's Castlecrag Estate in Sydney, the idea would seem to be essentially an anti-urban proposition in the traditional sense of the city. Sub-bush is desired rather than sub-urb. By doing so, the Australian architect was however attempting to understand and accommodate the Australian bush, something that has never been easily transferred to
the suburb, though many architects such as Walter Burley Griffin and Marion Mahoney, Harold Desbrowe Annear and Edna Walling had all indeed tried. Such attempts were anomalous in a planned environment of quarter-acre blocks hostile to the bush, and containing a populace eager to plant exotics and the other appurtenances of Anglo-suburbia, the annuals and the domesticated street trees, in an effort to create another time, another place and satisfy the necessary urges for taste, nostalgia, style, status and glamour. All of these were not inherent allusionary qualities of the bush, at least not in 1945. It is interesting to note that the question of landscape is not given great prominence in the histories of post-war architecture in other parts of the world. The idea of climate and landscape is one that is tenaciously followed by Australian architectural historians, rather than an acceptance of an urbanized history of architecture in Australia which is an undeniable and difficult fact.

Australian architects after 1945 had an implicit belief in the anti-suburban motives and ideals of the Modern movement. Consequently change that was desired and speculated was often radical but only in the sense of ignoring the suburb and going elsewhere to multi-storey housing types or ignoring the suburbs altogether and immersing designer and client in the vagaries of architectural form which as has been shown, the Melbourne architect met with unquestionable skill and invention.

Two principles were thus assumed: first, that the nature of the suburb itself as the natural outcome of market forces and the desires or ideological commitment of the inhabitants was an incorrect and undesirable outcome that was to be loathed and rejected. Secondly, attempts to understand the immediate surroundings were therefore largely disinclined and contributed to a fascination with house as an object to be formally manipulated at the expense of the communal and civic responsibilities of Garden City principles and a more profound vision for a future Australian city.

If this conclusion sounds equivocal, I would contend that architects in general have also been equivocal as to their commitment to a type which they have not tried to critically understand. The architect posited a glamorous form to which one might aspire but as an escape rather than as a sense of arrival or achievement, a defensive castle rather than part of a greater realm that may be called a city. Even within the confines of the inner city area, the walled
townhouses of the 1960s and 1970s embody the escape from the responsibility of the city. Though the prevailing modernist philosophy of the time saw form and reform as synonymous, the house underwent rigorous formal and stylistic experiment in the context of Melbourne but still remained rigidly positioned within the context of the detached object in space. Consequently when the architect decided that high screen walls, flat roofs and fully glazed walls were desirable, instead of a new engagement with programs for housing, he was actually mapping out fashionable living patterns which were to be eagerly followed, desired and commandeered by homebuyers as springboards to boost their major speculation, the home. In the invention that occurs between 1945 and 1975, the house goes through an entire linguistic and spatial transformation but not a new vision for living. In the public perception, the architect is fundamentally still reserved for the difficult site or the upper limit budget.

The architect designed house signified therefore the ultimate DREAM - leaving both builder and homebuyer behind in a whirlwind of style that was indeed elegant, indeed private and well designed but bereft of a larger commitment other than the satisfaction of an upper middle class client. By 1975, the house in Melbourne had lost its potential as an object or type that could be improved or regarded as a departure point for usurping its own omnipresence. Formalistic experiment ruled. By this stage, the idea of reform was itself virtually obsolete and regarded as an infringement upon the rights of people to choose how they wanted to live. Australian utopia was confirmed as a sea of homes where everyone is housed, and on the surface where all would seem to have an equitable piece of the pie.

The single family house between 1945 and 1975 has for architects been the subject of constant linguistic alteration and the playground of Australian architectural theory as well as the culminating note of high-style living. Much of this fascination with the house has also to do with the traditional means of beginning architectural practice in Australia. The young architect invariably begins designing in the domestic field. Architectural publishing has also cultivated a never-ending stream of examination of the single family house.

The architect-designed house in Melbourne therefore finds itself increasingly out on a limb as unable to respond to the
SUBURBAN or URBAN condition, but undoubtedly resplendent and unbeatable in its own insularity of formal dexterity. That insularity is a reality and an ideological position about which all Australian architects must pose the question; Does that insularity describe their own status quo or a does it describe a position from which to depart to forge new directions in housing the Australian people and understanding the Australian city?
APPENDIX ONE:

PERIOD STYLES AND THEIR EMBRACE OF THE MODERN

The Georgian/Neo-Georgian Style
The Tudor and Old English Cottage Style
The Spanish Mission and Hollywood
The French Provincial
The Georgian/Neo-Georgian Style
In considering the Georgian house in 1930s Melbourne, it is appropriate to begin with the last house designs of Harold Desbrowe Annear, who died in 1933. These last works are symptomatic of a conservative and academic tradition of the Georgian, and can properly be called Georgian Revival. The Baillieu House, Orrong Road, Toorak, 1925, Ince House, Glenferrie Road, Malvern, 1932, and Lear House, Plenty Road, Preston, 1933 are all exercises in the scholarly application of classical detail to static double storeyed prismatic forms with the obligatory porte-cochere attached. Before the Depression, Annear's "Cloyne" in Toorak Road, Toorak, 1926 (fig.12) had been a clever re-interpretation of Georgian formality with its dynamic canted bays and wide overhanging eaves, echoing the taut muscular quality of the wall in earlier timber houses such as his own and the adjacent Chadwick House in the Eyrie, Heidelberg, 1902 - 3 and 1903 - 6 respectively. This change to the simple traditional prismatic forms with applied ornament has been attributed to Annear's failing health (both mentally and physically), a dearth of comfortable and wealthy commissions in his last years and restrictive economic circumstances following the Depression (1). The last houses of Annear and those of the late 1920s by contemporaries such as Rodney Alsop and Walter Butler extended the Georgian tradition in a scholarly and dignified manner. They could not, however, be considered modern as can the Georgian houses of the immediately following generation of architects such as Marcus Martin, Osborn McCutcheon, and Yuncken Freeman and Freeman.

Fig.12 Harold Desbrowe Annear, architect. "Cloyne", Toorak, Victoria, 1926.

These younger Melbourne architects extended the authority of the neo-Georgian rule of Taste but altered its application. The sources were more varied; the restrained quiet eloquence, and correctness of their elders was embraced by a modern abstraction yet their allegiance to the authority of an image that necessitated detail and pomp was retained. Though retaining the simplicity of their supposed prototypes, the Colonial Georgian forms of early Sydney and Tasmania, these houses diluted the notion of stylistic integrity while confirming the client's desire to own a Georgian house. There were three major approaches to this modern Georgian house: the formal mass with the asymmetrical facade; the symmetrically composed box; and the butted prismatic forms which composed a picturesque modern Georgian house.

The houses of Osborn McCutcheon exhibit subdued historicism. The J.B. Shackell House, built close to the street at 27 St. Georges Road, Toorak, 1940 is a large massive prism, formal by its mass and hipped roof, complete with shutters, garden wall and potted cypresses, yet its fenestration is asymmetrical and indicative of the spatial functions within (fig.13). The powerful form, a dominant implied cornice and symmetrical elaboration of particular elements such as the front door give the house its formality. Georgian details lend historic authority to an otherwise functional cubic mass. A plinth level of incised lines reinforces this and implies a static datum, while the oriel window denotes an off-centre hall, behind the Regency flywire door and doormat embossed with J.B.'s initials (2). This cloak of Georgian respectability concealing a pragmatic plan within pervades McCutcheon's Georgian houses; the J.O. Manton House, 20 St. Georges Road, Toorak, 1939; H.G. Balding House, 8 Moonga.

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2. "27 St. Georges Road, Toorak, Victoria", Art in Australia, 25th November 1940, pp.66 - 67; R. V. I.A. Journal, October/November 1940, p.98; George Beiers, Houses of Australia, p.76.
Road, Toorak, 1935; John Grimwade House, 15 St. George's Road, Toorak, 1937 (3). All are formal bulky masses presented to the street with skilfully composed asymmetry contained within overall symmetry of their external form. At the side and rear, a garden facade was invariably broken by wings or bay windows. The stair hall in these houses often enjoyed grander proportions than some of the main rooms. This sophisticated compaction of volumes within a formal mass extended to Bates, Smart and McCutcheon’s entry for a small house design in the Centenary Homes Competition of 1934, and was described as “Modern with a Colonial Flavour” (4).

The conflict of modern convenience and the aspirations of Melbourne’s upper classes to the gentility of the Georgian was indicative of many of the firms practising the Georgian. The E.S. Van Staten House in Anderson Street, South Yarra, 1940 by Martin and Tribe (5) presents itself as a demure and tasteful single storey house, three steps above the level of the street with a symmetrical facade, stripped classical portico and with white medallion above (fig.14). Yet the house is built of the latest cream bricks complete with dog-tooth dentils in the cornice and accommodating a garage tucked neatly underneath and into the front facade. All the modern conveniences plus taste, sophistication and an urbanity more redolent of London than Melbourne are there. The plan was zoned into living

Fig.14 Martin and Tribe, architects. E. S. Van Staten House, South Yarra, Victoria, 1940.


Appendix 1/4
and two storey sleeping areas connected by a sun gallery, and backed by a services block. The treatment of the garage as integral to the Georgian also occurs at the Dr. Roy Watson Residence in Glenferrie Road, Hawthorn, c.1940 which was designed by R.S. Demaine (6), where formally composed prisms are butted together to form an asymmetrical composition which was the most common way to avoid the academic difficulties of producing a wholly correct formal design.

The most sophisticated Georgian architects of the 1930s in Melbourne were the Freeman brothers at Yuncken, Freeman and Freeman, the established firm which was later to become Yuncken, Freeman Bros., Griffiths and Simpson. The street facades of their houses were strict symmetrical compositions with formal articulation of detail rather than stripped classicism and with garages attached as judiciously discreet pavilions. A diligent classicism is enforced even with diminutive compositions such as the Mrs. D. Lindsay House in Boxshall Street, Brighton, c.1940 (7). Larger houses included “Redheath” for Mr. and Mrs. C.D. Finch of Kooyong Road, Toorak, a salmon pink brick home (fig.15) that is more precisely labelled as Queen Anne (8) and the Fay McClure House in Fulham Avenue, South Yarra, described as “definitely early Colonial in feeling, but handled with a smoothness and dexterity which is truly modern” (9). Both houses are sited

close to the street with elaborately decorated doorways. Another so-called Queen Anne house in Grant Avenue, Toorak, c.1935 (10) was a large cubic composition with an opulent white regency interior complete with chandeliers and rococo mouldings. The stairhall was an oval and of the same dimensions as the living room.

Described as having a "Colonial Note in a Modern Home", the Cedric Ralph House, Wrixon Street, Kew, c.1937 (11) was a single room width L-shape house built close to the street to harness maximum privacy and orientation for the rear garden (figs.16,17). Fine applied Colonial detail enriched the recessed entrance porch. Built in cream brick, an anomalous choice for Colonial allusions, this was the Georgian house edging towards the open plan. The single room width planning is symptomatic of the disjuncture between image and plan. As "an example in which Colonial detail has been adapted to modern conditions" (12), the house is a picturesque composition of cubic prisms butted together, finished in quality historic detail with the obligatory generous stairhall and elaborately decorated entrance way. In such a house, the architects understood desired living patterns and demonstrated their notion of etiquette and the requirements of proper dress: the purity of colonial taste.
Appendix 1: Period styles and their embrace of the modern

The Tudor and Old English Cottage Style
The Tudor and the Old English Cottage style was above all a style of the exterior, emphasizing picturesqueness, and indulging in the rich brickwork and tile colours available in Melbourne. These were houses of neo-medieval details: diamond panel casement windows, steeply pitched roofs, adzed timbering and tapestry brickwork between the half timbers, a castellated or pitched roof to the porch, corbelled over-burnt clinker brick gable ends, solid boarded doors and little bay windows. All ensured a convincingly crafted picturesque home of a distinctively English appearance yet without any derivation from medieval models in history.

This modern version of Tudor was extremely popular. In 1936, *Australian Home Beautiful* noted that,

*The English influence is very strong at the moment and for every eight or ten roomed house of the Georgian type being built, a score of English cottages are springing up* (1).

Architects who designed houses in such a style included Keith Reid and John A. Pearson; Robert Bell Hamilton; Arthur Plaisted; Osborn McCutcheon; Bruce Sutherland; H. Bramwell Smith; R.M. and M.H. King; Alder and Lacey; and G. Burridge Leith who was Chief Architect of the State Savings Bank of Victoria.

A talented exponent of what I shall call Modern Tudor was Arthur W. Plaisted, who built large and substantial mansions in the style in Toorak and South Yarra. The three storey H. Kerr House, Toorak Road, Toorak, 1936-7 (2) is of manorial proportions (fig.18). The authority of the design is obtained not so much by the deft composition of steeply pitched gables but by the use of authentic details and materials such as Tudor entry arch, lancet windows in

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Fig.18 Arthur W. Plaisted, architect. H. Kerr House, Toorak, Victoria, 1936-37.

2. (H. Kerr House, Toorak Road, Toorak) *Australian Home Beautiful*, December 1936, p.38.
the gable ends, multi-paned windows with stuccoed sills to resemble stone and tall chimneys with pots to form a picturesque silhouette. From these apparently authentic details, age, permanence and respectability is acquired. It is not inherited but created. Another house by Plaisted in Turnbull Avenue in Toorak of 1936-37, was a large double storeyed house whose "Old English" atmosphere was achieved by the exterior effects of the adze, the "quaint stone porch" and the "irregularity of the line dividing the lower portion of the building (in clinker bricks) from the upper portion which is stuccoed". Australian Home Beautiful also pointed out that "needless to say the adjacent kitchen has all modern conveniences, and these are ingeniously co-ordinated" (3).

The virtues of Robert Bell Hamilton's architecture were extolled in August 1934 in an article written by Harold Herbert in Art in Australia. Hamilton was a society architect in Melbourne whose virtuosity was not limited to Modern Tudor or Old English but encompassed versions of the Spanish Mission and the Georgian. Herbert's description of Hamilton captures the essence of his Arts and Crafts basis to domestic design and this description could so easily apply to other Melbourne architects:

To those who seek the particular type of English domestic architecture that suggests comfort and romance, the age of the craftsman as William Morris knew it, the hundred and one charms of old world cottages and the atmosphere of scented gardens, Mr. Robert Bell Hamilton's outlook should appeal. Every detail is a matter for consideration, carefully selected and hand-made whenever possible. The adzed beam and sawn timber, appropriate glass and handblocked hangings on coarse materials, all of these mean everything to him, and there is, certainly much to be said for his point of view in an age of glitter and polish, bent steel and factory made furniture (4).

Herbert goes on to say,

A Tudor period suggests many delights from "wainscoting to waist coating" - mulled ale or rare port, the dull glint of pewter on shelves with the sharp high lights of porcelain. There is a fire not a radiator or central heating - and mine host rubicund and smiling. This is perhaps a winter's tale and in the gloaming. But in Summer, just as alluring, there would be an air of grateful coolness - shaded windows, ice

Appendix 1/8
5. Ibid., p.75.
6. Ibid.
7. Ibid., p.81.
10. Herbert, op. cit., p.79.

Mr. Hamilton avoids where possible the brand newness of the factory made article. He prefers the wooden or wrought iron latch, for instance to the machine made, metal fixture and realises the effectiveness of sand finished plaster for wall surfaces and the attractiveness and comfort of Windsor chairs (5).

Hamilton was an admirer of the Arts and crafts principles of English architect H. M. Baillie Scott, but as Herbert notes: Hamilton's period revival architecture employed "modern science in sanitation, lighting and engineering (which) is naturally, made use of by him" (6). His Modern Tudor works include the Mrs. John Fitts House, Montalto Avenue, Toorak (fig.19) (7); "Denby Dale" Flats, Malvern (in association with Marcus Norris) (8); "Moore Abbey" Flats, Marne Street, South Yarra, 1934 (9) and the notorious Ford's Pharmacy, Toorak Road, Toorak, 1933 (10). Hamilton's work is symptomatic of a sincere Arts and Crafts philosophy placed within a technologically serviced new age. His houses demonstrate how 1930s architects effortlessly embraced traditional notions of home and materials and the rapid changes in technology and industrially made materials. There seemed to be no philosophical problem.

Smaller more modest English cottage types were promoted by architects Keith Reid and John A. Pearson, who are perhaps best known for the horizontal Streamlined Moderne McPherson's Ltd. Building, Collins Street, Melbourne, 1934. In an article from the same year in *Australian Home Beautiful*, entitled "Honeymoon Houses
...and Castles in the Air", romantic images drawn by Reid and Pearson of one's dreams of old and new are compared (11) (fig.20). The "New Style" resembles a Normandy fantasy or gingerbread house similar to houses designed by romantic Bay Region architect W.R. Yelland in the late 1920s, particularly his Goss House, Piedmont, Ca., 1925 (12). Reid and Pearson's actual proposals however are modest compact plans with projecting wings to the street set amidst luxuriant gardens (fig.21). The gable-ended box forms are austere and elaborated only by bay windows and castellated or gabled porches. The reason for the attention given to these small houses by architects was the financial stress and dwindling demand for larger and more costly houses following the Depression. Sparer versions of these houses were offered by speculative builders such as A.V. Jennings whose publicity advertised the "English Cottage Style" as,

possibly the most charming that has ever been evolved; this style has lived for centuries, and even today we find that a majority of the better class homes follow this type (13).


The Jennings version of the English Cottage Style was however a bungalow with a gable ended bay with brick corbels and a gabled clinker brick porch! (fig.22)

A house in Turnbull Avenue, Toorak, 1935-36 by Reid and Pearson is a larger and more elaborate attempt at the English Cottage type, complete with half timbering, clinker brick infills, an attic second storey and brown adzed beams in the living room (fig.23). As with other Modern Tudor houses, the kitchen, bathroom and service quarters were "all equipped in modern style" (14). The article which
described this house was accompanied by a photograph of a thatched cottage in Devonshire showing "real charm" taken by Mr. F. L. Klingender on a recent visit to England. Modern Tudor and the Old English Cottage represent a romantic search for English roots, realised eagerly in the leafy suburbs of Malvern and Toorak, and a desire for status, once again from somewhere else. This style was loved by the homebuying public for its security, warmth, sentiment, and its unequivocal statement to one's neighbors of one's English roots. This desire for a connection to England was not limited to Australia. Australian Home Beautiful published houses designed by American architects which were described as English Cottage types (15) as well as houses designed by contemporary British architects which had originally appeared in The Architectural Review (16). The modern medieval home was in demand.

15. For example, "An Attractive Roof Treatment" (House designed by American architect Julius Gregory), Australian Home Beautiful, February 1935, p.25.
16. For example, "English Cottage" (house examples from The Architectural Review), Australian Home Beautiful, December 1937, p.23.
Appendix 1: Period styles and their embrace of the modern

The Spanish Mission and Hollywood

Though Robin Boyd spoke of the Spanish Mission as "perhaps the strongest single influence in twentieth century stylist" (1) he and other champions of modernism largely ignored its continued use by architects in the 1930s. There were many competent exponents of the style and its Mediterranean variants in Melbourne before the Depression: Osborn McCutcheon, Rodney Alsop, Leighton Irwin, Cedric Ballantyne, Leslie Perrott, and Blacket, Forster and Craig. There was also a substantial amount of literature available in the late 1920s on the architecture of Spain in lavish publications almost all of which emanated from the United States such as Arthur Byne's Provincial Houses in Spain, 1925 and Samuel Chamberlain's Sketches of northern Spanish architecture in pen, pencil and wash, 1926 (2). Other books such as Rexford Newcomb's The Spanish House for America: Its Design, Furnishing and Garden, 1927 and Randolph Sexton's Spanish Influence on American Architecture and Decoration, 1927 (3) suggested the applicability of the style and its detail to America, because the Spanish house is primarily designed as one in which the occupant may enjoy outdoor life to the utmost, providing a maximum of light, air and sunshine while affording at the same time a desirable privacy .... and of course is profoundly modified by American common sense, good taste and insistence on comfort and convenience (4).

In the 1930s, consideration of the Spanish and its various forms like the Georgian underwent a modern transformation. The careful courtyard planning, arcades, and loggias of Leslie Wilkinson's calm and reposed Spanish-inspired houses in Sydney were of lesser influence and the superficialities of style were applied to essentially cubic planar forms. It was however, not exclusively a "builders invasion" as Boyd would lead us to believe (5). Many Melbourne architects continued to design in what has become known as Spanish Mission.

There were two sources for this style in Melbourne: the vernacular architecture of Spain, in particular that of Andalusia, studied and sketched on many a young architect's grand tour and the Spanish Colonial Revival or Mission Revival Style from Southern California. In cities such as San Diego, Santa Barbara and Los Angeles in the

1920s and 1930s, numerous homes, shopping centres, hotels, schools and civic buildings were being erected in Mission Revival Style. As David Gebhard writes,

*Neither the essential forms nor the structure of the Mission Revival buildings had anything to do with their supposed prototypes. Instead, the Mission Revival architects conjured up the vision of the Mission by relying on a few suggestive details: simple arcades; parapeted, scalloped gable ends (often with a quatrefoil window); tiled roofs, bell towers, (composed of a series of receding squares, normally topped by a low dome) and finally (and most important) broad unbroken exterior surfaces of rough cement stucco* (6).

Spanish Colonial Revival houses built in Southern California by architects such as George Washington Smith and John Osborne Craig of Santa Barbara, Wallace Neff of Pasadena, Reginald Johnson, John Byers, Roland E. Coate and Gordon Kaufmann in Los Angeles had also been inspired by the provincial architecture of Spain, especially Andalusia (as were Leslie Wilkinson's) and nearby Mexico. They were frequently published in the American magazines, *Pencil Points, Architectural Record* and *Architectural Forum*. The houses were conceived as sculptural volumes, closely attached to the land and the basic form of the building broken down into separate smaller shapes which informally spread themselves over the site. The same tendency occurred in Melbourne and these houses underwent subtle modern transformation.

The Spanish Mission houses of Melbourne fall into two groups. The first are those which possess all the appropriate accoutrements of the style. In the A. Sacks

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Appendix 1: Period styles and their embrace of the modern

Fig. 25 Geoffrey Mewton, architect. Third Prize design in The Herald Ideal Homes Competition, 1939.


By looking at the house designs of two progressive architects of the late 1930s, Geoffrey Mewton (fig. 25) and Robin Boyd (fig. 26), one can detect new forms of architecture assisted by qualities inherent to the period styles of Spanish Mission and the Georgian. This is the second version of the Spanish Mission house in Melbourne. Simple, stuccoed planar forms, screen walls, the tiles, terraces and pergolas of the Spanish Mission are
added to the cubic simplicity of the Georgian. It is a cumulative influence on architects developing a modern house in Melbourne.

Geoffrey Mewton's third prize design in *The Herald* Ideal Homes Competition, 1939 (9) and a house designed by Robin Boyd in the same year for the *Australian Home Beautiful* (10) reveal the influence of the Mediterranean courtyard and stuccoed screen walls of the Spanish Mission. Mewton's design is a planar composition with a skillion roof and open plan within. The massing is picturesque, with pergolas and luxuriant planting, screen walls and stylised grille to a garden gate, tiled roof and a timber verandah. All bespeak a Mediterranean air of privacy and sundrenched courtyards, revealing his upbringing in the conservative office of Blacket, Forster and Craig, and complementing his formal interest in interlocking form (11). Boyd's house design is a cubic form with a wedge shaped roof and an elevated roof terrace over the garage. Both Boyd's and Mewton's designs have bold skillions, white walls and terracotta red marseilles tiles. Doors, windows and gates are high gloss white and on Boyd's design the gutter is glazed apple green.

One is often inclined to overlook the influence of such a revival style on an architecture reduced to simple geometric forms. The Spanish Mission of Leslie Wilkinson, the Georgian of Hardy Wilson in Sydney, and the various interpretations of Georgian in Melbourne offer a sound basis for the acceptance of a new architecture based on simple cubic geometric forms. The limited number of materials and the basic simplicity of brick, wood and stucco inherent in the Spanish Mission style led to simple geometric box forms and minimal detail and may be
regarded as spreading the eclectic base of the developing modern house in Melbourne. David Gebhard has noted a similar, more pronounced development in California.

In the end it could be suggested that the Renaissance of modern architecture which occurred in California during the 1930s was due in no small measure to the fact that the visual leap from the Spanish Colonial Revival building to the modern one was not a great one. Ironically, the modern movement found its "historic" roots not in the distant past but in the very tradition against which it was supposed to be battling (12).
The Modern House in Melbourne 1945 - 1975

Fig. 27 Keith Cheetham, architect.
Irswell House, Toorak, Victoria, c.1939 - 40.

Fig. 28 Edward F. Billson, architect. Fred Dennett House, Toorak, Victoria, 1936.

Fig. 29 Edward F. Billson, architect. A. M. Heath House, Frankston, Victoria, c.1936.
Appendix J: Period styles and their embrace of the modern

The French Provincial
Another exterior dressing in which most period revival architects of the 1930s could operate was French Provincial. Other terms used to describe this nebulous label of doubtful derivation were Chateau or Normandy Cottage Style. The style was characterized by steeply pitched slate or tile roofs, bay windows, painted brick walls, French doors and brick dentils. It was a style that was extremely popular in America and featured frequently amongst the work of architects such as Robert R. McGoodwin; Willing and Sims; and the Philadelphia firm of Mellor, Meigs and Howe. The most convincing examples in Melbourne are found in the house designs of Keith Cheetham and his Irswell House, Struan Street, Toorak, c.1940 (1) (fig.27), Osborn McCutcheon's "St. Mirin's", Baxter for Mr. James Cook, c.1936 (2), or in St. Georges Road in Toorak, in the Fred Dennett House, 1936 by Edward F. Billson (3) with its round tower topped by a French Provincial weathervane, blue and green slate roof and regency door canopy (fig.28). Inside however this house was determinedly moderne with ship's rail stair, coved ceilings and built-in electric fires. Another French Provincial design of Billson's was the long and spreading A.M. Heath House at Frankston with its bay window, steeply pitched gables and rough textured bricks colour washed cream (fig.29) (4).

It is interesting to compare Billson's residential work with his commercial and industrial designs in this period. In 1936 - 37, Billson designed his widely acclaimed industrial buildings at Warburton; the Sanitarium Health Food Company Building (fig.30) and the Signs Publishing Company Building, both examples of the new European style of industrial architecture which derived much from the

Fig.30 Edward F. Billson, architect. Sanitarium Health Food Company Building, Warburton, Victoria, 1936 - 37.
cream brick vocabulary of Dutch architect, Willem Dudok. The transparency of the the glazed corners and the formal discrete detailing of the Fagus factory by Walter Gropius and Adolph Meyer at Alfeld-an-Der-Leine, Germany, 1911 is also recalled by the Sanitarium Building. Such a comparison shows what seems to be an ideological contradiction amongst Melbourne architects of the 1930s. What is demonstrated however is a design philosophy of circumstantial and exploratory eclecticism producing in many cases competent and convincing examples of a style rather than a strict adherence to universal ideas of form and detail. Such an intellectual schism was never discussed nor even questioned. Propriety demanded **domesticity** in the form and it was to be eclectically derived from any period style. French Provincial was but one of many styles to choose from, a selection that proclaimed successfully a domestic form.
APPENDIX TWO:

DREAMS OF A MODERN MELBOURNE HOUSE:
IDEAL HOME COMPETITIONS 1933-1939
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Dreams of a modern Melbourne house - Ideal home competitions 1933 - 1939

Several competitions for the design of the detached house were held between 1933 and 1939. In many of these, there was the open encouragement for change and experiment. A search for a modern Australian house was advocated. By examining these competitions, one can perceive the breadth of contemporary thought in Melbourne and the extent of local visions for the future. A knowledge and appreciation of overseas progressive design ideas and philosophies is demonstrated and the process of local assimilation is continued. By 1939, eclecticism is still in force. There is an increased usage of new vocabularies of form and detail but change to the design of the single family house has been an incremental one. The 1930s dream of the modern house for Melbourne was realistic and achievable, but hardly revolutionary.


In early 1933, a competition for an £850 house was held in association with an exhibition organized by the Melbourne University Atelier of Architecture students. The first prize was awarded to Horace Tribe (1) for his house on "Harmony Row". His entry was a two storey solid brick house with a tiled roof, and compact functional plan to maximize views to the rear garden (fig.86). Its gable roof, chimney, potted cypress beside the front door, poplars, and an axially laid out garden with lily pond were hallmarks of English domesticity.

The second place award was for a symmetrically composed double storey rectangular block with a hipped roof and a juliet balcony above the front door (fig.87). The major
rooms were formally planned and connected axially to specific points in the formal garden, such as a birdbath or sundial. Inside the front door was the obligatory grand staircase. The designers were Harry A. Burt, J. Kirkland Robertson and Allan Love (2).

These two entries show all the qualities of a mellow eclecticism: thorough, safe, unquestionably domestic and firmly entrenched in Anglo-Saxon ideals of gentility and respectability which extended to a complete design for the car washing area, kitchen garden, fruit trees and obligatory tradesmen's porches, all neatly and efficiently located within the confines of Melbourne's typical suburban block. The street title "Harmony Row" is indicative of the comfortable acceptance of the suburban ideal in 1933.

The Centenary Homes Exhibition, 1934.
1934 was Melbourne's Centenary. It was also the year which signalled the recovery from the Depression. As part of centenary celebrations, a housing competition with five different categories, (three for the design of complete houses) was held in conjunction with the Centenary Homes Exhibition which had been inspired by the late Sidney Myer, who had attended a similar exhibition earlier in the year in Los Angeles, U. S. A. (3).

The major stipulation of the competition was that "modern tendencies in design and plan were desirable" (4). Such covert encouragement of the formal and visual characteristics of International Modern architecture managed to inject a concentration of International Modern tectonics into the designs. In discussing the competition, W. A. M. Blacket noted the dangers of an eclecticism which had too great a regard for past precedent and the light

2. Ibid., p.7.

3. "The Centenary Homes Exhibition", *Australian Home Beautiful*, December 1934, p.11. The assessors were three prominent and established Melbourne architects; John R. Freeman, (Yuncken, Freeman, Freeman and Griffiths), John F. D. Scarborough and Marcus Martin.

heartedness with which it might be taken up. Here were entries which apparently exhibited release from past habits.

The majority of entries were for two storey houses. The major elemental change was the almost universal adoption of the flat roof not only for reasons of style but also for the new functional justifications of sunbathing and exercising. Blacket's discussion of "modern work" in terms of mass, solid and void shows an appreciation of Le Corbusier and Hitchcock and Johnson's International Style. The free plan, and potential escape from past constructional and design methods were discussed. In reviewing the entries, Blacket was to make the following generalizations regarding the changing nature of the house:

i) the rear garden was developed as an open air extension of the living room.
ii) the joining of the living and dining room, often separated by a curtain hence a greater feeling of space.
iii) the practice of built-in storage (suggested by Blacket to be an influence from Japan)
iv) the invitation to the sun via horizontal development of the windows and the "salient" angle of the window (5).

Marcus Martin, one of the adjudicators, noted the omission of the maid's room stating that "the logical development of the small house lies in the direction of mechanical efficiency, so that it can be operated unaided by the mistress" (6).

The three house categories of the competition were:
1. a perfect home to cost £1550 placed in a garden on a site 60 x 140 feet.
2. a concrete home to cost £1200.
3. an asbestos cement house to cost £650.

By chance, all three categories of the competition were won by Donald C. Ward, a young graduate architect who had also just won the 1934 Robert and Ada Haddon Scholarship.

Category 1: The Perfect Home to cost £1550.
Donald Ward's winning entry was a double storey cube, rendered white cement over brick with metal windows in emerald green and a front door painted orange (7) (fig.88). The roof was to be constructed of concrete flats finished with bitumen and gravel. Parapet, wall copings and

5. Ibid.
6. Marcus Martin, "How the Competition Entries were Judged", Australian Home Beautiful, December 1934, p.27.
window sills were to be cast concrete. Inside floors were to be polished timber. The garage doors were painted in bright chevrons echoing Swiss Heimastil interests while the glazed stair bay projecting from the face of the house echoed contemporary English architecture such as the stair bay at the Royal Masonic Hospital, Ravenscourt Park, London, 1932 by Sir John Burnet, Tait and Lorne or Connell and Ward’s New Farm, Haslemere, Surrey, 1932 (8). Spaces were functionally expressed externally such as the stair and dining alcove and through horizontal fenestration of the corner windows. The roof terrace above the garage was accessible from the master bedroom. It was a hybrid of modern elements and closely resembled Horace Tribe’s winning entry in 1933 in all aspects but stylistic dress. The stair and major rooms were placed forward to the street. The dining and major living room also opened onto the paved terrace at the rear. The central stairhall minimized passage space and compacted the plan.

Second and fourth placegetters were J. F. W. Ballantyne and Roy Wilson working in conjunction (9). Both houses


were heavy cubic designs weighed down by deep reveals in one of the entries and a massive second storey fascia line to the other (fig.89). Both designs had compartmentalized plans with living and dining areas oriented to the rear garden. Attempts were made to provide the obligatory strip windows, roof terraces and weightless corner windows of the International Style.

The third prize entry, submitted by Norman Seabrook and J.D. Fisher exhibited a Dudok-inspired use of details, materials and interlocking form (10). The exterior was cream faced brick with deeply raked 3/4 inch thick joints, with a flowerbox plane at the entry in bright blue glazed bricks (fig.90). The concrete copings were rendered in white cement. The metal window frames were painted bright vermilion. A de-Stijl composition of brick flower boxes, concrete door canopy, adjacent brick pier and slim vertical stair windows denoted entry. At the rear, roof decks and a bedroom daringly cantilevered out over wide expanses of glass and an interior bathed in sunlight.
Other entries in this category showed more traditional styles. Bates, Smart and McCutcheon’s entry (fig.91) was a pale ivory Georgian house described as "Modern with a Colonial Flavour" (11) with its symmetrical facade, cubic form and elaborated door aedicule. The exterior suggestion of interior grandeur concealed spaces tightly packed, skilfully and formally into a rectangle. Who would guess that the major window to the left of the front door was actually the kitchen complete with dining nook? Other period style entries included an English cottage type by G. Burridge Leith complete with lead lights and shingle tiles, projecting bay window and strongly modelled chimney (12) (fig.92).

Edward Billson’s entry was suggested to have more in common with Captain Cook’s cottage than the work of the European modernists with its steeply pitched tiled roof and blended brown bricks, Tudoresque porch and garage doors in earthy brown chevrons (13) (fig.93).

Bullen and Ziebell’s bungalow design resembled contemporary American small house types (fig.94). Its simple compacted layout lacked a relationship to the
outdoors yet its strong horizontal fascia line, cut away corner windows made subtle references to the Prairie houses of Frank Lloyd Wright as did choice of colours, wide eaves and ever so slight pin-wheel plan (14). Arthur L. Peck and Hugh L. Peck submitted a novel design for a double storied round house with a spiral stairway at its centre, with deftly compacted functions around it to form a circular radiogram house, strikingly moderne and futuristic (15) (fig.95).

Category 2: A Concrete House to cost £1200

The section of the competition devoted to the design of a concrete house was an interesting one, with the stated intention by the jury (16) of stimulating thought in the use of this material in Australian architecture. Donald Ward's winning design was a slightly smaller version of his other prize winning entry: a two storied cubic design with chevron doors, planes of concrete block with the suggestion of scrubbing them to expose the aggregate, an
The Modern House in Melbourne 1945 - 1975

attempt on the street face to reduce openings in the wall to a minimum, and to increase the graphic effect of sheer volume enclosed by a skin (17) (fig.96).

The fourth prize design by L. Garrard Cahn was perhaps the most accomplished adherent to the tenets of the International Style (18). Hovering interconnected white forms, strip windows and slim concrete hoods to the windows, a roof terrace off every first floor room, a boldly open plan and cubic volumes supported off a single slim pipe column, give this house a sophistication that few other entries were able to achieve (fig.97). Cahn's entry bears a strong resemblance to American architect William Lescaze's Frederick Vanderbilt Field House, New Hartford, Connecticut, 1930 - 31 (19).

Mewton and Grounds's entry was also sophisticated and it also resembled the sleek International Style houses of Howe and Lescaze. A massive streamlined form exploited the constructive capabilities of concrete to provide a spacious and open ground floor plan of interlocking spaces opening onto a terraced patio complete with swimming pool (fig.98). A porthole indicating the bathroom suggested a

Appendix 2/10
nautical flavour and every room featured built-in furniture. In the living room a built-in seat was placed along an entire wall (20).

Experienced concrete house designer, Leslie M. Perrott (21) entered a subdued flat roofed design of static Georgian proportions while the designs submitted by G. Burridge Leith were massive and bulky houses employing the appropriate stylistic trademarks of the Streamlined Moderne (22). Lawson and Cheeseman's entry from Adelaide was a hipped roof house that took its plan directly from the 1934 "Sunspan" show house at Olympia by Wells Coates and D. Pleydell-Bouverie and was disguised with tiles, and Moderne detailing (23) (fig.99).

Another Adelaide entry by Selby A. Chinnery simply produced a concrete English Cottage complete with shutters and timber stable doors to the garages (24). One of the most interesting of the unplaced designs was Leonard Bullen's concrete masonry unit house, planned on a one foot grid with the foot square blocks left exposed (25) (fig.100). The scheme derived its structural inspiration

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Fig.98 Mewton and Grounds, architects. Unplaced entry, (A Concrete House to cost £1200) Centenary Homes Exhibition, Melbourne, Victoria, 1934.

Fig.99 Gavin, Lawson and Cheeseman, architects. Unplaced entry, (A Concrete House to cost £1200) Centenary Homes Exhibition, Melbourne, Victoria, 1934.
from Frank Lloyd Wright's textile block houses of Los Angeles, where the blocks were load bearing rather than the "knitting together" and vertical layering of Walter Burley Griffin's Knitlock system (26).

Category 3: An Asbestos House to Cost no more than $650.
In this category, Donald Ward took off another prize with a simple L-shaped house with a gabled roof and horizontal cover strips to the asbestos cement sheets which lined up with the horizontal glazing bars (27). It was a progenitor of what Robin Boyd would later label as the "Victorian Type" (28), with bedroom wing projecting to the street and a transverse living/dining room wing attached (fig.101).

Leighton Irwin's fifth placed design closely resembled this design, with a lower pitched gable, wide overhanging eaves suggestive of Californian Bungalow origins and going modern with stressed horizontality of cover straps and glazing bars. *Australian Home Beautiful* suggested its suitability for the seaside or the country (29). L. Hume

26. The difference between Frank Lloyd Wright's textile block construction and Walter Burley Griffin's Knitlock system is explained by Donald Leslie Johnson in *The Architecture of Walter Burley Griffin*, pp.56 - 60.


Sherrard's unplaced design repeated the plan in an American Colonial manner, complete with shutters, multi-paned windows and latticed porch (30).

The most innovative designs in this section were the 2nd (fig.102) and 4th (fig.103) placed entries by Mewton and Grounds. Both had linear plans with a strong emphasis on living areas to the rear of the site. In the second prize entry, strip windows and banks of vertical mullions opened onto generous concrete paved terrace with a slide away awning (31). Low planar garden walls and the strong horizontal lines of cover straps and the flat roof reinforced Mewton's idea of the suitability of the horizontal in Australian design. "New materials and new modes of living", said the originators of the fourth placed design, "demand a new
type of residence." The kitchen/service area/laundry was described as the "nerve centre of the establishment" and had been "considered as fully as an assembly line in an automobile factory" (32). The linear design turned its back to the street to encourage privacy and seclusion in a spacious, informal garden. Three portholes to the bathroom reflected literal nautical analogies of the International Style. Corrugated asbestos cement was used as a new textural wall finish on a laundry that interlocked onto the main form of the house. The colours were Australian; yellow and green curtains, the internal walls were all biscuit with varied hardwood slabs for doors, ceilings in blue or pale sea green. Externally the asbestos cement walls were cream, cover straps light orange, and the chimney and garden walls were in cream brick. The two designs were compact, lightweight expressions of the International Style but exhibiting a delight in colour and texture. These designs were regional assimilations by designers intent on creating a uniquely Australian idiom and show an aptitude for working in lightweight materials and simple stud frame construction. Comparative work overseas is difficult to reconcile with these designs. Richard Neutra's houses are perhaps closest in spirit as delicate works of de-Stijl in the garden. The home is no longer the suburban idyll of English domesticity and reflects an inward turn from the street. For the designers, "this is the home for today - for those who have kept pace with our growing needs, opportunities for increased leisure and more ampler, keener living" (33).

V.A.S.S. Competition, 1936
A student competition organized by the Victorian Architectural Students Society of the R.V.I.A. in 1936 exhibits changing attitudes to domestic design within Melbourne's architectural schools. In 1935, The Bulletin of the University of Melbourne Architectural Atelier, then under the direction of Leighton Irwin, ceased acknowledgement of the teaching methods of the Royal Academy in London and the Ecole des Beaux Arts systems of France and the U.S.A. (34). An infusion of the approaches to forms derived from first principles used by the Bauhaus began. The winning schemes of the competition by W. Lambert Lee and another by Robert C. Coxhead in association with J. Brett Finney are simple austere cubic white walled designs, naive explorations of planar form and linear block planning (35) (fig.104). By 1939, esquisses were involved exclusively with concepts...
Fig.105 Arthur Baldwinson, architect. First Prize, (Type A: <£500 suitable for reproduction) "Timber Homes" Competition, Melbourne, Victoria, 1938.

of mass, form and volume and the development of materials and construction rather the knowledge of past styles and their modern day application to design (36).

"Timber Homes" Competition, 1938
The "Timber Homes" Competition of 1938 was organized by the Timber Development Association of Victoria. In this three category competition, Arthur Baldwinson took all three prizes. The assessors were Alec S. Eggleston, E. Keith Mackay and John F.D. Scarborough who emphasized experiment rather than precedent (37).

Type A: <£500 suitable for reproduction.
Baldwinson's winning design was a simple box with a skillion roof, exposed white rafters and a curving porch of white painted timber fins (fig.105). The horizontal six inch weatherboards were to be left unpainted; door and window frames were to be painted high gloss lemon yellow. A sleeping zone sat adjacent to a simple kitchen/living/dining area. Internal linings were 12" vertical boards. The house had a bank of vertical casement windows and at its rear, sets of french doors (38).
The design of E.A. Hunt was a simple T-shape, with entry at the intersection of the T and projecting living room to the street (fig.106). The exterior treatment was unusual with its wide horizontal weather boards and a very low pitched corrugated a.c. hipped roof and concealed gutter behind a deep fascia in Wrightian style including wide eaves, built-in fireplace-seat and an emphatic horizontal emphasis (39).

Fig.106 E. A. Hunt, architect. (Type A: £500 suitable for reproduction) "Timber Homes" Competition, Melbourne, Victoria, 1938.

Type B: <£850 House
Baldwinson’s entry in this category reflected similar compositional techniques of butted forms under a continuous flat roof (fig.107). The service block and bedroom wing flanked an open living/dining area glazed on both sides. White weatherboards, lemon yellow frames and light blue soffits and an egg crate screen at the entry formed the special effects. The garden design was free form with softly undulating rock walls (40). By contrast Frank Murphy’s prize-winning scheme in the same category is a symmetrical American Colonial example, complete with period doorway detail and startlingly open ground floor plan (41) (fig.108).

Fig.107 Arthur Baldwinson, architect. First Prize, (Type B: <£850) "Timber Homes" Competition, Melbourne, Victoria, 1938.

39. (Type A entry by E. A. Hunt) Ibid., p.67.
40. (Type B entry by Arthur Baldwinson) Ibid., p.68.
41. (Type B entry by Frank Murphy) Ibid., p.69.
Fig. 108 Frank Murphy, architect. Equal First Prize, (Type B: £850) "Timber Homes" Competition, Melbourne, Victoria, 1938.

42. (Type C entry by Arthur Baldwinson) Ibid., p.70.


Type C: £2000 House
Baldwinson's winning entry in this category is a striking example of a regionalised modern design; a large two storey rectangular prism, with skillion roof sitting on a rubble rock podium (42) (fig.109). A whole wall of glass and strip window on the first floor faced the expanse of lawn beyond. Horizontal weatherboards were unpainted. Doors, window frames, fascias and eaves soffits were to be painted white. The first storey hovered above the ground floor, cantilevering out slightly. On the ground floor, external lining boards were vertical; above they were horizontal in a functionally textured house. The ground floor is a sweeping open plan. The design bears a strong resemblance to Walter Gropius and Maxwell Fry's "The Wood House", at Shipbourne, Kent, 1937. Baldwinson had worked for Gropius and Fry in England and his later houses in New South Wales bear out this distinguished pedigree (43).

Fig. 109 Arthur Baldwinson, architect. First Prize, (Type C: £2000) "Timber Homes" Competition, Melbourne, Victoria, 1938.

By contrast, the other winning design in this category by Marcus Martin was a hybrid period style home, with shutters, gabled roofs and a picturesquely formed plan,
being an austere U.S. Colonial Revival house with timber pergolas and the distinctive Martin trademark of the circular gable vent (44).

**The Herald Ideal Home Competition, 1939**

In 1939, in association with the Home and Building Exhibition, an Ideal Home Competition was promoted by *The Herald* newspaper in collaboration with the R.V.I.A. The aim of the competition was to design a house to cost no more than £1250, and to fit on a 60' by 140' block. The assessors for this competition were A.J. Ainslie, Marcus W. Martin and Norman Seabrook. The assessors' main comments indicated a conservative concern for the "elevations" of the houses (45).

The first prize entry by Frank W. Murphy (46) had an almost identical plan to Donald Ward's 1934 prize-winning entry, yet reverted to a simple gabled brick veneer tiled prism (fig.110). More interesting was Geoffrey Mewton's 2nd placed design, a low flat roofed single storey design of remarkable sophistication (47) (fig.111). He created outdoor rooms and spaces with pergolas, screen walls indicative of a determined effort to place the public spaces of the house towards the rear of the block. The house was zoned into sleeping and living areas. The car slipped neatly under a roof integral with the rest of the house. A bank of French doors opened from the living room onto the north facing terrace and pergolas shaded the west face. The response to climate was conscientious and echoed the planning of Richard Neutra in its feathered extension of the house into the garden. Designed to be built on a concrete slab, the walls were to be brick with vertical boarding to the laundry and w.c. area at the rear. The emphasis is one of planes rather than mass, and infinite extension rather than static form.

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46. (Entry by Frank Murphy) Ibid., p.54.

47. (Entry No.1 by Geoffrey Mewton) Ibid., p.55.

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Mewton also won third prize with a startling skillion on a two storey rectangular house (48). A perforated screen wall to the street emanated a Spanish air. Once again the clever use of screen walls increased the suggestion of the garden as an integral part of the house. A long stretch of French windows opened onto this terrace. The changes in texture, the bank of tiny portholes, exposed rafters and enveloping vegetation emphasised textural interest and diverse sources of design. Alex J.W. Fergie's fourth placed design was a picturesquely massed set of gabled roofs above a compartmented and standard plan (49). It sat simply on the site, harnessing little of the garden that Mewton was so skilfully able to do with his two entries.

By 1939, attitudes to domestic design were still diverse. The strength of the 1934 entries as a group remains important. Change was slow but thought was contemporary and up to date with overseas trends. The methodology of assimilation seemed assured and carefully controlled. The suburban site was being explored in new ways. The post-war competitions which would follow would see a dramatic visual shift from these considered and skilful compositions of elements towards experiment in lightweight structure and a more concerted attempt to free the plan and escape any labels of style.
APPENDIX THREE:

THE EMERGENCE OF THE LARGE SCALE BUILDER:
A.V. JENNINGS & THE HOUSING COMMISSION OF VICTORIA
The emergence of the large scale housebuilder: A.V. Jennings and the Housing Commission of Victoria.

The 1930s saw the inception of two important homebuilding bodies in Victoria. The first was a private speculative building company, A.V. Jennings Construction Co., which became one of the nation's biggest private homebuilders after World War 2. The second was a government body, the Housing Commission of Victoria, established specifically to provide low income housing for needy Victorians as an alternative to the slums of inner city Melbourne. Immediately after World War 2, the Housing Commission was the largest provider of housing in the state of Victoria.

For A.V. Jennings, priority in domestic design lay in the market demand for individuality. For the Housing Commission, the major aim was the alleviation of slum conditions with the goal of sanitary dwellings accompanied by a cohesive collective community. In the pre-war years the priority of production was not as strong in the pre-war years as it later became in the 1950s. Though the forms of the Commission and Jennings houses differed, the scale of each operation was similar, as was the notion of site planning: small estates of detached houses planned along garden city guidelines. Where possible playgrounds and community facilities were planned into the estate development. Alternatively the estate was located close to existing local facilities and public transport routes. For A.V. Jennings, experiment in structure and materials was not an issue. For the Housing Commission, such experiment meant greater production and economic potential, hence greater provision of housing at a faster rate. For A.V. Jennings, the status quo of fashion was a highly marketable quality. For the Housing Commission, such status quo was economically unachievable. Consequently, the Commission sought alternatives. While one body celebrated the norm, the other tried valiantly to reinvent it, or at least replace it with something attainable and presentable. Bland anonymity was avoided where possible, yet in the Commission's case anonymity was also a sign of equality.

A.V. Jennings Construction Co.

In the Depression in 1932, there were very few prospective home buyers who had the cash to take on a mortgage and keep up with regular payments. Albert Victor Jennings, a
former dental technician and estate agent, proposed a
homebuilding scheme to his brother-in-law, Horrie Amos.
If A. V. could build the houses, then his brother-in-law
could sell them. The basic condition was that each house
was to be sold and financed before the house had been
built. His brother-in-law agreed and Jennings contacted a
builder, William Vine who introduced him to a young
architectural student, Edgar Gurney who was to stay with
the firm and design houses for them for the next thirty
years (1).

Jennings's aim was to build something better and cheaper
than the standard weatherboard house. Rather than a house
that was a mixture of timber, brick and stucco which
contained the standard bath water heater and enamel sink, a
Jennings house was envisioned to be all brick,
approximately 12 squares, to have a hot water service,
stainless steel sink and taps, french polished joinery, doors
and skirting, and sliding doors between lounge and dining
room, all for approximately £895.

Jennings set about selling them to interested buyers, who,
at the time, were invariably paying cash for other people's
mortgages. The first venture was the "Hillcrest Estate",
South Caulfield, 1933 where 13 houses were built in
Hillcrest Avenue (fig.112). The first nine houses were
sold, all for cash, becoming then a matter to sell the
remainder on terms financially assisted by State Savings
Bank. Built in brick and sited on both sides of the street,
the houses were hipped roof bungalows with Italian or
Spanish porches, window surrounds and fence details.

The next Jennings subdivision was the Beauville Estate, 64
blocks at Murrumbeena, 1934-35, planned around
Beauville Avenue and surrounding streets (fig.113). The
The Modern House in Melbourne 1945 - 1975

The estate was intended to be a totally integrated community design.

*Trees in the nature strips, low brick rather than timber fences, avoidance of side fences at street corners, avoidance of unsightly dead-end streets, a group of tennis courts, construction of adjoining shops, were all part of the improved design* (2).

Other features such as concrete garden-paths, drives, and footpaths were also provided. One of the highlights of the estate was the Colonial Gas Association all-gas display home. Designed in the old English Cottage Style with tiled roof and corbelled brick gable ends, this house was the first of many display homes built by Jennings as essential components of any new estate. Other houses on the Beauville Estate had simple hipped roof bungalow plans with a choice of Moderne or Tudor porches. All were solid brick. Crucial to the Jennings philosophy was their notion of good design.

*There is no waste space for a purchaser to pay for in a NEW CENTURY HOME. The Company employs an experienced Architect, and every design is different, and each is the result of careful and studied planning to embody*

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Economy, individuality and generosity of space were the aims of a Jennings house. Their well publicized aims were certain to strike a chord with their intended middle class market.

The Beaumont Estate Ivanhoe, followed in 1936. This large long rectangular subdivision of 120 blocks involved four cul-de-sacs off a main arterial street, Melcombe Road. The use of cul-de-sacs enabled extra blocks and some tennis courts to be located within the development, providing visual interest different from the linearity of the surrounding subdivision and restricting through-traffic to Melcombe Road. Underground power was laid to the houses with power poles sited at the rear of the blocks, and light poles were placed at the end of each cul-de-sac. The estate was extremely successful financially, with a wide selection of styles offered, ranging across free interpretations of Dutch architect Willem Dudok's work, Spanish, Tudor and English Cottage style (fig.114), and Moderne bungalows.

Individuality and choice were the much touted advantages in the estate's publicity brochure (4). As Graeme Butler has noted, the architect Edgar Gurney, in an unusually bold gesture, sited the overtly modern styled buildings at the corners of each cul-de-sac which led off Melcombe Road (5). His own two storey house, a cubic tour-de-force in two-tone brick recalled the houses of local architects, Mewton and Grounds, also Seabrook and Fildes (6). The two-storey Gurney House, 1937 had steel framed windows, a porthole and a boldly glazed corner window to the staircase (fig.115). It was described in a publicity

Fig.114 Edgar Gurney, architect. A semi-attic English Cottage design, "Beaumont Estate", Ivanhoe, Victoria, 1936.
brochure as "Modernity and Sunshine" (7). The roof of the house was flat and walls were cream brick with red brick highlights. The site office for the Beaumont Estate, "Hylsbroke", was also a moderne styled cubic composition with white painted curving concrete balconies. One half of the building was devoted to office and display purposes while A. V. Jennings lived in the other half (8). Another house, "East Neuk", 1939 was a triple fronted cubic composition with a flat concrete canopy entry and red brick corner pillars (fig.116). As the names of the cul-de-sacs suggest (Hampton, Tudor, Surrey and Lincoln), many of the houses were in a brick Old English Style, or were hipped roof brick bungalows with small porches, strongly modelled chimneys and heavy terracotta roofs. Though there was a disarming variety in external style, all the houses had virtually all the same plan: an elaborated bungalow plan consisting of a central entry hall with living and bed rooms off to either side. A sense of picturesque balance pervaded each design regardless of style. Moderne and Tudor made happy neighbors. Similar siting and massing ensured a harmonious enclave of substantial homes.

Fig.115 Edgar Gurney, architect. Gurney House, "Beaumont Estate", Ivanhoe, Victoria, 1937.

Fig.116 Edgar Gurney, architect. "East Neuk", Beaumont Estate", Ivanhoe, Victoria, 1937.
The Beauview Estate was the next Jennings venture. Begun in 1939 and planned for 120 residential blocks, construction was interrupted in 1942 by the onset of World War 2 when the Government stopped all private housing. "Beauview" was built in East Ivanhoe, below the curving streets of the Mount Eagle subdivision designed by Walter Burley Griffin. The layout of houses centred around the curving streets of Beauview Parade and Burton Crescent (fig.117). The estate had shops and an office/display-home on Lower Heidelberg Road. There were no startlingly modern-styled houses on this estate. Many were substantial houses in the popular Old English Cottage Style. The sketches of houses illustrated in the estate brochure, Beauview Homes (9), are prophetic of speculative domestic designs that would proliferate after the war (fig.118).
Illustrated were bungalow plans with a perspective of a hipped roof house above with reduced ornament and a spare insertion of an occasional moderne detail such as the porthole window or steel-framed corner window. Houses such as these indicate the seeds of the triple fronted brick veneer house which was to become, after the World War 2, a new suburban vernacular.

In each Jennings estate, planning had assumed the density of the garden city ideal. The question of an increased density was not entertained. Variety and individuality were cherished. The perspective image of the house complete with its compact plan below was a seductive technique of persuasion. The principle of the single-family detached house, located within its own garden setting, was the ultimate desire of a home-seeking public. For the building entrepreneur, the garden city principle was profitable, and offered a lucrative package of house and land, which in the spacious circumstances of Melbourne had great potential for the enterprising developer. In 1942, A. V. Jennings had engineered a successful method for transforming the house into a new status, that of commodity. However, with the intervention of war, that phenomenon would not be truly realized by him until the mid-1950s.

The Housing Commission of Victoria
The Housing Commission of Victoria was constituted in March 1938 under powers conferred by Parliament (10). The immediate duties of the Commission were to formulate schemes for providing housing for persons of limited means, for reclaiming and rebuilding insanitary areas, and the drafting of legislation to carry out these proposals. Shortly afterward in the same year, the Slum Reclamation and Housing Act, 1938 was passed defining the Commission's principles of operation as:

1. improvement of existing housing conditions
2. determination of minimum standards for new homes
3. reclamation of insanitary areas
4. provision of houses for persons of limited means
5. zoning, i.e. the division of municipalities into residential and other areas, and prescribing types of buildings which may be erected within those areas (11).

In the first few years of operation the Commission's principal concern was the provision of houses at a rental within the capacity of the lower-income group. In February

1939, an architectural competition was held from which two important results were obtained. The first was a series of house designs which would form a basis for use by the Commission. The second was the appointment of a panel of architects from private practice who were selected from entrants in the competition. The Panel would advise the Commission on house plans and contribute designs (12).

The competition was in two sections: the first consisted of designs for three types of dwellings and the second was a proposed subdivision plan of an area of land at Fishermen's Bend, Port Melbourne, bounded at the north by Howe Parade and to the south by Hobson's Bay. The question of economy was paramount and architects were asked to:

provide dwellings conforming to modern standards of decency and comfort, of such design and construction that they will set a satisfactory standard for a housing authority, and at the same time be capable of letting at an economic rent to the average person in receipt of the basic wage (13).

Entrants in the first section were asked to produce designs for one, two and three bedroom dwellings capable of being erected in single cottage units or in semi-detached pairs (14). The competitors were also free to adopt any style of design and method of construction considered by them to be suitable, excepting timber.

All the prize-winning entries were responsibly austere designs with obligatory gabled roofs and traditionally scaled windows. First prize winner in the One Bedroom section was E. Campbell Jackson, whose single storey semi-detached cottages were to be constructed in concrete with steel framed windows (fig.119). These houses were a
simple hipped roof rectangular block with a central fireplace on the common wall with a flat shading canopy over the recessed front door and window bay of the living room. A.C. Leith and Bartlett's Second Prize for their two bedroom design was a more spartan concrete design, also semi-detached, and with a hipped roof (fig.120), while Eric Andrew's third prize for a three bedroom design was a conservative double brick design with a steeply pitched gable and living room projecting toward the street. Frank Heath's Fourth Prize was also a three bedroom house but was a two storey gable roofed semi-detached pair to be built in cindercrete units, to be cement washed externally and internally colour washed (fig.121). Flat concrete canopies sat above the front door, and windows were steel framed (15).

Equal first prize winners in the second section for the subdivision plan were the partnership entry of J.F.W. Ballantyne and Roy Wilson, and an entry by Saxil Tuxen (16). Ballantyne and Wilson's street plan was a virtual figure eight with a pedestrian walkway connecting the two loops. A nursery school, hall and church were located.
Appendix 3: The emergence of the large scale housebuilder: A.V. Jennings and the Housing Commission of Victoria

Fig.122 J. F. W. Ballantyne and Roy Wilson, architects. Equal First Prize, Subdivisional Layout of the Fishermen's Bend Estate, Port Melbourne, Victoria, "Housing for Low-Wage Earners" Competition, 1939.

adjacent to the intersection, with a crescent shaped shopping centre on Howe Parade (fig.122). The space created by the loops and other left-over spaces were devoted to playgrounds, parks and games areas. 380 houses were to be provided.

Tuxen's plan by contrast centred on a formal axis through the centre of the site, and terminated at Hobson's Bay. The axis connected firstly a shopping centre off Howe Parade, second by three community buildings adjacent to a central oval, off which tennis courts and two churches sat at either side, and finally to a picture theatre and dance palais on either side of the axis (fig.123). On both sides of this axis of community buildings, houses were laid out either on curving streets or cul-de-sacs.

Fig.123 Saxil Tuxen, town planner. Equal First Prize, Subdivisional Layout of the Fishermen's Bend Estate, Port Melbourne, Victoria, "Housing for Low-Wage Earners" Competition, 1939.

The other main purpose of the competition was the selection of the Architects Panel. Members of the panel would be appointed and required individually to undertake the preparation of plans, specifications and supervision of houses for the Commission. As a group, the panel would act as an advisory and consultative body to the Commission
conducting its operations under the provisions of the Slum Reclamation and Housing Act. Following the announcement of the awards of the competition, the architects selected were Frank Heath, Arthur C. Leith, Best Overend and John F. D. Scarborough (17). The Architects Panel subsequently designed each subdivision along garden city guidelines, always described as modern town planning principles, and usually with a density of approximately 8 dwellings to the acre. Short cul-de-sacs were employed to eliminate unnecessary road construction, limit road areas and lessen traffic dangers and provide quieter living conditions rather than streets of through traffic. Each estate when acquired by the Commission was undeveloped and essential services such as roadmaking, drainage, footpaths, water, sewerage, gas, and electricity had to be installed. In the first years of the Commission, the focus of operation was medium sized suburban estates in Melbourne and selected country towns.

The first estate begun was at Fishermen’s Bend, Port Melbourne where it was planned that 412 houses would be built for occupiers of insanitary dwellings in South and Port Melbourne. By June 1940, 60 concrete houses had been erected at the Port Melbourne estate (18). It was an innovative construction technique which had been encouraged in the 1939 competition. It was also an issue dear to the heart of competition assessor, Leslie M. Perrott who had written a book on concrete construction and was a practised designer of houses in this material (19). Concrete was to form subsequently an important part of the architectural programme of the Commission, not only in the post-war villa estates but in the subsequent development of high rise flats built by the Commission in the 1950s and 1960s (20).

Fishermen’s Bend

The Fishermen’s Bend Estate sat on 55 acres of reclaimed beach frontage at Port Melbourne, and 376 dwellings were eventually built on the site (21). The subdivision plan was a blend of the two prize-winning designs of the 1939 competition, a figure eight with parkland within the loops and an axial scheme connecting Howe Parade and Williamstown Road to the beach. The central north-south axis had a shopping centre placed symmetrically on either side of a small square at the northern end of the axis, with provision for a community centre to act as the southern focal point. There were open play areas at the centre of the

eastern and western halves of the estate. Football and cricket grounds, tennis courts, playgrounds and gardens were all envisaged. Approximately 95% of the 376 dwellings directly overlooked these parks. The road system was based partly on the Neighborhood Unit system with through traffic discouraged and cul-de-sacs optimized.

At Fishermen's Bend, five different construction techniques were adopted: all brick construction with plaster finish internally; all cinder and cement block construction with unplastered ashlar finish internally cement coloured; brick external walls and cinder and cement block internal walls with both plaster finish and ashlar finish; brick veneer; and solid 3 inch vibrated concrete precast prefabricated units built upon the Fowler system (22).

Pier and beam foundations were adopted because of the nature of the reclaimed site. This type of foundation proved to be so economical when applied to the mass production of units, that it was subsequently adopted as standard construction. The foundations had been tested on four double dwelling units, as an investigation and research to establish economic house types capable of repetition, prior to a large scale expenditure of public money.

All the houses were very simple gable or hipped roof designs with essential porches, chimneys, but virtually no elaboration (fig.124). Their forms owed much to English semi-detached housing types. These were fundamental houses in a period of idealism and contained all the essentials of home albeit with a diminished palette of materials.
The first major contracts
As a result of the initial experiments of four double dwelling units at Fishermen's Bend, other experiments in estate planning were made at Preston and Brunswick. Contracts were let for the erection of 80 houses in Stokes and Penola Streets, Preston, and 22 houses in Kitchener and McColl Streets, West Brunswick (23). New house plans were evolved from the experimental types at Fishermen's Bend and the palette of materials was reduced to either all brick and a white plaster finish within, or brick outside, cinder and cement ashlar block coloured with cement inside. Low pitched and wide eaved asbestos cement sheet roofing was used. Oakover Road Estate, Preston was the next development with only two house types. These were all brick houses with an internal sand textured cement rendered finish, colour washed, with low pitched galvanized iron roofs. Estates at Raglan Street, Preston, 96 houses, and Bailey Avenue, Preston, followed (24).

At the Bridge Road estate, Richmond, Frank Heath laid out a series of five cul-de-sacs off Tudor Avenue, a through street from Bridge Road (fig.125). There, 138 houses were built in red and blue clinker brick on the site of the old Richmond Racecourse (25). The houses in Tudor Avenue were arranged so that a two-storey maisonette unit was placed opposite the end of each cul-de-sac. On the two storey units facing Bridge Road, there was at one end of the development, seats on both road and garden sides under a pergola which acted as a screen from passing traffic (fig.126).

Housing Commission estates were also built in the country and were designed by Geelong architects, Buchan Laird and Buchan. In addition to preparing plans for types of

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houses suitable for erection in various parts of the state, they also prepared subdivision plans. Country towns with estates planned included Geelong, Warrnambool, Mildura, Red Cliffs, Merbein, Irymple, Swan Hill and Shepparton (26). In Geelong, the Town Council of Newtown and Chilwell donated the land for the new Commission estate of 54 houses. The council also made the roads, planted trees and sowed nature strips. The houses for all of these estates were a mixture of semi-detached single and double storey houses.

By the end of 1942, altered conditions brought about by the war, particularly the opening of the Eastern Theatre of Operations, seriously curtailed the work of the Commission. Shortages of materials and labour had seriously impeded production. After 1942 when 402 houses were built by the commission, the number plummeted to 79 built in 1943 (27). Table 1 (28) shows the extent of the Commission's achievements at the 30th June 1942, and the locations of country estates throughout Victoria such as Newtown, Geelong, Redcliffs, Swan Hill and Warrnambool, and in Melbourne suburbs such as Preston, West Brunswick, Northcote, Williamstown, Richmond and Northcote (fig.127). Timber and brick veneer construction was limited to country areas and Geelong, while concrete houses were built only at Fishermen's Bend and at an entire estate of 58 concrete houses at the Fowler Estate in West Brunswick. All the Commission's houses in the suburbs of Melbourne were built in all-brick construction with the majority of houses having marseilles tiled roofs.
The major achievements of the Commission had begun. In 1942, both the Commission and the entrepreneur, Jennings, had cemented the image of the single family detached house firmly into the developmental picture of Melbourne. Expectations at all levels of society centred on the single family home. World War 2 was to reinforce that expectation. Yet the fortunes of both were to diverge after the war. For the moment, the security and stability of the pre-war years enabled them to build a high standard of accommodation. With a severe materials, labour, financial and housing shortage immediately following World War 2, the Commission would be encouraged to alter its vision of, for every man his house, and experiment with a new housing type, the high rise block of flats. Meanwhile, Jennings would wait for the tide of austerity to pass and reappear re-energized and sweep through the domestic market as one of Australia's biggest housebuilders.
APPENDIX FOUR:

POST WAR IS POST MODERN:
THE HOUSE IN THE UNITED STATES 1945 - 1960

Introduction

The Idea of Region: The House in the Bay Region of San Francisco, the Pacific Northwest, and Florida

The Idea of Style: Modernist versus Traditional
a Question of Taste and Not a Point of View

The Idea of the Ideal: Palladio, Post and Beam,
and the American Desire for Authority in Grammar and Syntax
Appendix 4: Introduction

Post-War is Post Modern: The House in the United States 1945 - 1960

I shall not imagine for my future house a romantic owner, nor shall I justify this client preferences as those foibles usually referred to as "human nature". No, he shall be a modern owner, a post modern owner, if such a thing is conceivable. Free from all sentimentality or fantasy or caprice, his vision, his tastes, his habits of thought shall be those most serviceable to a collective industrial scheme of life: the world shall, if it so pleases him, appear as a system of casual sequences transformed each day by the cumulative miracles of science. Even so, he will claim for himself some inner experiences free from outward control, unprofaned by the collective conscience. That opportunity when all the world is socialized, mechanized and standardized will yet be discoverable in the house. Though his home is the most precise product of machine processes, there will be entrenched within it this ancient loyalty invulnerable against the buffetings of the world.

It will be the architect's task, as it is now, to comprehend that loyalty - to comprehend it more firmly than anyone else - and undefeated by all the armaments of industry, to bring it out in its true and beautiful character. Houses will still be built out of human hearts.


In 1945, Joseph Hudnut, the celebrated Dean of Harvard University's Graduate School of Design, wrote of the "Post Modern House" (1). On the brink of the boom of housing that would cover the United States after World War 2 in a flood of single family houses, he cautioned architects to push forward beyond the "engineered house", to something that would not only facilitate the daily functions of Americans but also illumine their lives. With a chronic housing shortage, a lack of traditional building materials and area restrictions on houses, the idea of mass housing via prefabrication with its scientifically assured background, together with defunct war industries eager for production, the concept of industrialized housing seemed an attractive and vital solution to the needs of returning G. I.'s. This apparent answer was presaged by articles such as Architectural Forum's special issue of 1942, "The New

Appendix 4: Post-war is Post Modern: The House in the United States 1945 - 1960

House, 194x" (2) devoted entirely to the merits of prefabrication and a swathe of single family house competitions such as the *Pencil Points* - Pittsburgh 1945 competition for a "House for Cheerful Living" (3) which encouraged "scientific" solutions capable of repetition and employing the most technologically advanced materials and ambitious forecasts of post-war family living. Ralph Rapson's third prize entry, intended for any locality in the southern half of the United States, and planned on a ten foot module of standardized wall panels, confidently suggested an open planned living area 55' long by 15' wide that interconnected living, kitchen, dining and sleeping areas (4).

The "engineered house" available to all was to become for the architect, the ultimate goal as he answered the call to solve the nation's housing shortage. Introducing the Case Study Program in *Arts and Architecture*, 1945, John Entenza spoke of "the gathering of that mass of material that must eventually result in what we know as "house-post war" ", and stressed that each Case Study House "be capable of duplication and in no sense be an individual "performance" " (5). The use of new materials and new techniques in house construction was encouraged. Experiment and innovation was sought in a time of restrictions.

Perhaps the most extreme image of the engineered house immediately after World War 2 was Buckminster Fuller's widely publicized and updated version of his 1927 Dymaxion House produced at Wichita, Kansas in 1946. The Fuller House was a round aluminium structure, thirty-six feet in diameter. At its centre was a mast, anchored in the ground. From it radiated cables on which walls and floor were hung and around the outside ran a horizontal strip window. On the roof was a streamlined revolving ventilator, and inside were four wedge shaped rooms. Built by the Beech Aircraft Corporation, few changes were needed on aircraft tools to convert them to housemaking production. Just one week after its unveiling, *Life* magazine was to comment prophetically that,

...unlike its ancestors,(the Fuller House) is eminently practical. Included in the hoped-for selling price of $6500 are all appliances plus shipping and erection charges anywhere in the United States. Although its 8,000 pound weight licked the problem of national distribution, big

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Appendix 4: Introduction

bugaboo of other factory made houses, one major question remains. Would people buy such a strange house? (6)

No-one did. Despite these carefully calculated and hopeful scientific proposals, which had at their basis, the social goal of an egalitarian provision of houses for the masses, the American architect and the American public were reluctant to accept the idea of the mass produced house in a machined image and its implicit connotations of collective similarity. Yet they were quite prepared to accept the latest technology in another way. Labour-saving devices and new appliances offered by mechanization to revolutionize the workings of the kitchen, bathroom and laundry were avidly procured and incorporated into domestic design. The house was transformed into an ever devouring centre for the consumption of the increasing range of kitchen appliances, cleaning liquids, furnishings and bric-a-brac. The post-war housewife, now without maid or household help, would elaborately and singlehanded, furnish and run a family factory for the 1950s American family. The role played by the woman in this edification of the home via consumerism is a phenomenon documented by Dolores Hayden in her book, Redesigning the American Dream (7). The hearth was to become a highly polished and mechanized centre of the household. In that regard, American homemakers were in full agreement. Comfort and convenience, and the onslaught of post-war advertising pressuring the acquisition of appliances for that better home were the reasons.

The schism that was to arise between the mechanized hearth surrounded by a rational plan and the exterior of the house had already begun in the 1930s. David Gebhard describes the Tyrone Power House, 1937 and Jay Paley House, 1938 both of Los Angeles and designed by Paul Williams as modern logical functional buildings. Selected historic fragments such as "correct" Georgian and Regency details are carefully arranged upon them. Gebhard insists that the description of these houses could only be "modern" on consideration of the

generally plain walls, the lowness of the building to the ground, and the almost universal horizontality of these designs...their low scaled volume, bland uninterrupted surfaces, easy going, rationally devised plans, and an ability to open up to the out-of-doors (which) did as much

6. "Fuller House", Life, 1st April 1946, pp.73 - 76.

7. Dolores Hayden, Redesigning the American Dream, Chapter 2, "From Ideal City to Dream House"; and Chapter 3, "Awakening from the Dream", pp.17 - 62.
to establish the real mood of these houses as did their historic allusions (8).

It was this strong belief that modernity need not be embodied in a shell of an avant-garde International Style or a high tech image that is to continue after 1945. Modernity was to be found in increased comfort and convenience and above all, privacy. It was not to be associated with a change to the literal and visual image of the home.

Despite attempts to universalize modern architecture associated with a specific visual language principally that of Mies van der Rohe and Le Corbusier, the post-war house was to resist visual change. In the face of the propagandizing of modern design via the architectural schools and the Museum of Modern Art in New York, efforts such as Arts and Architecture's Case Study House programme of 1945 - 1962, and the futuristic post-war house competitions organized by the professional press, the American house was to prove extraordinarily resilient to a change of image. Though the face of corporate architecture after 1945 was to capitulate to the International Style of Skidmore, Owings and Merrill's Lever House, 1952 and Mies van der Rohe and Philip Johnson's Seagram Building, 1958 both in New York; the post-war house, though changing in program, planning and experimenting with new materials and lightweight construction, would not undergo so complete a transformation. Gardner Dailey in 1949, succinctly described the typical 1000 - 1500 square feet custom designed post-war house.

In comparing this exhibition to one which we might have seen here two decades ago, we note the disappearance of the large house, and in its place the appearance of what may be termed, "The Large-Small House". The Large-Small House has one very large room, and the balance of the house has been compressed wherever possible to eliminate waste space, long halls and stairs. The elimination of space has been accomplished by reducing the service section to a one maid or no maid unit. The basement has disappeared. The garage, as such, is usually but a roof. Almost all of the houses shown use what has become popularly known as the dual purpose room. By this we mean the Playroom-Garden Room, the Study Guest Room, the Living Dining Room, the Dining-Kitchen Room; the pantry has become only a vestige, and it is only man's basic instinct to

worship fire which still keeps the fireplace intact in the Living Room (9).

Though the plan and program were to change, the single family house in the United States after 1945 was to remain resolutely connected with traditional visual images of home set in an idealised non-urban setting. The design of the single family house in the United States between 1945 and 1960 exhibits symptoms of what I shall call the American condition, symptoms which were to culminate in the theoretical reassessment of American architecture in the mid-1960s, and writings such as Robert Venturi's * Complexity and Contradiction in Architecture* of 1966. The vagaries of what is now called "Post-Modernism", a label which is in its notions of style is a particularly American phenomenon, are embodied in the post modern condition of the American post-war home.

The American condition was assisted by a number of factors; the political moves of the mid-1940s to encourage single family home ownership and hence the urban pattern of suburbanization of America; the low Veteran's Administration Federal Housing Authority Loans Programs for returning G.I.s; the agrarian ideal of owning one's own home on its own plot of land epitomized by Thomas Jefferson and his ideal villa, Monticello; and the power of the perspective image of the house associated with pre-war means of obtaining one's home from, say, a Sears-Roebuck catalogue and perpetuated by popular home journals and books. (These were not the functional recipes for modern living where one designed from the inside out.) The post-war house was thoroughly American, and the symptoms of its condition were:

1. the irresistibility of tradition and the "homey" image.
2. the irresistibility of grammar and syntax as providers of authority.
3. the idealization of the individual.
4. the idealization of the ideal.

The essentially collective aims of the late 1940s provision of houses for the average American family to reduce post-war shortages, aided by the psychological panacea of a new visual language freed from the shackles of history, the precedent of New Deal housing of the late 1930s, and the efforts by Lewis Mumford and Vernon DeMars to advocate the rowhouse (10) as the post-war alternative to the single
family house were sidestepped by architects in favour of the continued extension of stylistic repertoire and a highly advanced scientific pursuit of universally applicable ideal solutions which rarely matched existing building industry capabilities and rarely developed the potential of a local regional expression.

The gap left by architects to house a nation was eagerly filled by merchant builders who provided houses at an unheard-of rate, each with its own technological hearth of efficiency and shell mirroring the "American condition", and each on its own block of land in its own inevitable suburb. For example, in 1948 in Oak Forest, Houston, Frank W. Sharp, a Texan developer was building one of the largest privately financed, single family house developments in the U.S. (perhaps even the world), a development planned for 4800 homes on 1132 acres housing 25 000 people (11). In 1948, almost 1000 of the houses had already been built. The simple hipped roof plans of standard timber construction sold for between $8500 and $10 000. This was homebuilding on a scale that the single architect practitioner could not match with his futuristic prophesying.

While architects ceded to the production and economic skill of the merchant builder, there was a quiet return to the language of architecture, style, and the literal images of home. What occurred was a hybridization of machine and hearth. David Joselit (12) has acutely noted that, "the post-war house was to place the "machine" in the service of the hearth in much the same relationship as that between a homemaker and her washing machine." Modern living was not to be associated with an ascetic and spartan sense of existence but a reaffirmed comfort and privacy after the strictures and austerity of the war years.

The house that was to epitomize this hybridization, or post-modern condition or "American condition" was the California ranch house. "Stylistically sired by the same Californian notion of the good life" (13), the ranch house epitomized the agrarian ideal, capturing all the positive elements of modern architecture; the open plan, light, connection with the outdoors, and with an exterior image that exuded nostalgia, comfort, and the sense of home complete with its mechanized hearth, the gleaming white kitchen.


The suburban ranches are often a quarter of an acre or less, and the view from the picture window is of another picture window. The pervasive Western spirit of the open range and the barbecue, of sunshine and leisure is nonetheless nationwide. For the nostalgic pleasures of exhuming the early American past, this generation has substituted the romantic dream of the prairie. The enchantment of Paul Revere, hero and silversmith, has been displaced by Hopalong, and the American architectural tradition of making things seem what they are not has found a new expression (14).

The architect reassumed his pre-war role as the middle to upper class arbiter of taste and refined academic design. The new modern architecture became a new language, "suburbanized" (15), a style to consume and not a means to a new social vision. It was another feather in the American cap of enthusiastic and often creative eclecticism, a penchant rarely conceded by American architectural culture and rarely applied until the mid-1960s.

There were of course areas and practitioners where uniquely American houses were produced. Popular home journals were to blur these regional differences. As the 1950s progressed, the house was to accumulate exotica along with Cape Cod, the new "shibui" from Japan, the California ranch house was to mix with New Orleans, and the lanai room, the pebble garden, the Colonial porch or the stylized modern furniture of the 1950s. The house was to become a container of consumer items, conforming to an image of formal sameness but adorned with those individual trappings of possession and "character". Repetition based on economy conflicted with owners' aspirations for individuality, as the spatial distribution of suburbia negated a corresponding homogeneity that may have created a sense of urbanity. The suburban house simply coveted its privacy, grew in size and shrank from the street behind screen walls, garage and blank feature walls.

In the rush of production of the 1950s, the urban consequences of the single family house would be left ignored until it was too late. Though the single family house has determined a desired and ideal way of living for the American family, it has become an increasingly unreachable goal. Suburbia created a disjuncture between city and home.

In the period 1945 - 1960, the single family house represents the American cultural ideal; individualistic freehold of land in its most private and autonomous sense. This ideal and its resistance to visual change was to prompt questions for architects: of region, style, order, structure but not the urban and social pattern that the single family house implied.

What follows then are three papers that chronicle the lost richness embedded in the search for that ideal, too easily overlooked in the urban shortcomings of the single family house and concealing a conscientious search for an American architecture that civic architecture of the same period was not able to match until the next decade.
The Idea of Region - The House In The Bay Region of San Francisco, the Pacific Northwest, and Florida.

Between 1945 and 1952, as the rush of single family housebuilding began to take full force in the United States, the image of the post-war home enclosing its "mechanized hearth" and what form it would take was an issue that would plague architects and the architectural press and intrigue the public and its popular press. The idea of regionalism was advocated by the popular home journals as a quality that would "give a house a look of belonging" (1). In 1945, *House and Garden* insisted that,

"...what we want to stress here is the power of such strictly indigenous local influences such as climate, materials, topography and social customs to mould and develop regional flavour in the design of the modern house. We believe it is a wise architect who goes along with the good local materials and is sensitive to the local air, and a wise client who encourages him to do so. Only thus will emerge in this country an architecture which is as varied and colourful as, say, the 17th century New England House and of the same period, the Spanish ranch house in California." (2)

Though modern architecture of the European International Style and the idea of "modern living" was accepted and encouraged by the press during the late 1940s, the house was portrayed as a potentially soft object. It was warm, comfortable and textural as well as being totally efficient. The regionalism advocated by the popular home journal was not a serious theoretical tool involving stylistic discipline or aesthetic principle. Rather, it was a means of resisting the influence of the machine and its mechanized techniques, of maintaining local identity and individuality. An eager and needy homeseeking public of the late 1940s was offered a house with the "homey" image of the pre-war years but without direct connotations of style and ornament. By force of circumstance as well as changing tastes in the post-war years, economics prevailed over taste.

By contrast, the professional magazines (*Pencil Points, Architectural Forum, Architectural Record*, and *California Arts and Architecture*) reveal an ambivalence toward the savoured image of the factory-produced house. On one hand, they proposed domestic design based on scientific

2. Ibid., p.124.
research and the search for universal design determinants such as the "romantic technologist" (3), Raphael Soriano's reduction of domestic design to an idea of industrialized "process" (4). In his 1950 Curtis House at Bel Air, Los Angeles, Soriano designed a house without bearing walls. The only part of the house that was not factory built was the concrete slab. Designed on a 10' x 20' bay of structural steel beams and lally columns, the plan beneath the steel umbrella was a flexible space of movable storage walls (5).

On the other hand, they continued to publish houses by the post-war regionalist architects and occasional articles that questioned the surge of European modernism throughout the 1950s, suggesting that all was not well with the new architecture, especially with respect to the design of the post-war house. Pietro Belluschi's article in Architectural Record, December 1955, entitled "The Meaning of Regionalism in Architecture" (6); Paul Rudolph's "Regionalism in Architecture" in Perspecta, no.4 (7) and Osbert Lancaster's "The End of the Modern Movement in Architecture" in Architectural Record, September 1952 (8) are three such articles.

Yet more damaging to the confidence of faith in a universal modernism was Lewis Mumford's codification of the Bay Region Style in "The Skyline" of The New Yorker on 11th October 1947 (9), This article prompted Philip Johnson to organize a symposium at New York's Museum of Modern Art in February 1948, bearing the title, "What is happening to Modern Architecture?". The formal tendencies displayed by the Bay Region architects were deprecatingly labelled as the "International Cottage Style" (10) and Lewis Mumford took away with him, "a badly bruised Bay Region" (11). Such an event impeded the codification of the regional in post-war U.S. architecture. The potency of the Bay Area as a centre of a healthy and indigenous local architecture was further diluted by the lame and cautious response by Bay Area architects to Architectural Record's question of 1949, "Is there a Bay Area Style?" (12).

In the immediate post-war years, the locations that attracted the most publicity as exhibiting regional tendencies were the Bay Region of San Francisco and the Pacific Northwest, in particular around Portland, Oregon. Bay Region architects included William W. Wurster, Gardner Dailey, Henry Hill, Mario Corbett, Campbell and Wong, John Funk and Joseph Esherick just several amongst the

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4. Interview with the author, November 1985, at the office of Raphael Soriano, Tiburon, California.
8. Osbert Lancaster, "The end of the modern movement in architecture", Architectural Record, September 1952, pp.115 - 123. This is a reprint of an article of the same title by Lancaster in the Architect's Journal, 18th October 1951, pp.465 - 468.
large number of talented architects practising in this area. In the Northwest, from Oregon hailed John Yeon, Pietro Belluschi, Harold Doty and Van Evera Bailey; from Seattle, Paul Thiry and the firm of Chiarelli and Kirk.

The houses designed by these architects conform to no common stylistic rules nor do they abide by a theoretical dogma or manifesto. They can however, be characterized as possessing similar qualities and a common design method.

The planning of these houses is particulate and additive; exemplars of elementary composition (13), based on strictly functional adjacencies, often to take advantage of external landscape features, a view, the sun, responding directly to the vagaries of the site. The particulate composition is arranged to create outdoor spaces, to duplicate the spaces within, a post-war induced economy of space and in the climates of northern California (in particular San Francisco), Washington and Oregon, a desire to create wind protected and sun-drenched courtyards. Internally, the honorific spaces are invariably treated formally; a fireplace centred on an external wall, a strong gable placed emphatically to the garden or view. The street entrance to the house is private, described by a windowless landscape of shed or barn-like forms, sometimes with a car court, at others a private courtyard behind a screen wall. The informal agglomeration of forms based on functional adjacency results in an unselfconscious collection of picturesque forms. The forms are vernacular and anti-urban; rural barn images of simple anonymous timber framed boxes, transplanted to the suburbs. There is no fear of the gable inhibiting modern expression. The materials are invariably redwood, frankly exposed rafters and structure. Brick and stone where used is valued for its textural quality. It is a sophisticated back-woodsman aesthetic; the skeletal post and beam frame allowing freedom in plan, and specific responses to the contours of the site and participating most intimately with what William Wurster would describe as the "immensity of the scene" (14).

The houses are styleless but of a type. The planning techniques engender plans that are "open and flowing at one moment become boxy and closed at the next; and plans which appear logical, simple and direct turn out to be
highly complex and even in some cases highly idiosyncratic" (15).

Illustrated profusely in the plethora of books that followed the end of World War 2, such as The Modern House in America, If you want to Build a House, and Tomorrow's House (16), these houses epitomized the tempering of "modern". They suggested easy graceful informal living released from the formalities of period eclecticism and the white International Style forms of the 1930s. They acquired the intangible descriptions from the late 1930s of "good sense", "simplicity and proportion". At the same time, John Funk's Marvin L. Heckendorf House at Modesto, California, 1939 was seen as progressive enough to grace the cover of Elizabeth Mock's Museum of Modern Art publication, Built in U.S.A. 1932-1944 (17).

The transformation of rural imagery into residential design was to embody the regionalism of the Pacific Northwest. Described in 1946 as "One of the Great Houses of America" (18), the A.R. Watzek House in Portland, Oregon was designed by John Yeon whilst working in the eclectic office of A.E. Doyle. Planned to take advantage of an arresting view of snowcapped Mt. Hood sixty miles away, this single room width house becomes an interrelated sequence of spaces of changing vistas and strung together to form a U-shaped courtyard of peaceful seclusion. The intimately landscaped courtyard opposed a bold and uncomplicated landscaping of the view side. The simple gabled box forms, recalling Oregon barns and sheathed in redwood, meld into a picturesque composition that on closer examination reveals highly sophisticated timber detailing, a seemingly artless timber aesthetic which in reality is obsessively crafted. The house required 75 sheets of full size detail drawings (19). A concern for texture and gracious outdoor living spaces culminated in the honouring of the living room with a double height space giving onto a verandahed loggia. Internal panelling echoed the timber frame behind as the house became a subtle expression of its structure and fenestration, honest delineators of the space within. This house brought Yeon much publicity after 1945 even though the house had been designed and completed in 1937.

Yeon's Victor Jorgenson House in Portland, Oregon also designed before World War 2 in 1939 was publicized well after the war (20). It exemplifies his interest in the

18. Elizabeth Gordon, "One of the Great houses in America" (A.R. Watzek House, Portland, Oregon by John Yeon), House Beautiful, February 1946, pp.80 - 87, 104, 150 - 151. The Watzek House was also included in Elizabeth Mock's M.O.M.A. publication, Built in U.S.A. 1932 - 1944.
Appendix 4: The Idea of Region: the House in the Bay Region of San Francisco, the Pacific Northwest, and Florida

expression of the timber frame and the idea of a "systems approach" for the design of a single family house. Using 4' x 8' sheets of the newly developed structural fir plywood, Yeon developed a 2' module suitable to the scale of the small house. He designed,

a series of related wall panels that met the fundamental requirements of privacy and protection from the elements, light and viewing and ventilation. Two by four studs were set two feet on centre and covered on the inside with plaster or wood panelling, and on the outside with conventional wood sheathing, building paper and the outer layer of 1/4" waterproof plywood. Fir battens or vertical mouldings were applied at each stud, expressing the modular construction (21).

The Jorgenson House was reached by a walkway covered with a series of hipped roofs. Setback on its densely wooded site, the house was rhythmically modulated by the panel construction and roofed by a wide eaved shingled and hipped roof, giving an air of Japanese repose and restraint. Window frames were eliminated by the insertion of timber louvres beneath fixed glazed panels.

Yeon's post war designs, the E.W. Van Buren House, 1949; the George Cottrell House, 1950 and Kenneth Swann House, 1950 develop the early themes of the module; the landscape of gables and the informality of a clustered group of timbered boxes echoing the imagery of the Oregon barn with a central connection space in all three houses, being the living room (22). A more literal rural image is found in the Lawrence Shaw House near Oswego. Although the interior is casually planned, a boldly formal and symmetrical hipped roof form dominates to give a classic image of a colonial farmhouse, similar to William Wurster's later explicit farmhouse form of the Pope Ranch House at Madera of 1958 (23). The traditional form of the Shaw House was posited by House Beautiful in their attack on the International Style in 1953 as the counter model to the "less is more" of Mies van der Rohe's Farnsworth House (24).

The association of barn and house was used concurrently by another fellow employee at A. E. Doyle and Associates, Pietro Belluschi. As with Yeon, the popular publicity of his pre-war house designs occurred after 1945 when they were published as post-war houses. The Jennings Sutor House,

21. McMath, op. cit., p.481. This panel system was first used by John Yeon on a series of nine houses commissioned by Portland contractor, Burt Smith in 1939 who had been impressed by the Watzek House. See "Culminating a brilliant series, this house demonstrated the flexibility of a tested design construction formula", Architectural Forum, January 1947, pp.67 - 71.


23. Sally Woodbridge in Bay Area Houses, p.202 describes the Pope Ranch House as "Wurster's mature vision of what a real regional architecture could be: a carefully referenced restatement of the past with form and materials still appropriate to the present."

Portland, 1938 was said by Henry-Russell Hitchcock to be "a surprisingly apt prototype of the best regional work in this area" (25). The simple all embracing gable overrunning on either end to create outdoor spaces and decks, the exposed timbers, the vertical glazing mullions that carried right up to the underside of the wide eaves hints at the Orient as the house hovers easily in the setting of firs and carefully cultivated shrubs.

The Peter Kerr House at Gearhart, 1941 is perhaps the closest to the image of the board and batten Oregon barn (26). Below the recurring dominant gable, an informal plan centres on a rubble rock hearth and expands to the sea view with a bay window-formally marked by piers. The house is a protective wall to the winds off the ocean; its entry is marked by a rustic log, an external tokonama. This house of 1941, with its vernacular barn by the sea image, prefigures the later works of the early 1960s of Charles Moore and M.L.T.W. at Sea Ranch in Northern California. The house contains a timber interior of crafted simplicity and generous passages that become gallery-rooms, regulated by the strong verticals of the structural window mullions.

Belluschi's comments from a 1941 lecture at the Portland Museum, exemplify his understanding of the notion of region,

This concept of modern, therefore, will not lead us to expect it to be just another style. It cannot be labelled international style, although certain characteristics are universal, not modernistic. It should not even be called modern, because it goes back to fundamentals. It goes back to nature, if the owner's life is one of response to it. Therefore we may deduce that a region with similar natural and human attributes may have an architecture harmonious to them. The people are neighbors, their interests are alike, they respond the same way to life, they have the same materials at hand, they have similar landscape, the same climate. So "regionalism" really has a meaning, which internationalism does not quite have (27).

The gist of these words were to be found publicly stated by Belluschi in James Ford and Katherine Morrow Ford's The Modern House in America (28); and in the popular press in an article such as "The Best Modern Architecture has its roots in our own soil" in House Beautiful, December 1946

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(29) and later more broadly in the professional press, Belluschi's "The Meaning Of Regionalism in Architecture" in Architectural Record, December 1955 (30).

Belluschi's post-war residential designs capitalize on his courtyard designs of the early 1940s, the Coats House, Netarts Bay, 1942 and the Myers House, Seattle, 1941. Here, as in Yeon's U-shaped Watzek House, the garage and bedroom wings form a courtyard with the main living room at the head of the U given full advantage of the view beyond. The Menefee "Ranch" House, 1948 is Belluschi's post-war epitome of the courtyard type with its huge all sheltering gable opening up like a vast portico to the landscape beyond in truly rural control over the landscape; a house, "whose forms developed naturally through an understanding of the region" (31).

Three flat roofed houses follow the Menefee design and indicate influence of the International Modernism of the East Coast. These houses still retain the protected courtyard, the strong vertical demarcation of the hearth, the sheltering eave, board and battens, rubble rock wing walls and understated privacy on entry. In the delicate Burkes House, 1949 one enters the hall through a skylit porch beside an enclosed pool. The living space flows dramatically out to the spectacular view of Mt. Hood beyond. The hillside to the rear of the house flows horizontally through the living room and out to the view, heightening the drama of the panorama.

In 1950, Belluschi left Portland to take up the position of Dean at M.I.T. in the School of Architecture and Planning where he remained until 1965. He continued in the 1950s to write and debate the positive aspects of regionalism and extend it beyond the confines of the Pacific Northwest.

Another architect from this region whose work featured in the early post-war years was Van Evera Bailey (32). Published regularly in both popular and professional magazines, Bailey's houses utilized horizontal board and battens emphasising the Usonian balconies and wide overhanging eaves of Frank Lloyd Wright with banks of vertical mullioned windows crowding under the eaves. The house pivoted always from a massive brick fireplace such as his L. Hoffman House and Hobbs House, both in Portland, which Architectural Record described as "rustic modern".


31. "This Oregon Ranch House Lives as Well as it Looks" (Menefee "Ranch House", near Yamhill, Oregon by Pietro Belluschi), House and Garden, March 1949, pp.104 - 111.

32. Biographical notes on Van Evera Bailey may be found in McMath, op. cit., pp.482 - 484.
Perhaps the most incisive comment on regionalism in the 1950s is offered by Tsutomu Ikuta in *Sinkentiku*, July 1956, where he writes on "Regionalism and Belluschi" and cites Belluschi, William W. Wurster and Harwell Hamilton Harris as the outstanding regional architects of the western states of the U.S. and warns, ...

...neither regional architecture nor purely functional internationalistic architecture needs to exaggerate and boast of its own purity, where it is practised. Even should they boast of its own purity, it is difficult for them to be deeply rooted and keep on surviving like species of living creatures of overpure stock; and it is flunkeyism consciously to exaggerate "regionality" alone to no purpose in these days when functionalism has been popular in the world architectural field since the first half of the twentieth century. From this derives the disagreeable traits peculiar to "traditionalism" and "Japonica" (34).

At the same time, down south in the Bay Region of California, a similar form of regionalism existed and which also reiterated what Elizabeth Mock in *Built in U.S.A. 1932-1944* had seen as the rediscovery of the barn.

Americans looked again at the stone and wood barns of Pennsylvania, the white clapboards of New England, the low rambling ranch houses of the West, and found them good. They were not interested in the picturesque detail of these buildings, but in their straightforward use of material and their subtle adaption to climate and topography. Here was local encouragement for the growing international movement towards a friendlier more differentiated architecture. It was suddenly discovered that California had been enjoying a continuous but curiously unpublished tradition of building in this new sense (35).

In 1952, in *Built in U.S.A. Post-War Architecture*, another M.O.M.A. publication, despite the flooding of the popular and professional journals with accomplished and award winning houses of the Bay Region of San Francisco, there was only one house, the Moritz Thomsen House by Mario Corbett that was included. The subject of the Bay Region was dismissed as being of overrated importance, and claimed by Henry-Russell Hitchcock to be part of a nationally homogeneous production of houses in the United States (36); a statement that ran counter to that same critic's positive proclamation of the Bay Region in 1940 (37).

Between 1945 and 1952, Bay Region houses were continually published in and advocated by the popular press. Again, many of the houses had been built before 1942. As Sally Woodbridge notes in *Bay Area Houses* (38), the number of architects who participated in this informal woodsy mode were numerous. Central among them was William W. Wurster who had been building scores of simple and honest timber houses since his seminal ranch house for the Gregory family at Santa Cruz in 1927, with its single room width plan encircling a courtyard with rooms connected by an outdoor covered verandah. After 1945, his houses continued to receive wide coverage in both professional and popular journals. The appeal of Wurster's houses was their use of texture, local materials, familiar images of the gable, simplicity of construction, informal planning and a low key response to the idea of "modern" and "contemporary". His designs epitomized good taste, satisfying the desire for discretion and gracious elegance by the cream of San Francisco society.

Like Gardner Dailey and Harwell Hamilton Harris, Wurster was profiled by *House Beautiful* in 1945 (39). He emphasised the desire for unpretentious informality and a belief that no forms should be rejected just because they were old and had precedent; any more that new forms be tried just because they were new.

Wurster was open to using materials not associated with Modern – pitched roofs, sidings of shingles or clapboards, timber shakes, board and battens. Affectation was rigorously avoided; simplicity, an almost Morrissean view of living was forecast where detail and finish were studied with an apparent artlessness but in fact were highly sophisticated. Bay Region climate encouraged the doubling of outdoor space as indoor space, and the generous use of glass to catch spectacular views.

Typical of Wurster's post-war designs is the house at Woodside, California published as one of "The 12 Best Houses of the Last 12 Years" in *House Beautiful*, September 1947 (40) and accompanied by houses designed by Gardner Dailey, Paul Thiry, John Ekin Dinwiddie and Albert C. Hill, John Yeon, Pietro Belluschi and John Funk, all from the Bay Region and Pacific Northwest. The Woodside House was an early example of the "bi-nuclear
plan", the much publicized feature of Marcel Breuer's domestic planning on the East Coast. Separating the living and sleeping zones, a glazed entry gallery with sliding doors, opened onto a courtyard terrace, to become an outdoor room. The skillion roof, block chimney, generous eaves, and windows subdivided by slim members gave an air of casual informality. The floors were simply tiled in red terracotta, the internal walls lined with dressed redwood, the ceiling above, white plaster. Exterior space was duplicated as indoor space to form a "large-smallhouse" spatially integrated into the landscape.

Wurster's articles such as "When is a Small House Large?" in *House and Garden*, and "The Outdoors in Residential Design" in *Architectural Forum* (41) advocate outdoor living and open planning but politely remain with traditional domestic formal images, avoiding ideas of abstract aesthetics, colour and space: He advocates those features particular to his pre-1942 domestic work; versions of the living porch, the glazed gallery, the screened verandah, and the garden living room (42).

Another house in Woodside by Wurster, Bernardi and Emmons in 1949 for the parents of Lawrence Halprin's wife is typical of Wurster's post-war designs after the 1944 partnership with Theodore Bernardi and Don Emmons (43). The gable is seen less and less and the flat roof dominates. The L-shaped plan with service areas in one wing and bedrooms in the other, was joined by a higher volumed living room at the corner of the L, a post war rationalizing of the typical C-shaped plans of pre-war houses. The public entry and car court inside the L is centred by a huge tree and faced by toplit blank walls. The meadow side is generously glazed and landscaped by Halprin. The vertical of the rock fireplace pivots the house into the landscape, blending softly the man-made and the natural.

The rural barn forms were to enter San Francisco as townhouses, where, as Sally Woodbridge notes, the box was the prime compositional unit (44). Two characteristic plans for the town house developed due to the view, the narrow rectangular lot and the peculiar climate of San Francisco.

*There were two characteristic plans for the townhouse: a tall rectangular box set flush with the street with enclosed*
garage on the ground level and a small garden at the back or two boxy structures, the smaller on the street and the garage and the larger box to the rear of the lot, with living and sleeping quarters direct to the view (at that time there usually was one, of either the Bay or the city). This left a small courtyard between the two volumes for an intimate outdoor landscaped room that was one of the hallmarks of Modern in the Bay Area (45).

Pre-war examples by Wurster of these two types include the Harley Stevens House, 1940 and the Grover House, 1939 both in San Francisco. A post-war example by Wurster, Be. nardi and Emmons is described by House and Home as the "ferryboat house" and "an almost militant expression of the San Francisco urge to live without show" (46). The house, built right to the boundary of its corner site, is pushed hard to the view in a dynamic gesture of glazing and sun balconies. One enters on the third level, following the exterior wall to a telescopic view ending in a "bay window" tower forming a Mendelsohnian punctuation to a form that has its eaves shaved, as living areas and master bedroom turn to the view. Skylights and toplighting provide light to the internalized service areas. The rural box is now in the city.

Gardner Dailey's Heil House, likewise contracts the suburban sprawl and harnessing of outdoor space and garden, to compress and build a three storey box at the rear of a steep San Francisco site with views to the Bay (47). The garage roof becomes garden at the street side. Flat roofs, casement windows, site and client specific, and use of painted timber are typical of the Dailey vocabulary. He was to comment in Ford and Ford's The Modern House in America, In smaller residential houses American Modern is expressed mostly in wood - and usually painted wood, following the Colonial and Victorian tradition. This vocabulary of painted wood and painted stucco over wood frame - almost never found in Europe - seems to me to be the unique contribution of America to the development of modern (48).

Gardner Dailey, a contemporary of Wurster's was also favoured by the professional and popular press. The widely published Owens House, Sausalito, 1939 had a trapezoidal plan, a modulated frame fanning out to a view, and roofed
by a simple skillion. It embodied the simplicity of Bay Region functionalism (49).

Dailey's Ets-Hokin House with its splayed zoned wings with skillion roofs and covered breezeways creating enclosed garden or motor courts, was used by James Marston Fitch in an article for *House Beautiful*, May 1952 called "Informal Architecture never puts on Airs" (50) while Elizabeth Mock used Dailey's San Francisco townhouse, the James Park Bradley House in a *House and Garden* article entitled "Modern Houses - How to look at them", where the main items of interest were the garden patio and the sun gallery (51).

Joseph Esherick, one of Dailey's employees, who had worked briefly for George Howe, was to continue the reinterpretation of the "barn" tradition begun by Wurster, Yeon and Belluschi. His houses develop ideas of volume (52) and attempt to go beyond Dailey's changing of modules to achieve spatial variety, in search of clarity and a consistent module, perhaps inspired by his friendship with the older John Yeon who had shared and developed similar interests.

Though experienced in the long strung out planning of houses such as the ranch-like Holt House, in Stockton, California (53) in the manner of architects such as Cliff May, Clarence Mayhew, Wurster and Dailey, it is the early houses such as the boxy Irving A. Frohlich House, San Rafael, the Lake Tahoe summer houses and his own house at Ross of 1946 which are forerunners of what was to become the Third Bay Region Style (54). These experiments were ultimately formalized by the barn-like forms of Moore, Lyndon, Turnbull and Whitaker's Sea Ranch in Northern California of 1965 and Esherick's own domestic designs at the now famous resort.

Esherick's two major themes of house design, "packing a box" and "packing a triangle" (55), are explained in *House and Home*, January 1952 (56). The Frohlich House is a simple and unadorned L-shaped box with interlocking volumes within. The end of the living room is taller than it is wide. Esherick kept the room from looking like a corridor by using the strong horizontals of wide redwood boards on the end wall and large glass panels on either side of the room give a greater sense of width than actually existed. Externally, vertical pine battens express the stud


52. Esherick's interest in volume is noted by Sally Woodbridge in *Bay Area Houses*, pp.184 - 185 where she compares Esherick's Goldman Townhouse, 1951 with the "Ferryboat house", 1951 by Wurster, Bernardi and Emmons.


55. Woodbridge, op. cit., p.185.

frame within and cover the asbestos cement sheet panels. In the earlier house at Ross designed for himself in 1944 (57), the box is an even simpler rectangular cube with a double height volume once again carved out over the living room and matched by a double height wall of glass dramatically opening up the tiny house. The small house is tall, almost cubic on the very steep site: a site induced exploration of volume to be later developed in the Berkeley houses of George Homsey, Peter Dodge, Richard Peters and Charles Moore in the early 1960s.

A Lake Tahoe House of 1948, designed by Esherick is the triangle packed. A large all embracing shingled gable hovers on massive rough hewn beams over rustic columns that are massive tree trunks. Inside, a double height volume to the living room is complemented by the expressive revelations of the stud frame module in the roof framing. An image of a vast primitive barn appears.

A sophisticated version of these genuflections to the imagery of the barn, is the house Esherick designed and built in association with Rebecca Woods Esherick at Kentwoodlands in 1950 (58). Here the spaces are packed into a gable set across the long axis. This "barn" turns its back to the street and entrance drive, and opens on the opposite side toward a huge oak tree in the foreground and sweeping curve of lawn landscaped by Lawrence Halprin. Beneath the main gable is packed a full height living area, dining room with study, master bedroom and office packed above with a service and sleeping wing in an opposing gable welded onto its side. Timber decks access the kitchen and bedrooms in addition to interior passages. The construction of the house is post and beam and based on a four foot module which is observed throughout the entire house. The transition from the street to garden is a progressive opening up to the landscape, a demonstration of the late Gordon Drake's desire to achieve the easy transition "from open sky to complete enclosure", "to give one a choice of degrees of enclosure, resulting in an intimate wedding of house and site" (59).

These sophisticated homages and reinterpretations of the ordinary were to change during the mid-1950s. Where there was the benefit of a generous steep site and lush undergrowth or an aspect among the trees, such intimate expressions of the connection between house and landscape would continue. The symbolic responsibilities to the street
and the public eye were able to be ignored. A private Arcadia behind quietly anonymous redwood wings and gentle private walls of wood was able to be enjoyed. The constricted suburban site of the Bay Region experienced little architectural attention and its development was left largely in the hands of speculative builders.

Less systematic than the order seeking Esherick and more spontaneous were the houses of Mario Corbett, whose houses transcend rural imagery and tread a fine line between the regional designs of Esherick, Wurster and Dailey and the more Internationalizing designs of other Bay Region architects such as John Funk, Henry H.:l and Ernest Born. These houses with the exception of the house designed for *Ladies Home Journal* in 1944 (60) were rarely published in popular magazines but appeared regularly in the professional press. Corbett's designs are unique impromptu solutions. His own "Stop-Gap" house at Wolfback Ridge, 1946 incised into the site on the street side by a planar wall of stone, protects a glazed pavilion fanning out in a semi-circle to the view of San Francisco Bay. A fin windbreaker bisects the half circle to create a wind protected and intimate deck area. A massive structural bearing beam supported by the fin, rises from the bathroom, locating the fireplace, and expanding and opening the house upward to the view (61).

Corbett's post-war houses are bold solutions using simple geometries, skews and angles responding specifically to a view or contour. Their cubic and impromptu nature was to appeal to later architects such as Charles Moore and Henrik Bull (62).

A 1951 Sausalito house designed by Corbett is a cube facing the Bay with a double height volume of glass, hovering over a base. This wall of the living cube, conceived by Corbett as the "simplest form of shelter" (63) opens up as an outsized glass showcase to the view of the whole of the San Francisco Bay Area. The abstract sculptural quality results from a direct response to the site. The house is a composition of three geometric shapes - a floating cube, a trapezoid, and a vertical plane, each defining functional zones of the house; carport, deck and house.

In another house projected in *Arts and Architecture*, Corbett embeds the house into a ridge for wind protection

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60. A series of houses were designed and models made for the *Ladies Home Journal* and began to be featured from January 1944 in the magazine. The program, begun under the direction of architectural editor, Richard Pratt included George Fred Keck, Carl Koch, Philip Johnson, Mario Corbett, Hugh Stubbins, Plan Tech Associates, Vernon DeMars, and Frank Lloyd Wright. In May 1945, Elizabeth Mock curated an exhibition of these models at the Museum of Modern Art in New York, under the title of "Tomorrow's Small House".


and snugs into the hillside to capture views (64). The house backs onto a sand blasted concrete retaining wall. The rhythm of the light post and beam construction of the glazed pavilion is reflected in the modular breakup of the exposed beach pebble concrete slab floor, subdivided by redwood strips, running perpendicular to the contour-following retaining wall and out to the view. Skylights follow the curve of the retaining wall emphasising the nest like quality of the interior.

These houses are remarkable for their formal abstraction and site specificity. Corbett's Moritz Thomsen House at Vina, California, 1952 was the only house to represent the Bay Region architects in the M.O.M.A. publication, *Built in U.S.A. - Post-war Architecture* (65). The house is a bold and simple rectangular solution exploring volume. "Viewing platforms" are suspended between two walls of field stone. The bedroom and service areas are sunk into the ground to obtain for the living area above, the depth of the perspective of the flat farmland beyond. The exposed timber framing of the porch and the connection with the earth give this house a strong earthbound sense of place.

The specifically local tendencies of Bay Area houses weakened after 1954 as affluence and the rise of consumerism tended to dilute the "naturalness" and honest pragmatism of the late 1940s where restrictions and austerity had assisted the development of a simple and modest regional domestic architecture. Its unselfconsciousness was perhaps its greatest weakness. In addition, the public denouncement of the Bay Region "Style" at the M.O.M.A. symposium in February 1948 and the public advocacy by that same institution of the work of Mies van der Rohe (66) and Frank Lloyd Wright (67) dampened the idea of an American regionalism. Just as the British magazine, *The Architectural Review* attempted to codify "New Empiricism", Lewis Mumford's attempts to legitimize the architecture of the Bay Region as a style to be known as uniquely American in order to encourage its development, were thwarted by the fear of a self conscious following of style. Mumford and *The Architectural Review* were attempting to point out future problems for modern architecture in terms of the International Style:

*Functionalism, the only real aesthetic faith to which the modern architect could lay claim in the inter-war years, is now, if not repudiated, certainly called into question...*
those who were formerly its most illustrious supporters.

Mumford had quoted these words in "The Skyline" in The New Yorker, 11th October 1947, as part of his argument in favour of the Bay Region and against the "rigorists" who "placed the mechanical functions of a building above its human functions, they neglected the feelings, the sentiments, and the interests of the person who was to occupy it." He included Frank Lloyd Wright in this attack for his dictatorial reign over the domestic client's taste. Mumford reveals the American tendency for language and grammar, urging architects to remember,

...what a building says as well as what it does. A house as the Uruguayan architect Julio Vilamajo has put it, should be as personal as one's clothes and should fit the family life as well... Rather, I look for the continued spread, to every part of this country, of that native and humane form of modernism one might call the Bay Region Style, a free yet unobtrusive expression of the terrain, the climate, and the way of life on the coast..... The style is actually a product of the meeting of Oriental and Occidental architectural traditions, and it is far more truly a universal style than the so-called international style of the nineteen-thirties, since it permits regional adaptations and modifications.

To combat Mumford's persuasive arguments, Philip Johnson reacted immediately and organized a symposium at the Museum of Modern Art to which all the lights of American Modernism; Walter Gropius, Marcel Breuer, Peter Blake, Alfred Barr, Henry-Russell Hitchcock, Eero Saarinen and Vincent Scully were invited and called it, "What's Happening to Modern Architecture?"

The Bay Region was the target of criticism. Despite Architectural Forum's conclusion that the symposium "would undoubtedly give extra confidence to the large number of American architects who have never considered coziness the equivalent of original sin", the general atmosphere of the evening was a fear of the word "style". The intended discussion between the two groups; the originators of the term, "International Style" and the upholders of the English reaction to it, called the "New Empiricism" with its American counterpart, the new humanism of the "Bay Region School"; was reduced to a discussion of style, standards and those who denounced.


69. Ibid.

the labels and -isms as secondary to the problem of production.

Alfred Barr described the Bay Region's "informal and ingratiating kind of wooden domestic building", a domestication of the International Style, calling it "the International Cottage Style" (71). He criticized Bay Region architects for falling back on the International Style for the design of office and civic projects. Marcel Breuer wiped off the Bay Region by saying,

*I don't feel too much impulse to set "human (in the best sense of the word) against "formal". If "human" is considered identical with imperfection and imprecision, I am against it; also if it is considered identical with camouflaging architecture with planting, with nature, with romantic subsidies (72).

Perhaps it is Mumford's words which lie at the heart of the problem and go unnoticed as the potential of the Bay Region went unexplored outside the domestic realm, because of its lack of cultivation as a potentially serious design discipline.

*What is the Bay Region Style? Nothing but an example of a form of modern architecture which came into existence with our growth and which is so native that people, when they ask for a building, do not ask for it in any style. That is the healthy state that we should have in every part of the world. To me, that is a sample of internationalism, not a sample of localism and limited effort. Any local effort, if worth anything, is worth reproducing elsewhere; and any universal formula that is worth anything must always be susceptible of being brought home - otherwise it lacks true universality (73).

Though Bay Region architecture continued to be acclaimed, as in the exhibition at the San Francisco Museum of Art in September and October of 1949, Mumford regretted the unwillingness of Bay Region architects to accept a certain degree of self consciousness and critical revaluation, to reconcile the universal and the regional. He praised the architecture of the region for its ability to belong to the region and transcend it, to embrace the machine and transcend it. Mumford insists that the existence of this vigorous tradition of modern building not go unnoticed by American architects (74). Earlier in the same year,
Appendix 4: Post War is Post Modern: The House in the United States 1945 - 1960

Architectural Record had asked Bay Area architects, "Is there a Bay Area Style?" of which the common reply by architects was a fear of the word "style" as inhibiting and an unwillingness to acknowledge the possibility of theoretical development based on common tendencies (75).

Regardless of the American indecision and fear of codification of the Bay Region as a school, the label stuck both nationally and internationally and Bay Region houses continued to be published in both the popular and professional press. Architectural debate, however, swung to focus on the more notorious arguments of the Moderns; Frank Lloyd Wright and Mies van der Rohe, the organic versus the rational. The idea of region had no part in this typecast scenario of classic versus romantic. Debate also centred on what was seen as a pressing need for a new monumentality and public architecture for post-war America. Regionalism and a Bay Area Style were not seen as capable of such a task, its sphere was regarded as purely a domestic one.

A less publicized version of a new regional architecture was to be found in Florida. Its presence was screened by stylistic affinities to orthodox International Modernism, just as David Gebhard has noted that the domestic work of Richard Neutra, Gregory Ain, J.R. Davidson and Rudolph Schindler could be said to be regional in its relationship to the stucco tradition of the Spanish Colonial Revival in Southern California as well as extending and supporting the tenets of the International Style (76). Paul Rudolph attempted to promote a type of regionalism for Florida, and concurrently, popular home journals encouraged terms such as "Florida living" (77) as this southern state boomed in residential development.

In his article, "Regionalism in Architecture", in Perspecta, no.4, 1957, Rudolph proposed that Florida with its particularly warm climate, its architectural heritage and love of the outdoor life, was sympathetic to many of the favoured ideas of post-war modern architecture such as open planning, lightness of structure and the free flowing of inner and outer space (78). Along with California, Rudolph believed that the regional characteristics of traditional Florida architecture were transferable and adaptable to modern design.

75. "Is there a Bay Area Style?", Architectural Record, May 1949, pp.92 - 97.
77. House and Garden, March 1952, pp.110 - 119, discusses the "New Perspective on Florida Living".
Rudolph, therefore argued the validity of the incorporation of traditional features into modern residential design; the raised cottage to escape the dampness, the dogtrot to obtain the maximum amount of ventilation and provide a shaded area, the chimney placed tangentially to the main structure so that principal structural members were not violated, grills and trellises to filter the light, hinged sections at the windows to control the sun, the frequent placement of living quarters on the second floor, utilizing masonry on the ground and timber above, modular construction, an enveloping well ventilated roof with verandahs often on four sides of the structure to protect the openings as well as the walls from the intense sun.

As an example, Rudolph uses the Walker Guest House on Sanibel Island, Florida to illustrate the translation of these regional devices into existing form. Each side of the square house was made up of three equal panels - one of fixed glass, the other two of upswinging counterbalanced panels which act as the infilling wall in inclement weather, ventilation elements, as overhanging eaves, and as a hurricane shelter. With the panels lowered, the house was a snug cottage, when the panels were raised, the house became an airy screened pavilion.

Such an approach, consciously reinterpreting tradition was quite different from the approach of Harry Seidler whom Rudolph cites as creating the "Harvard House Incarnate" (79) in Sydney, Australia, transplanting the stylistic idiom of Gropius and Breuer to Australia without any modifications whatsoever. Twitchell and Rudolph's Healy Guest House at Sarasota, Florida of 1950 (80), and the unbuilt Cohen House at Siesta Key, 1952 are then fresh interpretations of both tradition and the tenets of the new International Modernism. Rudolph carefully points out that the use of materials, for example the use of a stone wall in Massachusetts is not true regionalism.

Labour-materials ratios are the cause of national differences, but they are not likely to create marked differences within a nation. In other words, true regionalism comes primarily through form rather than the use of materials (81).

Rudolph believed that true regionalism within the U.S.A. was possible primarily through form rather than materials,
believing that forms and devices utilized in traditional architecture could be readapted for contemporary use.

Other architects in Florida, who practised Rudolph's interpretative modernism were Igor Polevitzky and Rufus Nims. Their houses eschewed the traditional Mediterranean image of the Florida house. In Polevitzky's design for the Michael Heller House at Miami, Florida, 1949 (82), wood and steel frame enclosed with plastic screening covers the whole house. Two thirds of the house was open to the weather. Within the volume of the screened prism there was an oval swimming pool above ground level, a Bucida tree, and kitchen, living and sleeping spaces were coolly tucked beneath the enclosed second floor porch.

Rufus Nims, in association with William Jameson designed a house raised on pilotes on Hibiscus Island, Miami Beach, Florida (83). A concrete roof and floor slabs, generous glazing, louvred shutters, deep overhangs and a clearly expressed frame with "floating walls" that never touch the concrete frame are the basic elements of this tropical pavilion.

This Florida mode of modernism did not develop. Critical discussion of such a small and concentrated phenomenon was minimal, in particular because many of the houses were holiday homes, implicitly transient, temporary and not serious enough for further development as permanent prototypes. Rudolph's comments on regionalism in 1957 come at a moment when the main architectural issues of the day are not the single family house but monumental architecture and civic form.

From the mid 1950s onward, the concept of regionalism was quietly subsumed across America. The industrialization of homebuilding by large scale homebuilders such as William Levitt and Ed Ryan with national distribution and "universalized features" of contemporary design, diluting the particularity of place. These "features", as described by William Jordy, became "buywords" of design (84). As the cozier variants of "the modern look" entered the consumer magazines; "the open plan", "redwood", "the barbecue patio", "the lanai room", "the picture window", the "carport", the "deck", the "ranch look", authentic regional devices were vulgarized and spread universally by the housebuilders. Regional idealism dissolved into superficiality and trite pictorial devices,


83. "Because this glassy house is raised up on stilts", House and Home, March 1954, pp.134 - 139; see also "Headline House #1(Ralph W. Adler House, Hibiscus Island, Miami Beach, Florida by architects Rufus Nims and William Jameson), House and Garden, July 1952, pp.32 - 39.

Appendix 4: The Idea of Region: the House in the Bay region of San Francisco, the Pacific Northwest, and Florida

without regard to climate or location, but avidly desired and procured by the American homebuyer.

The so-called "ranchburger" was typical of the reproduced house which smoothed over regional differences all over America with its universal application by speculative builders. The ease of travel and communication of housing ideas via magazines assisted the shallow pluralism with a cheapened exoticism. The average homemaker, now with new affluence and buying power to choose his (but invariably her) surroundings, understandably adhered to the principle of "do-it-yourself" and overlaid her tract house with the latest exotic touches from the pages of *Good Housekeeping* and *Better Homes and Gardens*.

Costs of traditional materials associated with a particular region inevitably rose hindering local identity associated with materials and texture. Yet the expressiveness of new materials was rarely explored or understood with respect to the traditional forms and devices, negating visual continuity between past and present. Where Florida differed from the Bay Region and the Pacific Northwest was the need to produce new forms without the assistance of abundant supplies of a natural material such as redwood. The architectural press emphasised production rather than place yet left large scale residential development and its urban consequences unexamined and in the hands of merchant builders.

In many cases, the success of houses by regionalist architects such as Belluschi and Wurster, was the inspiration given by the site and surrounding landscape. The rural imagery of the barn could be readily transported into a house but less so into the suburban landscape, a fact little discussed by architects of the time. The "discovery of the barn" was undeveloped in urbanistic terms and satisfactory only on the untamed site. Regional architecture invariably involved transformation of the rural image. Its urban application in San Francisco developed more by circumstance of the site-induced compaction of the inherently sprawling form and not by choice.

For much of America, a beneficent site was not the norm. The restrictions of the suburban lot and its urban pattern negated the subtle anonymity and non-symbolic aspirations of the informal "modern" woodsy tract house. The streets became a barren landscape of private walls, carports,
driveways, and the no-mans land of setbacks and sidewalks with unknown private worlds somewhere behind. It was a new urban landscape.

The whole nature of regionalism would arise again only after the house had been irrevocably standardized throughout the nation, to the stage where one's home represented neither a sense of place or the individual, nor even a definable sense of urban community of street and public space.

The lack of acknowledgement of regionalism and place by the architectural culture of the 1950s assisted the dilution and sameness that had come to dominate suburbia by 1960. The house was abandoned as a responsible duty of urbanistic proportions. There were indeed "doldrums in the suburbs" (85). Efforts by the few historians and architects to codify regionalism were either too weak or quashed by the fear of being labelled as "style".

The tragedy was simple. The specificity of regionalism originated with the architect designed house, whose forms were consumed and transformed by a mass marketing building industry. Regional forms became general and non-specific. Response to the site became general and non-specific. Combined with the pattern of suburbia, the single family house suffered anonymity and a backhanded slap to the face of an architectural profession devoted to the production of houses for America based on new forms, materials and a vision of a better life after the war.

The Idea of Style - Modernist versus Traditional - A Question of Taste Not a Point of View.

In the 1930s, the American homemaker could choose the image of his prospective house from a myriad of stylistic possibilities; Tudor, French Provincial, Spanish Colonial, Cape Cod, Colonial Revival, Moderne or Modernistic, and even International Modern. In the restrictive circumstances immediately after World War 2, gone was the eclectic pleasure of selection, the choice of image had narrowed and lay between two definable extremes; Modernist and Traditional. Much of the immediate cause for the polarity of choice was economy. Both extremes lent themselves to minimal applied ornament and standard materials. The open plan compacting living and dining areas was cheaper as was a simple flat roof or gable. "Modern" design was not only functional but economic. "Traditional" design used standard construction, was inherently small scale and compact, owing much to its vernacular antecedents. In the middle of such a choice lay the nebulous range of "contemporary" homes; the economically functional plan that could respond either to history or modernity with anonymous ease, and which was the domain of the speculative builder who dressed houses according to taste, fashion and market demand.

The "Traditional" house on the East Coast was a Colonial or Cape Cod design. On the West Coast, "Traditional" encompassed Spanish Colonial Revival and the Monterey Style and variations of the two. "Traditional" houses had popular appeal. They appeared frequently in home journals, especially House and Garden and Good Housekeeping but never in the professional press after 1945, with the exception of the broad based spin-off from Architectural Forum, House and Home. Garden and walking tours of Williamsburg and hints on recognizing Colonial and Georgian houses encouraged a visual and nostalgic attachment to the Colonial heritage.

The "Modernist" house was an East or West Coast version of a transplanted European International Style. In the case of Southern California, as David Gebhard has noted (1); aided by a benign climate, the two extreme positions could mutually co-exist with ease. Stucco, white planar surfaces and low-pitched or flat roofs, open planning and the easy connection between indoors and out, were common to both the Spanish Colonial Revival and the planar forms of the

Appendix 4: Post War is Post Modern: The House in the United States 1945 - 1960

West Coast International Style of Richard Neutra and Rudolph Schindler.

In America, the choice of the "modernist" image for one's home was one of taste, not one of a commitment to a political or social vision of a new domestic existence. For,

Certainly the social commitment of European Modernism of the twenties, which had aspired to provide standardized housing for all classes consonant with the highest standards of technology, was seriously (and tragically) eroded in America, New Deal Social Reforms notwithstanding (2).

Stripped of its ideological impetus, the International Style had been given a suburban conditioning by the European emigres. Walter Gropius and Marcel Breuer. Their first commissions were invariably houses, concomitant with client demands for distinctive rather than conforming design. The "Modernist" house became an "art" house, built largely by an intellectual elite associated with the universities to which the luminaries of European modernism had been graciously invited. Cambridge, Massachusetts naturally had its share of the latest in the new International Style of the East Coast. The "Modernist" house was one assumed and energetically advocated in the professional magazines appearing as spicy interest in the popular home journal, for those brave enough to venture into "art".

The house that was to eventually politicize the East Coast decision of taste was built in the Mid-West in 1949. In 1953, a small McCarthyist war was to irrevocably damage the image of the "machine for living" and firmly implant in the minds of suburban America, the idea of the postwar house being post-modern, or what their house was not to be. At the same time, the house that would gain increasing popularity and inevitably triumph as the ideological ideal, was the California ranch house. The ranch house would proliferate throughout the United States in its various forms, attracting the name "ranchburger" from Bruce Goff (3) and in its pure form, was a generous family home designed by Cliff May, Clarence Mayhew, William W. Wurster, Allen Siple or H. Roy Kelley. The ranch house, regardless of its image, was the symbol of American individualistic freehold, a symbol of attaining the land.


Chief among the exponents of the East Coast "Traditional" house was the Boston architect, Royal Barry Wills, master of the Cape Cod, and described by *House and Home* as "probably the most popular architect America ever produced" (4). By 1945, Wills was a veteran of period style homes on the eastern seaboard and the author of several popular books which had made him the most widely read architect in the nation (5). Writing in *Better Homes and Gardens*, February 1945, Wills argued for the merits of Colonial architecture as a legitimate representative of inherited culture, that colonial architecture was an inherited birthright and as such, ought not be ignored, that, 

No architecture could have been a more natural expression of people's needs, or better related to climate and local building materials. Those materials (stone and wood) are still the most readily obtained and the cheapest... the fact is that all buildings showing the great hallmarks of Modernism are likely to cost more than their fellows in a traditional skin (6).

The open plan was considered drafty, flat roofs and oversized windows were affected examples of exhibitionism and neither were well suited to the northern climate of the East Coast. Wills believed that traditional design still had a place in post-war America.

Posterity was to prove him right, where by 1960, his residential practice was averaging about 100 custom houses a year. In addition, he was designing prefabricated houses such as the best-selling Cape Cod "Deerwood" for National Homes (7) and the earlier $5200 plus lot two bedroom Cape Cod for Prebilt Homes of Boston (8).

Wills believed that Colonial architecture could offer a myriad of variations and great flexibility as well as being able to include all the present day mechanical gadgets and benefits of the new post-war machine age without losing its historic flavour.

Typical of such a house envisaged in the traditional mode was the Cape Cod house, Wills designed for the *Better Homes and Gardens* Five Star Homes series in 1945 (9). Wills adopted the basic H-shape of the traditional form of the Cape Cod house to a program of postwar family living.
Appendix 4: Post War is Post Modern: The House in the United States 1945 - 1960

There was no compromise however with the authenticity of the exterior; the steeply pitched roof, fat brick chimneys, white shutters, multi-paned windows and a brick red exterior achieved through a combination of finishes (flush board siding on the street front, vertical board siding of the gable of the garage porch, brick for the fireplace wall of the living room, and shingles elsewhere).

But internally, one found a rationally zoned plan with an open living-dining room; the house was carefully massed into three main blocks to achieve courtyard spaces and progressive levels of privacy away from the street. One entered through an archway beside the arched garage, to a covered loggia beside a private courtyard. The oversized garage doubled as a porch in summer as doors opened onto this private court. The passage connecting the bedrooms to the dining/living area doubled as a storage wall. The high roof over the living room permitted a third bedroom upstairs plus storage space for trunks and boxes. Living, dining and kitchen area looked out to the rear garden terrace. The living wing had been placed to the rear of the site without negating public response to the street, where chimneys, arches and gables symbolically denoted entrance and home with immutable safety. Wills had skilfully stretched the Cape Cod box into a modern plan, making use of the whole site and retaining traditional imagery. The front door was cleverly placed deep on the site to make the most of a limited budget and give the impression of great space on a small and constricted suburban site.

Wills’s books, Houses for Good Living, Better Houses for Budgeteers, Houses have Funny Bones, and Houses for Homemakers were aimed at a typical homebuying public (10). They are catalogues of houses, according to either price range or style, offering sketched perspectives and floor plans. The house is presented as a total image in its garden setting, easily easily comprehensible and enticing. An accompanying floor plan is diagrammatic proof for the layman that the image above, lovingly sketched as the ideal house, actually does work. The popular books of other designers such as Paul Williams, New Homes for Today and The Small Home of Tomorrow (11), likewise present the ideal perspective image of the home in catalogue form. One can picture one’s home immediately and choose from known imagery.

   iii) Royal Barry Wills, Houses have Funny Bones, B. Wheelwright Co., New York, 1951.

By contrast, the books advocating overtly modern design such as *The Modern House in America, If you want to build a House*, and *Tomorrow's House* (12), discuss and illustrate the house not as a complete image but rather its component parts of living, sleeping, kitchen and bathroom as if a kit of parts. Visual images from "good" contemporary houses, generally those of the Bay Region of San Francisco or Los Angeles were used. Rarely are these books written by architects. A clear image of the modern house, encapsulated in one view is rarely presented to the layman. The method of designing from within and its explanation of function was an anathema to a catalogue oriented public. The popular magazine understood such techniques and popularized modern architecture with special detailed features on complete houses, such as *Better Homes and Gardens's Five Star Homes*, *House Beautiful's Pacesetter House* and *House and Garden's Hallmark Houses*.

Other architects published in the popular magazines, and who practised in the "Traditional" manner included Walter K. Durham, Jerome Cerny, Hamilton Brown, George Paul, Harold S. Fenno, Wilson McClure, Henry Otis Chapman and Randolph Evans. These houses with their period costume over a liveable and functional plan exemplify a popular attachment to sentiment and tradition. Relatively unsophisticated, these houses shield the continuing work of older architects of much larger and unpublished houses of the 1950s. The generation of the 1930s such as Georgian specialists, Mott Schmidt, Harry Linderberg, Lewis Edmund Crook, and John F. Staub (13) were all still building large and sophisticated versions of historicism and continuing the pre-war condition of an academic and rigorous eclecticism. At the same time on the West Coast in Southern California, a healthy tradition of Spanish Colonial Revival was being perpetuated by Wallace Neff, John Byers, Lutah Maria Riggs and Edna Muir, all now building larger and larger houses in the wealthy suburbs of Pasadena, Bel-Air, or Montecito.

By contrast, the professional press was enamoured with the idea of the ultra-modern house. Instead of symbolizing scientific advances as had happened in the streamlined 1930s, the post-war designer wished to install the real thing. The postwar house competitions of *Arts and Architecture, Pencil Points* and *Architectural Forum* predict the fascination and optimism associated with the
industrial images and production of the postwar home. It is important to stress that it is the single family house, and not housing or the housing block that was to occupy the postwar American architect. Deep in the program of modern architecture, the idea of individualistic freehold was an anathema to the pure social goals of modernism. But in America, the social program of the single family house superseded that of the collective. The single family house was de rigueur. Space was available. Finance was available. What existed economically and was encouraged, was the choice of the average American family to live with more space and on his own piece of freehold land. What suffered were the inadequate post-war deliberations by architects on the postwar community and the urbanistic implications of the inevitable suburbia that would result. The increased density of Gregory Ain's suburban subdivisions such as his "Park Planned Homes" scheme of 1945 (14) and Francis Violich's plea that "today, architects must abandon individual house design and attack the problem of the community as a whole" (15) went largely unnoticed as the single-family house was assumed as the prime American goal.

Consequently, the International Modernism of the East Coast was epitomized after World War 2 by the numerous houses in the new suburbs of Long Island, New Canaan and Boston, by the former master and pupil of the Bauhaus, Marcel Breuer. His houses exemplified "Modernist" design grappling with the stranglehold on history and tradition that the Colonial and Cape Cod had naturally assumed.

As a comparison to the Royal Barry Wills design for Better Homes and Gardens, it is the Geller House, Lawrence, Long Island, New York of 1945 which is the most instructive. The Geller House bequeathes to the postwar designer and the world, the "bi-nuclear plan", first used by Breuer in his 1943 "H-House" Project (16), as well as what some authors have described as a regional response to the East Coast, the "domestication of modern" or a weakened and diluted International Style that had earned a "loss of polemical edge" (17). Yet it was the Geller House of 1945, the earlier Chamberlain Cottage, Wayland, Massachusetts, 1940; the Robinson House, Williamstown, Massachusetts, 1947 and Breuer's own house, New Canaan, Connecticut, 1947 that would influence Hugh Stubbins, Carl Koch, E.M. and H.K. Hunter, George

15. Francis Violich, "Mr. Mumford and the Job Ahead", Arts and Architecture, November 1945, p.31.
16. The Geller House, Lawrence, Long Island, New York, 1945 was the first house built using the "bi-nuclear plan" developed by Breuer in 1943 in his "H-House" Project, 1943, followed by Project "Bi-nuclear House III", 1945; and Beach House Project, Miami, Florida, 1945; see Marcel Breuer: New Buildings and Projects, p.218; Peter Blake, Marcel Breuer: Architect and Designer, pp.85 - 88; "Disporting in Florida Sunshine", Architectural Record, April 1946, pp.82 - 85.
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Nemeny, Donald Olsen and a host of other American designers and arm them with a stylistic repertoire and discipline of planning, breaking entirely from the local Cape Cod and Colonial tradition of the East Coast (18). Breuer had defined clearly in a small group of houses, a consistent and rational kit of parts, his "design furniture". One needed only to take the kit and reassemble it elsewhere.

Featured in *House and Garden*, January 1947, as "Tomorrow's House Today", the house for Mr. and Mrs. Bert Geller and their three sons was built of fieldstone and timber with cedar siding, complemented with highlights of primary reds, yellows and blues (19). Breuer's most dramatic innovation was the bi-nuclear plan. An entrance hallway connects a bedroom wing to the living-dining-kitchen block with a third detached wing as guesthouse. The breakup of the house into its component functional zones is one of the hallmarks of postwar domestic architecture's commitment to functionalism.

The theory here advanced is that the privacy and apartness that usual second storey location of bedroom areas automatically produces, is a desirable factor in a house plan. To achieve it in a one floor scheme, the designer deliberately separates the entire bedroom-playroom wing from the daytime living areas of the house, connecting these two major spaces by means of a passage way which since it falls in the centre between the two halves, logically also serves as the entrance hall. Hence the bi-nuclear plan..... (20).

In addition to praising the plan for its creation of privacy zones, Peter Blake cited the aesthetic basis for the bi-nuclear plan as part of Breuer's devotion to Constructivism and his furniture designs of 1922 where he had decided that elements with different functions (such as the supporting frame of a chair as opposed to its seat or back), should be expressed in different materials and elements clearly distinguished from each other in character (21). However, in many cases such an approach led to a scaleless quality, in this house and others, that is suggestive of furniture rather than house.

The wings of the house have elegantly detailed butterfly roofs, sloping inward and draining over the entry. External wing walls extend the end planes of the blocks into the

18. Harwell Hamilton Harris in "Regionalism and Nationalism", an address which he first gave to the North West Regional Council of the A.I.A. in Eugene, Oregon in 1954 described the capitulation of New England designers to the modernism of the Harvard School in terms of regionalism. A region may develop ideas. A region may accept ideas. Imaginations and intelligence are necessary for both. In California in the late twenties and thirties modern European ideas met a still developing regionalism. In New England, on the other hand, European modernism met a rigid and restrictive regionalism that first resisted and then surrendered. New England accepted European modernism whole because its own regionalism had been reduced to a collection of restrictions. (from H. H. Harris, "Regionalism and Rationalism", Raleigh, North Carolina, Student Publication, XIV, no.5.)


Appendix 4: Post War is Post Modern: The House in the United States 1945 - 1960

landscape in a non-centralized, "peripheral" or centrifugal relationship with the spaces within (22). The house spreads over the site, freed from the compact postwar box and is stretched. The house is earth hugging and space harnessing in the manner of Frank Lloyd Wright's Prairie houses and Richard Neutra's Kaufmann House, Palm Springs, 1946 and Nesbitt House, Los Angeles, 1942 that reach de Stijl-like into the landscape.

The house is without basement or attic or stairs. House and Garden stresses the playroom separating the master bedroom and children's bedrooms - neglecting to point out that the generosity of scale permitted such a division. In later, smaller versions of this house by other architects on contracted suburban sites, privacy and workability for the average family was compromised by scale.

In the next issue of House and Garden (23), the mechanical services of the Geller House feature on its cover. The "innards" of the home are then described in minute detail, accompanied by a warning that "materials and equipment together constitute the largest single expense in building costs for your home". The heating, telephone, electricity and hot water services are described in detail. The kitchen and bathroom are dissected for their materials and fixtures, stressing penultimate efficiency, economy, child-proofness and cleaning and labour-saving bonuses. The "style" of the house was ignored. The acceptability of the image was left to the reader's discretion.

A reduced version of the Geller House appeared as an ideal home for a middle income family in the garden of the Museum of Modern Art in New York in 1949 (24). Its butterfly roof and Mondrianesque vocabulary was highly influential and seen by thousands, assisting the spread of "modernist" taste. It was a compact version of Breuer's transportable and reproducible zoning and planning techniques; an artistic language imbued with an authority that relinquished any traditional notions of home. Materials were used in an abstract way that eschewed their traditional use. Vertical boards were now planes, windows were screens, rock walls were spatial lines extending into the landscape not a plinth or a garden wall.

The simplicity and directness of the Geller House, its non-complication of technique and repeatability could be said to have just as much merit as Wills' Five Star Cape Cod

22. Colin Rowe describes "peripheral composition" in his essay, "Neo-Classicism and Modern Architecture I" from The Mathematics of the Ideal Villa and Other Essays, pp.127 - 130, as the abolition of the centre, what Sigfried Giedion in Space, Time and Architecture, Cambridge, Mass., ed. 1941, pp.495 & 497 wrote of as "the ground floor lacks all tendency to contract inwards upon itself".


house. One's aesthetic disposition need only adjust to the butterfly roof that could have easily taken a gable; a mildly sculptural form or a traditional home. Though the Breuer stylistic repertoire was a new and exciting one, it was simply a question of taste in the immediate post-war years as designers tackled the same issues. For a "Modernist" house, one chose from the coterie of select Harvard graduates (assuming one could afford them), who could reproduce houses with inimitable flair.

The postwar Breuer houses were transformed by American architects into a virtual vocabulary of form and detail. The kit of parts aesthetic, however, limited the houses to bland formulae of sophisticated details. The houses became assemblages of designed fixtures and elements, independent of place.

Though *Progressive Architecture* would confidently state, "it is the method of solution, rather than the specific answer, that might well be imitated" (25), the East Coast modernists, for the most part, capitulated entirely to the new vocabulary with its overt expression of function. A disjuncture was created between the expectation that "in a house of this size one traditionally finds a certain massiveness and imposing quality" (26), and the openness and airiness of the expensive "Modernist" postwar house. A reaction to this break from traditional conceptions of home would occur in less than five years. Yet on the West Coast, such a disjuncture would not occur, where climate and lifestyle easily accommodated the "Modernist" vocabulary and the implications of the open plan and connection to the out of doors.

The Harvard School epitomized by the Breuer houses was a style not yet in the pattern books. It espoused no abstract theories of space and was closest to the codifying of a postwar modern style. Its blandness and repeatability was to remain unquestioned and unargued, pampered and assumed amidst its variations.

The house that would tip the scales away from the choice of "Modernist" taste, in particular aversions to the flat roof and the generous use of glass, was Mies van der Rohe's 1945 design for the Dr. Edith Farnsworth House, built finally in 1950. With this house, "Modernist" design was politicized and hounded. Resistance to the machined image was at its most inquisitorial and ignorant level. The

26. Ibid.
Appendix 4: Post War is Post Modern: The House in the United States 1945 - 1960

Farnsworth House would scandalize the popular press and simultaneously earn kudos from the professional press.

In February 1952, *House and Garden* published Dr. Edith Farnsworth's summer retreat at Fox River, Plano, Illinois as a house that "epitomizes the basic trends already influencing most new houses.... it is one of the most uncompromising modern houses in existence" (27).

Set in a grassy meadow, the house comprised two floating planes. The house sat within and upon the higher plane as a single room, 54 feet by 28 feet, entirely enclosed in glass, opening onto a partly cantilevered porch paved in travertine. Wide steps led down to the second hovering travertine slab. Within the house, a service core of utilities was held down from the roof to minimize the interruption of space between the two planes that defined floor and roof. White shantung silk curtains afforded exterior privacy. The only vertical supports were eight white exposed steel universal columns. The precise simplicity and abstraction resulted in a gracious icon for the minimal house/pavilion - a temple of architectural purity and spatial freedom. The "unobstructed clear span single storey unitary volume" is described by Kenneth Frampton as the "apotheosis of Mies's phrase beinahe nichts, almost nothing" (28). The single volume house sat 1.5m above the ground on exterior columns set 6.7m apart. The house was a balance between the symmetry of the Schinkelschuler tradition and Suprematist dislocation of symmetry. The house is elevated to the status of monument.

The architectural press lavished praise upon the Farnsworth House. *Architectural Forum* in October 1951 (29), covered the Farnsworth House in detail, describing the first house built by Mies since he had arrived in the United States in 1938, as having "no equal in perfection of workmanship, in precision of detail, in pure simplicity of concept", and discussed its conceptual basis of purification and reduction in glowing terms suggesting that ultimate freedom had been bestowed upon man by such architecture.

*Arts and Architecture* published beautiful photographs of the house but minimal accompanying text (30): One was to savour its precision and detail and the purity of Mies's oft-quoted "less is more" epithet. William Jordy in *Zodiac*, no.8 found this philosophy a springboard for the enrichment of architecture, which concealed the number of


29. "This is the first house built by Mies van der Rohe", *Architectural Forum*, October 1951, pp.156 - 161.

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aesthetic decisions which Mies' spare architecture called forth, what Jordy was to describe as "a paradoxical plenitude of an elemental demonstration" (31).

But in November 1951, Architectural Forum was to report that Dr. Farnsworth was suing Mies for "fraud and deceit" on the basis that he misled her into paying $33,872 more for her house than the $40,000, she alleged she had set as her top limit when the house began construction in April 1949 (32).

The problem with the Farnsworth House, however, was to go far beyond the traditional closeness of architect-client relationships. Despite the accolades from contemporary architectural critics, the popular home journal, House Beautiful, was to attack it vehemently. In April 1953, Elizabeth Gordon, the editor of House Beautiful began a series of articles aimed at attacking the concept of a "machine for living" and the formal elements of the International Style (33). Her target was the recently completed Farnsworth House designed by Mies van der Rohe.

Preceded by an article by Joseph Barry, "The Next America will be the Age of Great Architecture", which expounded the virtues of John Yeon's formalizing design for the Lawrence Shaw House, Portland, Oregon (34), Elizabeth Gordon's article, "The Threat to the Next America", sparked a vitriolic inquisition, suggesting that the forms and motives of the International Style and the polemics of Mies's "less is more" implied cultural dictatorship,"promoting unliveability, stripped down emptiness, lack of storage space and therefore lack of possessions" (35). In a campaign that George Howe was to label as "xenophobic and McCarthyesque" (36), Gordon succeeded in politicizing the domestic architecture of the so-called International Style, and pinpointing the houses of Mies van der Rohe and Le Corbusier as her two major victims. In the following issue of May 1953, Joseph Barry was to cite the Farnsworth House as a "fine example of bad modern architecture to which we (House Beautiful) are opposed" (37). Barry described the house as a "fishbowl or better, like an emptied aquarium on a steel stand", whose owner now feels "like a prowling animal, always on the alert", and in an emotional interview with the client, the economics, energy costs and inconvenience are harped upon as dictatorial commands from the architect at the

35. Gordon, loc. cit.
36. George Howe's reaction to Elizabeth Gordon's attack on the International Style is comprehensively described by Robert Stem in George Howe: Toward a Modern American Architecture, pp.184 - 190.
client's expense. Barry cites as alternative designers of "good" modern design, architects such as Gardner Dailey, Anshen and Allen, Allen Siple and Harwell Hamilton Harris. As another example of "bad" modern design, Barry implicated Richard Neutra's Kaufmann House, Palm Springs 1946, with the phrase,

... one other bad modern house sits on the hot desert outside of Palm Springs like a German professor in a tight blue serge suit and a high stiff collar...... (38).

Barry cited the problem as the fault of highly placed and highly vocal American intellectuals, those

morbidly fascinated by the austere design of the International Style..... They are in a sort of cold shower period of their flushed lives. They are delightedly playing "Commissars of Culture". They are leading people into the latest attack on reason and common sense, and into a mortifying mysticism. They are mortifying their flesh like medieval flagellants as if in penance for a guilty conscience. No-one seems to know why they should be doing such penance, but there they are - and they exhort similar penance from others. "Less is more!", they cry. "Give up all and follow us!" Their austerity far from improving the soul, impoverishes the spirit. They starve themselves in the midst of American plenty. They make life so hard for woman by scoffing at modern aids for her comfort, labour savers for her time, that one might conclude women are the object of their attack.

Such alarming rhetoric is followed by Barry's satire of the glass house moderns with his fable, "The Emperor's New Palace" (39), also in the same issue of House Beautiful, about a trickster architect who could turn empty space into empty form.

Gordon's campaign that houses such as Mies's Farnsworth House and Philip Johnson's Glass House at New Canaan, Connecticut could "lead to a cultural dictatorship, and eventually a totalitarian state, if its block house architecture and design for subsistence living were to prevail," evinced heated public response both for and against in both public and professional circles (40). House Beautiful was warmly congratulated by Frank Lloyd Wright, Lewis Mumford, Bruce Goff, Paul Laszlo and Talbot Hamlin (41); but rebuked by George Howe, Peter Blake and a team of thirty

38. Ibid., p.72.
41. Ibid., pp.28 - 29, 91-95.
Bay Area architects which included William W. Wurster, George Rockrise, Lawrence Halprin and Henry Hill (42). The controversy was followed up by House Beautiful's article by Lewis Mumford, "The House with an Interior", in June 1953, which traced the history of the American house emphasizing an interior of warmth, comfort, privacy and the benefits of the open plan, greater use of glazing that "good Modern design" had bequeathed to the new American house (43). Frank Lloyd Wright added to the fray with typically vitriolic comment in a piece entitled "Frank Lloyd Speaks Up" (44).

The *International Style is neither international nor a style. Essentially it is totalitarianism, an old totalitarianism cult made new by organized publicity...*

These statements are reformulated by Wright with almost crackpot enthusiasm in "For a Democratic Architecture", in response to the letter from the thirty Bay Area architects (45).

Gordon capped off this almost year long campaign with her article, "Does Design Have Social Significance?" decrying those architects practising in the International Style as being un-American,

...either we choose the architecture that will encourage the development of individualism or we choose the architecture and design of collectivism and totalitarian control. We believe that the International Style is the style of the latter; that whether some of the people who practice it, know it or not, it is the Procrustean bed of collectivism, conditioning people for total control.... (46).

She makes the comparison with Jackson Pollock's drip painting and this apparent hot bed of seditious politics, and with almost McCarthyist mania proceeds to enlarge and dramatize her case, again advocating the "democratic dream" - every man in his own home on his own land. It is not by chance then, that in November 1953, the 1954 Pacesetter House for *House Beautiful* (47) was a vast Wrightian design by the architect, Alfred Browning Parker, an idealized American family and their ideal home on Biscayne Bay, Florida.

The popular home journal made the firm distinction of what was to be considered modern. It was not a prescription of...
International Style forms, but rather an association with fine material, the garden, a functional plan, comfort and privacy. In an earlier article, Elizabeth Gordon had asked "Is Modern Architecture Mature?" and followed it with another Yeon house, the Victor Jorgenson House, Portland, Oregon; a typical popular choice for comfort, texture, privacy and the collection of consumerable items, together with the typically hazy description, "it has about it an aesthetic rightness and inevitability that characterizes all fully developed art forms" (48). House Beautiful's use of the "home-front" for the politicizing of domestic design is a rare case in the 1945 - 1960 period in the United States but indicative of the suspicion and resentment in popular circles of the power of the Museum of Modern Art as a broker of architectural taste. The heavy publicity of the "Modernist" houses was impressive. The moderate modern was approved with an emphasis on living, sympathy with site and materials. Abstract aesthetics were forbidden entry into the popular vein just as in the 1960s, Pop Art would debunk the ideas of museum art, so too would the ugly and ordinary of Robert Venturi. The difference was that no one would want to live in Pop Architecture.

The Farnsworth House was to be an influential domestic prototype for architects, but for the popular press and the public, an object of derision and one to be feared. As an isolated piece of polemicism, the Farnsworth House was an unqualified success.

The glass box implied a generalized view of human function: a space good for everything, in which little attempt was made to respond to individual incident or a sense of place. In the Farnsworth House of 1946, Mies van der Rohe indicated how a similar idea could be applied to the domestic pavilion, with a supremely anti-natural attitude: the obverse of Wright's landscape romanticism (49).

As an appealing prototype for the public, it was anathema to an American sensibility of comfort and security, resulting in the unfortunate case where an art piece was twisted ideologically to deleterious effect. The Farnsworth House described a way of living anti-pathetic to the American cult of consumerism and the collection of possessions. Middle American culture was not ready for such advanced and sophisticated concepts either of living or of space.

49. William C. Curtis, Modern Architecture since 1900, p.262.
In the 1950s there was one house that would bridge the taste gap, that would straddle the position between modernist and traditional. Politically, it would be accommodating and culturally embedded, rooted in the American psyche. That house was the Californian ranch house.

Strongly advocated by the popular home journals, the ranch house would cover America with versions that satisfied millionaires to speculative builders reproducing them by the thousand. The ranch house would be the bridge between the desire for modern comfort and psychological satisfaction of comfort, security and the old fashioned aspiration of gaining land in its most capitalistic and material sense.

The ranch home epitomized the agrarian ideal of the "farm" in the suburbs, the imagery forward looking enough to be considered modern and with an ability to embody sentiment, nostalgia, and an element of history, "of having been there". Unlike Colonial designs, the ranch house did not dictate an interior of historicizing detail. The design rules were open and accommodating. The ranch house was a universal type in all senses of the word; as a logical and functional typology and also, flexible enough to withstand the ravages of eclectic taste inflicted upon it and still retain its integrity as a ranch house type. It was to become the suburban vernacular of the United States, much to the chagrin of modernists and scholarly historians, obsessed with accuracy and the Classical tradition.

The popular periodicals idealized the concept of the ranch house after World War 2. Architects adept at designing such houses were Cliff May, Allen Siple, Clarence Mayhew, H. Roy Kelley, Clarence Tantau, and William W. Wurster whose Gregory farmhouse in Santa Cruz of 1927 had become a seminal prototype for the Bay Region of California in the 1930s and 1940s.

Originating on the West Coast, the ranch house offered informal living, open planning, traditional imagery of the home; the gable, the fireplace, and sentimental attachments that could be added at will; carriage lamps, red and white chequered curtains and the old wagon wheel sanded back and painted white. The image was adaptable from its purest form in the hands of Cliff May to its most banal and
meanest in the hands of William Levitt and the "ranchburgers" that he and others were to build all over America.

The ranch house would consume elements of the Modern, sliding glass doors, skylights and an increasingly open plan; the Hispanic tradition, stucco, arches, terracotta tiled roofs; infuse the Monterey Style, with shakes and shingles, shutters and white painted detail; and also from the Colonial, the multi-paned windows and mock stables that had become the garage. The colourful tastes of America could be exerted on the home without perverting its innate simplicity and response to modern family life.

The Californian ranch house had its origins in the 1820s Hispanic adobes of the West, and was revived in 1932 by Cliff May of San Diego (50). Before the Second World War, its plan had consisted of a single storey set of rooms, one opening onto another, strung around a U-shaped courtyard or patio, the rooms opening onto a "corredor", the cool deep verandas that were extensions of the flat or low slung gabled roofs that protected the adobe walls from the hot summer sun.

Ranch houses were handsomely sited in a gently rolling landscape, the long low lines bespeaking the generous use of ground in the sprawling floor plan, the wings stretching out but enclosing, the private and public spaces harmoniously defined. The houses continued to turn an almost blank side to the public view, while creating intimate spaces in courts (51).

After the war, Cliff May was to make two changes to these cool and gracious houses (52).

1. the introduction of more light through roof openings through the 1950s when the taste for lighter interiors had increased and exemplified in his own home of 1954 with its skylights on either side of the ridge beam (53).

2. with the growing acceptance of the open plan, the dark walled rooms of the original ranch house were opened up by May working with a post and beam system of construction in which the only bearing walls were the exterior ones.
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With these changes to the ranch house, the plan was opened up, diluting the purity of the spatial origins of the ranch but not dissuading its potential for elaboration via applied historical reference or decorative detail. May's changes encouraged the generalities of its form and its popularization by the American middle class as the popular American dwelling for suburban speculation.

The California ranch house was "propagandized" (54) across the United States by Cliff May and the popular Sunset magazine, with the 1946 volume of Sunset Western Ranch House (55) where flexibility and "ranch" living were emphasized. The book was a thorough examination of the history, a catalogue with photographs of the contemporary ranch house.

The form called a ranch house has many roots. They go deep into Western soil. Some feed directly on the Spanish period. Some draw upon the pioneer years. But the ranch house growth has never been limited to its roots. It has never known a set style. It was shaped by need for a special way of living - informal yet gracious (56).

It was not only Sunset magazine that energetically propounded the virtues of the ranch house. Other mainstream home journals were doing the same.

In April 1946, House Beautiful (57) featured the home of Cliff May in a special feature of "Nice People come from Nice Homes" where May's "only one acre but it's a whole kingdom" is idealized as the perfect home environment, a "family that really knows how to live". The magazine examined in detail May's 1937 home in Los Angeles, a vast sprawling courtyarded plan complete with flower garden, fruit trees and bridle trail nearby. Monticello, as ideal classic villa (albeit a thoroughly domesticated classic) is replaced by the ranch houses of Cliff May, self styled designer and self made man. The ranch house as "ideal" was now applicable to suburbia. The window and door openings were too big and the plan, more rambling than that of its original prototypes was now eminently suited to the needs of postwar family living. Its materials (brick, stucco, or board and batten, and hand split shakes) and low lines were the only allusions or reminders of past antecedents to the contemporary ranch house.


56. Ibid., p.ix.

57. Patricia Guinan, "Nice People Come from Nice Homes", House Beautiful, April 1946, p.73; Helen Weigel Brown, "Meet a Family That Really Knows How to Live", House Beautiful, April 1946, pp.74 - 102; see also "The Perfect House that wasn't good enough", House Beautiful, June 1951, pp.82 - 91.
In the January issue of the following year, *House Beautiful* impressed upon the reader the applicability of the ranch house to other climates with examples in Illinois and Connecticut, and emphasized the ranch house as "more a way of living than a style of architecture" (58). A Cliff May design was used for the 1948 Pacesetter House for *House Beautiful* and examined in the minutest detail (59). *House and Garden* in 1950, felt strongly enough to comment, "to us it is a way of life, part and parcel of the "new informality"" (60), a phenomenon to describe the open planning and open living of the early 1950s. In 1957, *House and Garden*’s Hallmark House No.1 was Cliff May’s sixth house built for himself in Sullivan’s Canyon, a vast 7000 square feet house (61). The post and beam structure opened up the house, releasing it from direct Hispanic origins. The ridge was now lit by a skylight, adobe walls were reduced to a minimum; the post and beam structure had transformed the ranch house into a spacious "modern" house dominated by the interior ridge beams and an expansive open plan, an elaborate and modernized version of the humbler forms of the original Spanish adobe. This extremely large house spread over the site with vast internal living spaces; the living room, for example, had an area of over 1600 square feet. The layout of the plan was an expanded version of earlier houses where the quantity of external wall area had been reduced and the openness of plan achieved by increased emphasis on post and beam construction rather than load bearing adobe walls.

The other extreme, the small reproducible ranch house could also be handled by Cliff May. In association with the architect, Chris Coate, May designed in 1952, a $7500 ranch house for tract housing. The first extensive tract of these low-priced houses was built near Cupertino, California, a small community several miles west of San Jose. The first group of 283 houses was built by the builders, Stern and Price, already notable for building the award-winning tract house by architect, Ward Thomas in the south Palo Alto area (62).

The simple low pitched gabled houses presented a carport to the street and a blank face of vertical redwood siding, the living areas retreating to the paved patio at the rear of the site. The post and beam construction, slab on ground, and dominant ridge beam and framing panels assembled in the Stern Price cutting yard were the basic components of these...
compact houses. The combination of simple ranch house allusions of rough timbers and a "crafted home", and perhaps more importantly the low down-payments available, made these houses an extremely attractive proposition ($500 down for a $7500 two bedroom house). Stern and Price sold a first group of three hundred of these houses in two weeks. On an average 55 x 105' lot, the small houses gained size with carport, courtyard fences and trellises, and included in the price, a landscape plan drawn up by Douglas Baylis.

Economy was gained as only one floor plan was used; a 36' 2" x 22' 4" rectangle which was the same for all 1500 houses. Other savings came from a simplified post and beam construction, an economical wall frame that used relatively little lumber and the absence of wall sheathing. Redwood boards and battens were nailed over a layer of building paper on the exterior of the 4" x 4" frame. The 2" wood fibre panels on the ceiling beams became both insulation and sheathing and the base for a built-up roof (63).

In the next year, May and Choate updated the 1952 version to produce very similar houses, except that instead of 26 standard panels, there were now only five and builders were able to cut construction time by 2/3. Another basic change was that all construction of both walls and ceilings were concealed by dry wall to cut costs and aesthetic pressure against the textural rusticity of the exposed timbers. In Chico, 85 miles north of Sacramento, O.E. Norlie in May 1953, was able to build May and Choate "ranch houses" at the rate of 1 1/2 houses a day (64).

The ranch house spread east. In 1954, Russell Lynes, in his book, *The Tastemakers* would comment on the spread of the "ranchburger" as,

>the standard new suburban dwelling in the suburbs of New York, as of Boston, of Chicago, as of Cincinatti or Seattle, or of course, Los Angeles. It varies in price from the least expensive (around $7000) to any amount a man can afford (65).

East Coast architects became adept at these larger forms of the ranch, designing regionalized versions of the transplanted farmhouse from the West. Examples such as the ranch house at North Manursing Island, Rye, New

York by architect, Philip Ives, has the familiar bedroom and garage wings enclosing a garden court, while at the head of the U-shaped court, generous open dining and living rooms overlook Long Island Sound. Roof shingles have been replaced by slate. Walls are field stone, instead of board and batten or adobe. The house is a modest collection of gable roofed single room width wings (66).

The winner of the 1954 Boston Art Festival Award was an East Coast regionalized ranch house. Smugly published by Elizabeth Gordon in House Beautiful, as a regional counter to the Farnsworth debacle of the year before, the J. Gordon Gibbs House was designed by George W.W. Brewster. Joseph Barry described it as symbolizing,

the end of the too-long battle between so-called conventional and so-called modern architecture by recognizing that emotional needs are deeply rooted in the past while living needs are immediately of the present. Only a good house, one which cheerfully shrugs off the label of "conventional" or the tag of "modern", it seems to say, can hope to satisfy all human needs - functional, emotional and aesthetic (67).

The ranch house had been thoroughly Easternized. Its eaves were cropped, the gable steepened with dormers and barn-like imagery for the garage. Wings typically formed courts. Generous glazing and cathedral ceilings gave openness, light and space. It was a mild mannered, low key domestic modern with discreet anti-urban allusions to the rural past; the ideological ideal of material comfort embodied in a rural image and set upon its own piece of land, had been satisfied.

Barry stressed the "fit" of this house to the region, and quotes architect, Robert Woods Kennedy's 1948 comments on regionalism,

Perhaps the most important of New England's qualities is smallness of scale. The region and its architecture are both diminutive.... The typical New England landscape is apt to be tinged with an obscure nostalgic quality. It is sad, ingrowing and old. It requires simplicity. It looks with a sour eye at ostentation. In this Lilliputian landscape, small scaled structures are mandatory. Given this scale by nature itself, the region's architecture responds with a marked

plainness. This smooth delicate quality is part and parcel of the inside as well as the exterior (68).

The question of regionalism raises its head again and the question of modernity and its reconciliation with the concept of place exists in the 1950s. Typically the resolution is a return to the rural image for simplicity but a position that perpetuates a non-urban landscape for the suburb. The resolution of the rural and the urban in the suburb is not tackled. Though the Gibbs House is perhaps not so sophisticated, it represents "how slim the line and unguarded the borders were in the late forties between the work of various regionalists and the sentimental eclecticism of the "early American" revivals" (69). What is seen is the perpetuation of the ideology of the single family house reconciling the idea of place and dwelling but not coming to terms with the public domain of community and the idea of city, increasing the disjuncture between city and suburb - without question. "Modernist", "Traditional", "Ranch Style", it all came down to a matter of taste for the client. The architect did not disagree. The political and economic power of the subdivision was stronger than any architect's doubt of something so assured as the American dream of the single family home.


69. Stern, op. cit., p.190.
The Idea of the Ideal: Palladio, Post and Beam, and the American Desire for Authority in Grammar and Syntax.

In the early 1950s America enjoyed a renewed prosperity. As housing and materials shortages eased, the issues of the minimal house of the late 1940s: compaction of plan, production and economy receded from view. The American architect reassumed the conservative but traditional role as the designer of large and expensive suburban homes.

Release from the pressures of pragmatic functionalism and economy (by no means total) meant a new freedom. Architects also felt the need to push beyond the stylistic rules of the Harvard School exemplified by the houses of Marcel Breuer and the individualistic expression and excesses of Frank Lloyd Wright or Bruce Goff. The site and landscape advantages of the Bay Region of San Francisco also were not available to all designers. A search for order began, as if to discipline and justify the new found freedom of functional design. It developed almost wholly from the structural reason of post and beam construction and the associated aesthetic of Mies van der Rohe.

Highly influential was the exhibition of the work of Mies van der Rohe at the Museum of Modern Art, New York in 1947 with the accompanying monograph written by Philip Johnson (1) and the much published Dr. Edith Farnsworth House which was finally completed in 1950. His elegant reductive grammar and growing neo-classicism was seized upon by U.S. architects as an attractive basis for the codifying of a style, deemed pure and perfectly refined, and above all, proper. It was not, as Colin Rowe (2) points out, the sophisticated concepts of the stress created between the outward pull of "peripheric" space and the centre seeking symmetry that Mies was able to achieve at Crown Hall, I.I.T., 1956 that American architects were attempting to emulate. Rather there are two reasons; one, a desired breach with the unified space concept formulated by Mies in search of centralization; and two, function was submitted to arbitration, a sense of propriety was sought.

They have reserved judgement on function, if not on structure and materials; and while they are, conceivably, aware of an aesthetic which originated in particular places at a certain time, they are indisposed to attribute to it inordinate significance. Rather the reverse. Disposed to

1. Philip Johnson, Mies van der Rohe, Museum of Modern Art, New York, 1947. Johnson's monograph for this retrospective exhibition was for many years, the most complete and important documentation of Mies's work. David Spaeth, Mies van der Rohe, Rizzoli, New York, 1985 pp.119 - 120 comprehensively covers the reaction to this exhibition. Peter Blake's 1947 reaction is typical, ...Mies appeals to an almost rarefied type of intellect... there is something quite terrifying in (his) work, a clarity and decisiveness of vision that brushes aside everything that is not brutally honest, and ends up with a monumental simplicity.


2. Colin Rowe discusses the concept of "peripheric" space in his essay, "Neo-classicism and Modern Architecture 1", The Mathematics of the Ideal Villa and Other Essays, pp.126 - 130.
keep this aesthetic at some distance, they do so at the level of taste by re-emphasising a form of concentric composition, and at the level of ideas by attempting to assert a universal principle - one to which both the less instructed and the members of a real or supposed elite may alike give assent. Thus, they have assumed the existence of an idea applicable at all times; and in doing so, they imply an intention to subordinate the imperatives of the epoch to an architectural equivalent of the rule of law (3).

The tempting spectre of classicism and formalism re-emerged in academic circles of the East Coast, particularly at Yale under the influence of the young Vincent Scully. The ghost of the Colonial and Classical past was never far beneath the surface. Instead of the syntactical rules of classicism, the structural graces and technicalities of post and beam construction became the springboard for a new eclecticism, a new search for production and a neo-classicism, formalizing and exoticizing the outdoor court of the post-war years. The "outdoor room" would become an "atrium" or entry forecourt, the structural system becoming a potentially decorative modulator of space and proportion, implying the closure of space.

The search for a discipline and order took effect in the design of the house in three ways:

1. the New Palladianism or the New Formalism
2. the perfection and elaboration of the Post and Beam
3. Japan and exoticism

By 1960, these three tendencies would have drained dry a functionalism that had encouraged development but rejected formal codification via disciplined rules. Matched by articles appearing in the popular home journals citing a new conservatism in house design (4), was the dismissal of the socializing intent of the freedom of the open plan (as well as its impracticalities in terms of composed family living) and the "new casual living" (5). The open plan was repudiated, increasing emphasis was placed on privacy (6), the closure of space, and the acquisition of exotica into the home.

The New Palladianism and the New Formalism
The regularity of the post and beam leads inevitably to the module and repetition. The idea of the module was not new, nor was it a new idea in terms of formality and symbolism. However, after 1945, there existed the
problem of a monumental civic architecture for post-war America. The Architectural Review's symposium of 1948, "In Search of a New Monumentality" (7), the 1944 symposium, "New Architecture and City Planning" (8), coupled with Minoru Yamasaki's pleas for pleasure in architecture (9) suggest the uneasiness with which modern architecture could cope with the growing need for civic and monumental expression. The obvious result of such a reassessment was the rash of neo-Palladian cum-neo-classical U.S. embassies and consulates built in the late 1950s throughout the world. Most notable among these was Edward Durrell Stone's U.S. Embassy in New Delhi, India, 1954 and the Architectural Collaborative's U.S. Embassy in Athens, 1956 (10).

The formalism of such designs would, however, find its first expression in the early Connecticut houses of Philip Johnson. An ardent admirer of the German emigre architect, Mies van der Rohe, Johnson was familiar with Mies's first residential design in the U.S., the Resor House, Jackson Hole, Wyoming. The unbuilt project of 1938 was a symmetrical block placed over a stream, clad in vertical timbers, visually suggesting two pavilion ends but spatially a frame for the spectacular landscape to push through, dramatically demonstrated by his collage of the view from the living room. Though Johnson would have appreciated the reductive planes and spatial dematerialization of Mies; in his own house, he chose to ignore those abstract principles and apply notions of grammar, syntax, and reference.

Johnson's approach to design in his early houses is one at odds with that of Mies. His approach is typically American; non-ideological, eclectic and pictorial. Authority is achieved through quotation and simple sets of architectural rules, a Miesian vocabulary that is mastered and subsequently mannered.

For his own house at New Canaan, Connecticut, 1949, Johnson cites a vast array of sources that range from the site planning of Le Corbusier, Mies at I.I.T., the romantic classicism of Schinkel and the perspectival approach to the Parthenon as sources to his layout of the glass box, the brick guest house, the car court and garden sculpture (11). The form comes from Ledoux, the guest house has a "Baroque central corridor" and three symmetrically placed rooms and derives from early Mies designs. It is 1950 and

7. "In Search of a New Monumentality", The Architectural Review, September 1948, pp.117 - 128; this was a symposium organized by The Architectural Review, who invited a number of leading critics and architects of several nations (Gregor Paulsson, Henry-Russell Hitchcock, William Holford, Sigfried Giedion, Walter Gropius, Lucio Costa and Alfred Roth) to give their views on the basic meaning of the term monumentality in architecture, on the desirability of monumental qualities in contemporary architecture and on the means of achieving them. There was a general agreement as to its desirability with a minority view that it was not wholly compatible with democratic ideals (in particular, the view of Gregor Paulsson).

8. The 1944 symposium, "New Architecture and City Planning" was organized by Paul Zucker. One of its themes was "The Problem of a New Monumentality", and contributors to this issue included Sigfried Giedion, George Nelson, Louis I. Kahn, Philip L. Goodwin, Ernest Fieue; see Paul Zucker (ed.), New Architecture and City Planning, New York, 1945, pp.549 - 602.


Johnson is frankly explicit about his eclecticism and desire for visual and pictorial elaboration.

Many details of the house are adapted from Mies's work especially the corner treatment and the relation of the column to the window frames. The use of standard steel sections to make a strong and at the same time decorative finish to the facade design is typical of Mies's Chicago work. Perhaps if there is ever to be "decoration" in our architecture, it may come from manipulation of stock structural elements such as this (may not Mannerism be next?) (12).

Such freedom to interpret history in a contemporary form was assisted by Colin Rowe's article, "The Mathematics of the Ideal Villa", published in The Architectural Review, March 1947 (13), where the villas of Palladio and their principles of composition are favourably compared to those of Le Corbusier. An authority for compositional rule is cited; the Americans take their cue.

Architectural Forum is less witty and more concise in comparing the philosophic differences between Johnson's house and Mies van der Rohe's Farnsworth House of 1950,

Johnson's house is symmetrically balanced, almost like a Roman pavilion; it is framed by heavy corner columns; it rests on the ground and is firmly anchored down by its massive brick cylinder; its steel is painted dark gray to blend in tone with the surrounding treetrunks.... Johnson's structure is quite classical, quite traditional with post and lintel construction and high (10' 6") ceilings.... (14)

whereas in the Farnsworth House,

Mies's house is asymmetrical, dynamically balanced; it is a floating cage almost completely divorced from the ground.... its steel is painted white... Mies's structure is startlingly modern, cantilevered at two ends, seemingly held up by some new structural magic, between magnetized steel pylons. Johnson, Ohio born, produced something strangely reminiscent of the Old World; Mies born in the Old World, came up with a sleek, low slung (ceiling height 9' 2") very American product...

12. Ibid., p.155.
14. "This is the first house built by Mies van der Rohe", Architectural Forum, October 1951, pp.159 - 160.
The two philosophies were completely different. In Johnson's design the vertical anchor of the hearth never leaves the American house as it does with Mies (15). Johnson continued to cultivate his eclectic formalism in following houses such as the Hodgson House, New Canaan, Connecticut, 1951; the Oneto House, Irvington, New York, 1951 and the Wiley House, New Canaan, Connecticut, 1953. He reinstates stylistic repertoire, mannerism, and syntactical elegance in houses for the wealthy. The house became a temple, asymmetrically set in a luscious green New England landscape, as if a Schinkelesque folly of Romantic Classicism. Allusion and formality superseded Miesian spatial concepts, but applied was Miesian detail as the new syntax of post-war classicism.

In an article in *House and Garden*, March 1957, entitled "We are fashioning a new formality", arch commentator on etiquette, Russell Lynes (16), records a popular swing to conservatism away from the "age of informality": In addition to descriptions of the softly formal houses by George Brewster (Richard A. Buck House, Manchester, Mass.) and Mott B. Schmidt (Ralph C. Price House, Greensboro, N.Carolina) is the Richard S. Davis House at Wayzata, Minnesota by Philip Johnson. This formalised court house with its Pompeian air was used by Lynes as an example of a return to manners, privacy and the "formality of democratic self respect".

In 1955, John Johansen was to make explicit the tendency amongst architects to follow the compositional rules of symmetry, order and axiality in an article entitled "Space-Time Palladian" (17). He observed that a "reconciliation between the revolutionary youths and their Beaux Arts elders is apparent" and cited Palladio as an inspiration for domestic design. The house would become the romantic Monticello once again for those who could afford the gracious determinism of the classical parti.

Once again the authority of Mies and Le Corbusier were cited as examples for the straining of a set of understandable rules that were predicated on classical notions of order and symmetry, the application of syntactical rules, and the desire for a known method to design.

15. The vertical anchoring of the hearth, in many ways, indebted to the compositional techniques of Frank Lloyd Wright is also noted by David Joselit in his comparison of the Walter Gropius House, Lincoln, Massachusetts, 1939 (Gropius and Breuer) and the Walter Bogner House, Lincoln, Massachusetts, 1939 (Walter Bogner) in "The Postwar House", *Arts and Architecture*, vol.3, 1984, pp.36 - 37.

16. Lynes, loc. cit.

Appendix 4: The Idea of the Ideal: Palladio, Post and Beam, and the American Desire for Authority in Grammar and Syntax

Johansen cites Rudolph Wittkower's *Architectural Principles in the Age of Humanism* (18) published just six years before in 1949 and then proceeds to analyse houses by Mies van der Rohe, Le Corbusier, Philip Johnson, and Paul Rudolph in terms of a selective Palladian search for a grammar to design.

As a result, Miesian detail becomes potentially transferable into timber, steel or brick and an authorized language of parts. Colin Rowe describes succinctly the New Palladianism of the house.

*Most generally the contemporary neo-Palladian building presents itself as a small house equipped with Miesian elevations and details. Conceptionally a pavilion and usually a single volume, it aspires to a rigorous symmetry of exterior and (where possible) interior.... It may be noticed that buildings such as these are a distinctly American phenomenon - or at least they are scarcely for the moment to be found outside the United States. It may also be suggested that their resemblance to any alleged prototype along the Brenta is slight, that obviously their architects have eschewed any overt historical reminiscence; but that, being inspired by certain activities of Mies van der Rohe, they have presumed the symmetrical disposition of a building to be adequate for most purposes and that, in doing so, have arrived at some rough approximation of the characteristic Palladian parti* (19).

Numerous neo-Palladian houses appeared throughout the United States. Following Johansen's piece in *Architectural Record*, is his design for the Goodyear House, Fairfield County, Connecticut, 1955 (20) - a Palladian parti of functionally zoned wings. On the West Coast, Craig Ellwood's Smith House Crestwood Hills, West Los Angeles, 1955 and Hunt House, Malibu, 1955 also employ the classic parti combined with a sleek Miesian syntax (21).


18. Rudolph Wittkower, *Architectural Principles in the Age of Humanism*, Warburg Institute, University of London, London, 1949. This book was extremely influential, not only engaging the interest of Americans in the methodology and aims of Palladio but also coinciding with the interests of the exponents of the British “New Brutalism”.

19. Rowe, op. cit., p.120.


all variations on a classically organized parti with a modern vocabulary inspired either by Mies van der Rohe or the rigours of inventive structure as in the Franzen House.

The tendency to centralized plans and the increasing emphasis on privacy, combined with a new formality often created the private courtyard house. The Palladian house of the 1950s could become Roman. As the parti developed so too did eclectic aspirations toward more spatially complex compositions. The courtyard had drawn great currency as an elegant interior space and oasis of privacy. In an attempt to suggest an urban form for the free standing modern house, Ian McHarg in *Architectural Record*, September 1957 volunteered the concept of the court house as a possible solution.

Without the introduction of such a new townhouse, the recentralization, which is the essence of a city's survival, cannot occur. Only by the provision of an urban residential environment at least equal in salubrity to that of the suburbs will the civilized polite, urbane as persons and families return to the city to ensure its survival (23).

The courthouse was essentially introverted, turning its back to the street to face upon a private internal court or courts. The various forms it took were,

the rectangular house with single walled court, the square house with a single internal space, the "L" house with one court, "H" and "T" plans with two courts, the "Y" plan with three courts, the cruciform house with four courts and finally the possibilities of asymmetrical plans with numerous courts.

Though few urban examples were built, numerous courtyard houses were built as detached single family houses. Eliot Noyes's own house at New Canaan, Connecticut, 1956 is a typical example where the zoning of the house, rubble rock screen walls and formal entry via the courtyard result in a quiet graceful country villa (24). The epitome of the court house and the New Palladianism is the Rosen House, West Los Angeles, 1961 by Craig Ellwood where the Miesian elegance is at its purest, the centre of the plan is a marble paved pool court, and as if in Vicenza, the sun washes the house and the ideal villa sits in its landscape of Paradise (25).

23. Ian McHarg, "The Court House Concept", *Architectural Record*, September 1957, pp.193 - 200. In this article, McHarg cites the sources of the postwar court house concept as follows, 
The prime source stems from Mies van der Rohe, and includes L. Hilberseimer and Philip Johnson; the second group, a logical extension of its Mediterranean origins is located in Italy and, starting from the studies of Pagano, Diotallevi and Marescotti, reached fruition in the housing at Tuscolano, Rome by Adalberto Libera. The third group, also deriving from the Mediterranean is identified with Jose Luis Sert, his partner Wiener and their collaborators in many projects for Latin American cities. The fourth group is a direct extension of the Moslem tradition in North Africa directed today by French architects. Each of these studies originated before or during the war.


The single family house was no longer the experiment in living that it had been in the 1940s. The growing social crisis of suburbia had been put aside. The parti had returned. Symptomatic of this formalistic approach, was the American transformation of the fundamental notion of functionalism. The means of production had been mastered. The ideological circumstances of Europe had been subsumed and both critics and architects were left to assess and concoct the formal principles and methods of the modern movement. In a penetrating article, Sheryl Kolasinski (26) exposes the tendency of American critics and historians, to point up this formalism and encourage it. Vincent Scully, Sibyl Moholy Nagy and William Jordy concur in various articles between 1953 and 1965 on the pictorialism of postwar American designers, their "graphic sensibility" (27), "the specifically American preference for visual rather than rational values" (28) where "the appearance of technological building materials and mechanical equipment in America became immediately ornamental "(29).

Likewise in the design of the house itself, this pictorial approach made itself felt by a classicizing tendency expressed both by Jordy (30) and Scully (31), that as Jordy notes, perhaps finds its most original expression in the works of Louis Kahn whose formalizing tendency, Jordy cautions is perhaps more realistically in its youthful stage. He quotes Kahn as saying,

*Here the modern movement is only thirty years old, and we are already polishing and perfecting it. We should be in the archaic phase. Our buildings should reflect this crudeness in search for a rationalized version of Le Corbusier's highly personal plasticity* (32).

It is Kahn's houses that seek to go beyond the potentially glib formalism of neo-classical temples or neo-Palladian villas and include the idea of monument, honorific form, and return to the home an urbanistic sensibility, instilling within it an order of things that his public buildings were also able to do. The Yale University Art Gallery was perhaps the first public building to do so, while it is Philip Johnson's own house that raises the issue of the pictorial, the question of the monument, and the clarification of the pictorial into a tradition attune with American notions of eclecticism, order, grammar and syntax.
To observe Louis Kahn's houses between 1945 and 1960 is to follow the changing trends in structure, space and compositional tendencies that become increasingly referential and formalistic, centralizing and space enclosing. These houses hold the key to much of the American theoretical developments of the 1960s. Kahn's houses creatively alter the prevailing International Style.

After the abstract perfection of Mies van der Rohe's Farnsworth House, Kahn felt the need to re-establish a line of architectural action based on spatial divergence and opposition. While continuing to exercise tight control over the phenomenon of spatial distribution, and without violating his own feeling for the strictest classicism, Kahn nevertheless managed to exploit the tension of opposing spaces rather than the usual hierarchical method of achieving spatial unity (33).

The Morton Weiss House, Norristown, Pennsylvania, 1948 - 49 is a bi-nuclear planned house (34) that owes much to Marcel Breuer's houses of the same period. Where it differs, is the massivity and archaic nature of the almost Richardsonian stone walls, the exposed natural timbers and the strength of the expressed plank and beam structure of the south facing window wall with its double row of huge double hung windows with glass in one sash and plywood in the other. Corners are strongly defined. Character is given to every stone and board. The panels slide up and down as desired, to alter light and glare. Kahn's house suggests mass and closure of space rather than the lightweight sculptural prisms and Constructivist separation of functional components of Marcel Breuer. The Weiss House is archaic. It resembles the primitive rural references used by Le Corbusier in his Maison aux Mathes, 1935. In the plan one senses the beginnings of Kahn's notions of served and servant spaces. In the house, unlike the public buildings, the servant spaces, the kitchen and bathroom, become interior fixed insulators as opposed to the freedom of the exterior served spaces that surround them.

The Samuel Genel House, Lower Merion Township, Pennsylvania, 1949 is also a bi-nuclear plan but compacted and incised into the earth with massive rubble rock walls. The house is of the landscape.

In 1950 - 51, Kahn was Resident-Architect at the American Academy in Rome. This experience of the great

constructional and volumetric feats of the ancient Romans, plus the prevailing interest at Yale in the "integrimly jointed wooden structure" encouraged by Eugene Nalle (35), crystallized his own appreciation of the contemporary works of Le Corbusier, Kahn being able to visit his Unité in Marseille (then under construction) and also being aware of the first published drawings of Maison Jaoul in 1952. Kahn's design methodology was to develop in an entirely new direction.

In 1954, the Weber de Vore House, Springfield Township, Pennsylvania was designed as a cluster of six 26 foot square areas grouped along a retaining wall. This unbuilt scheme germinated the concept of an insistence upon structural definition of single or separate volumes of space rather than the spatially fluid, fundamentally non-structural type of International Style planning of earlier projects.

Kahn had started afresh. It is the clarity of the module and its structure and the closure of space which dominates. Spaces between the six 18 inch square brick piers are enclosed by brick cavity walls and glass. These bricks are laid in a non-supporting manner to distinguish them from the brick supporting piers.

In the same year, the Francis Adler House, Philadelphia is likewise a cluster of five 26 feet square areas. Square stone piers, 3 feet 6 inches, in the four corners of each square area are gathered to form space for closets, bathrooms, the fireplaces, vertical shafts for ducts and a well for a stairway. To satisfy the "order" of space, the design purposely created the piers heavier than necessary for support. Each square was a whole structure. Criss-cross timber roofs rested on the inner edge of the piers and each roof area was supported independently, drained independently and seen as an entity from the ground and from above. Each space was then considered as possessing an order of its own, and part therefore of a larger order of things. The number of squares was circumstantial, applicable to the particular family requirements. The form "characterizes a harmony of spaces good for a certain activity of man" (36). Kahn was to say of the Adler and De Vore Houses, "Each house is a cluster of square areas, 26 feet on a side. They grow out of the same order. They are different" (37).

In these two projects, Kahn is not limited by the grid but uses the freedom of the individual module, sliding it to fit the complex functional adjacencies required in the home, quite unlike the determinism of Philip Johnson's gridded plan in the Boissonas House, New Canaan, Connecticut, 1956 where spaces are dictated by the grid. This house by Johnson drew much from Kahn with its vocabulary of brick and fascia, and the spatial delineator of the grid (38).

The Lawrence Morris House project, Mt. Kisco, New York, 1958, was designed on a series of 1'-4'-1'-4' modules. The 1' module is used for either a post or beam opening and the 4' module used for a wall or an opening. This house with its clusters of repeated vertical panels and piers, consisted of an asymmetrical grouping of formalized spaces, that in its repetition became oddly scaleless and resembling the Richards Medical Research Building at the University of Pennsylvania, Philadelphia, 1957-61. The ambiguous scale and massive compartmented space is typical of the interest of the time in the brick and concrete work of Le Corbusier's Maison Jaoul, Neuilly, 1956 which had extended into works such as Paul Rudolph's Married Student Housing at Yale, 1960 - 61, and his Milam House, Jacksonville, Florida, 1960 - 62, Stirling and Gowan's Ham Common Housing, London, 1958 and the Schreiber House, Hampstead, London, 1963.

In the Fleischer House, formalism would combine with structure to become Kahn's first monument/house though it would remain an unbuilt project. The Fleisher House, Elkins Park, Pennsylvania, 1959 has a perfectly symmetrical plan, ruled by the dominating space-structural units bearing masonry walls with pre-cast arched caps over. A cross shaped central hall and stairway is closed into a square by four servant space units which open outwards to their respective served spaces. The house with its arched highlights becomes a villa, a temple, the theme of insulators in the house taken up by the servant spaces, alludes to the Mediterranean, Le Corbusier's vaulted projects of the 1950s and the slotted windows of Roman Ostia (39). The unbuilt Fleischer House has done away with the lightweight structural themes of the 1950s and the feathering of the house into the landscape. Permanence and mass are emphasized. The spaces are enclosed. The house has become a unified whole in the classic tradition.

38. Philip Johnson is to claim the influence of K. F. Schinkel's domestic work in Potsdam, especially the Hofgartenrei, as a major influence on the design of the Boissonas House; see Henry Russell Hitchcock, "Introduction", Philip Johnson: Architecture 1949 - 1965, p.11. Vincent Scully notes that although the Adler and De Vore Houses by Kahn were not constructed, Philip Johnson was reminded by them of Schinkel and freely adapted their scheme for his Boissonas House, New Canaan, Connecticut, 1956; see Scully, op. cit., p.23.

It is Kahn's unbuilt Morton Goldenberg House, Rydal, Pennsylvania, 1959 which however is the richest domestic commission of the 1950s resolving the American desire for permanence and symbolic association with the home and the inherent classicizing tendency of this period. Servant spaces such as bathrooms and closets are grouped around a purely square courtyard. Spaces at the periphery develop freely but are bound back to the "order" of the square by framing diagonals.

The complex intersections in plan and massing are thus not picturesque but wholly expressive of two systems of formulation: the will to be general and the will to be specific; to be ideal and material (40).

Once again, servant spaces are skylit and become insulators. The central court becomes the honorific formal space with the fireplace given honoured position. In this house, Kahn has achieved peripheric freedom and symbolic rootedness in terms of the traditional imagery of the home. Kahn uses symmetry and scale to gain mass and formality. The large keyhole window distorts scale, the front door is deeply set on the free-flowing perimeter.

The Esherick House of the following year, 1959 - 1961, at Chestnut Hill, Philadelphia (41) compacts completely the bi-nuclear plan into a conventional cubic mass. The dividing split of the circulation stair and entry explores volume creating a double height living room lit by the scale bending keyhole windows. Allusions to Le Corbusier are more specific with stuccoed walls and panelled shutter openings. The garden facade becomes a deeply recessed screen, wide windows with slots below give to the street, formality and monumental scale.

Kahn's houses have transformed the house back into the public realm with questions of frontality, the street and symbols of home; the fireplace, the front door, and the procession of entry. His houses infuse the house of the 1950s with a richness of structure and order, and a freedom that is new, while returning to the house notions of dwelling and spatial closure. The open plan has been resolved, private and public domains of the house have re-emerged and a sense of time has been offered to these houses. It is with Kahn's houses that the search for order and grammar has transcended pure notions of style, he has created a basis for development in the house that reaches


beyond the bounds of the house to the city. Kahn's first comments on such ideas are found in "Monumentality" from Paul Zucker's *New Architecture and City Planning* (42). In an interview with Beverly Russell in *House and Garden*, October 1972 (43), Kahn was to say, "The Colonial House is the eternal plan", emphasizing the "society of rooms", commenting on the typical ground floor plan where rooms are paired on either side of a central hall. Kahn's notion of the house is not the individual creation for the individual owner, rather "the house that is made with the feeling that Home is as possible to many as it is to you has the power to become a treasury". Kahn emphasizes the importance of the fireplace, "the presence of man and therefore is of home" and the street, "streets must be given back to the residences as their community rooms...they are meeting places in the full meaning of the city" (44).

The Perfection and Elaboration of the Post and Beam.
Structure was to fascinate American architects in the 1950s. The ordering system of the post and beam, either in timber or steel, assisted by the clarity of Mies van der Rohe's Semperian minimalism was to be the centre of attention in small scale commissions. As a rational planning and structural device offering long spans and hence a free plan beneath; modules for repetition, and making use of the abundant timber supplies of the U.S., the post and beam was de-rigueur for the American architect. The Cartesian grid of reference, the order of mathematical authority gave an easy and unquestioned starting point. The ability to insert lightweight non-structural panels between meant the use of new materials, thinner walls and this was seen as a potential paring down of the building process in an effort to speed up production. Consequently the order of the module was rigorously investigated rather than the abstract spatial notions of "dematerialization" of Mies van der Rohe. American architects emphasized the module, the modulated space and its closure.

One of the more talented postwar exponents of the post and beam was Gordon Drake, whose tragically brief career produced several elegant houses in California (45). In 1946, *Progressive Architecture* awarded Drake their first annual award for his own tiny house in Los Angeles (46). A prototype for a minimum house, built for $8 a square foot, the house was framed with 4" square posts set 6' on
centre with redwood plywood on the exterior and horizontal shiplap on the interior walls. The rectangular shell was a compact three bedroom house nestling into a wooded California hillside. The living room 12' x 8' was separated from the living area by a fabric curtain. A gallery ran along one whole side of the low skillioned box adjacent to a brick paved terrace. A miniaturized version of a Usonian house, a row of french doors opening along the length of the gallery gave the impression of great space. A low run of clerestory lights showed to the street. The low pitched skillion hovered above the toplights. Exposed roof rafters extended beyond the low flat eaves to form a structural trellis. Screens and opaque glazing offered a vaguely Oriental feel to this tiny house.

In 1947, Drake designed and built the Spillman House and Presley Houses in Los Angeles. Built on a difficult sloping site, the 4" square post and beam construction of the Spillman House (47), enabled an elevated living sleeping rectangle, with kitchen and bathroom to the rear. To brace the 4" timber posts, plywood sheathing was inserted between to act as a structural skin. Posts not so braced had 2" x 4" stiffeners attached to them. Pergolas, decks, balconies and terraces emphasised and extended the calm order of the structural module.

The David Presley House (48), designed to a 4' module used 4' x 8' stressed skin plywood panels for its walls to simplify construction and installation. Drake's words to describe his idea typifying the prevailing mood of the period amongst architects with respect to houses was

_I am seeking a unit that can be broken down into a small number of basic parts; that can be erected by unskilled labour and expanded with additional units as the needs of the family grow; that can be adapted to many variations of site planning and above all be excellent in design_ (49).

The Tom Damman House, Los Angeles, 1948; a vacation house in Carmel, 1949; the "Unit House", San Francisco, 1952 (designed with Douglas Baylis); Drake's studio-office, and designs for _Sunset _magazine and _Better Homes and Gardens_, develop these themes of modular construction, post and beam, the progressive enclosure of space, and the Japanese concern for elegance in the repetition of natural textures and unit sizes of timber. A vocabulary of exposed timbers, banks of french doors, and

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48. Douglas Baylis and Joan Parry, _California Houses of Gordon Drake_, p.36.

49. Ibid., p.69; Drake's ideas on light and the house were: natural light: use clerestories, glazed gable ends, translucent screens and large walls of plate glass; with artificial light: recessed into the structural frame and shielded with obscure glass panels or run deep in wooden troughs that help to accentuate the directions of a space or to illuminate structural patterns.
structural pergolas give these houses a relaxed informal air where the subtlety of the module is enhanced by the invitation to the garden, the edges of the house are feathered into the landscape.

The vacation house in Carmel on a sloping site, exemplifies Drake’s leading the eye on a processional passage in much the same manner as Wright’s in Fallingwater where one is led around the base of the house, essentially a blank walled and chimneyed edge, to enter the living room which is a tray of space giving onto the tray of the roof deck. Internally shoji-like panels slide to divide the space. The Japanese concern for repetition of natural textures is used to great effect. The sense of enclosure decreases, the further one travels into the house.

The completion of a Malibu house designed by Drake in 1947 epitomized Drake’s four basic tenets of modern design; outdoor continuity, modular construction, architecturally used light and a Japanese air of restraint.

The Malibu House was a rhythmic collection of panels, windows and screens. Walls, cabinets, supporting posts and beams repeated the module design in the horizontal dimension. The outdoor terraces were as much an integral part of the indoors where structural pergola beams "roofed" terraces and again feathered the edge of the house. Grey greens, sand and brick tones, sliding panels of stretched muslin, natural burlap or rice paper emphasized the Japanese flavour of sticks and panels. Posts, beams and window heads became the dividers for light or space.

Drake’s visible regular modules gave his architecture a sense of discipline and order not always found in rambling, close to nature houses. He believed that undisciplined building caused "waste, confusion and inefficiency.... Architects concerned with housing will either work for prefabrication and building integration, or they will no longer exist economically" (50).

Typical of the late 1940s architect aspiring to develop the order of the post and beam into a rational and flexible design tool was Donald Olsen’s unbuilt "Contraspatial House" (51). The plan was a square gridded with a pin-wheel plan with the three dimensional grid of horizontal and vertical members. Vertical members were placed twelve feet on centre in each direction creating structural bays


which were multiples of the basic 4' module on which the
house was planned. The pin-wheeled plan enabled zoned
wings and private courts, the closure of spaces within, and
a systematic reproducible order. The walls were
prefabricated standard panels, fitting into the structural
frame that had been assembled in the local mill and
delivered to the site ready for installation. The centralized
living space is typical of the American tendency to
centralize and focus rather than concentrating on peripheric
centrifugal planning. It becomes a virtual common room for
the house.

This idealized house was typical of the developing order of
the post and beam system, of architects experiments across
the U.S. For these architects, the vision of a reproducible
architecture for all was still a strong and vital issue.

The most publicized search for the ideal house via the post
and beam was the *Arts and Architecture* Case Study House
Program of experimental houses of 1945 - 1962, instigated
by editor John Entenza. In January 1945, the magazine
announced that eight architects had been commissioned to
design eight houses for the program (52). They were J.R.
Davidson, Richard Neutra, Spaulding and Rex, Wurster
and Bernardi, Ralph Rapson, Whitney Smith, Thornton
Abell, Charles Eames and Eero Saarinen.

Between 1945 and 1949, thirteen houses were built of
timber as steel was not available in the immediate postwar
years. Of these early houses, Case Study House #20 by
Richard Neutra, the Dr. Stuart Bailey House, Pacific
Palisades, 1946 - 47 was designed to expand with the
growth of the postwar family (53). In Neutra's hands the
post and beam became an aesthetic device of almost
decorative proportions, an "ornamental" trademark (54),
the outrigger beam and column or "spiderleg" became a
slick emblem of structure rather than a simple expression
of the frame. The signature of expressed beam on the
window line and flat oversailing eaves give the houses a
sliding quality in plan where zoned blocks slide together to
form de-Stijl like compositions, "machines in the garden".
The house later in 1958, extended fingers into the garden,
creating intimate outdoor spaces and embracing a
swimming pool. Neutra's other houses of the same period,
the Earl Street Reunion House, Los Angeles, 1949; Moore
House, Ojai, 1952 and the Connie Perkins House,
Pasadena, 1955 carry on the same themes of sliding zoned

52. John Entenza, "The Case
Study Program", *Arts and

53. "Case Study House #20 :
Richard Neutra, architect", *Arts
and Architecture*, December 1948,
pp.32 - 41.

Neutra and the Search for Modern
Architecture*, pp.254 - 256.
blocks, feathered at the edges with beam ends, overrunning gutters, a horizontal layer of sticks that propose a loose expression of de-Stijl.

The early Case Study Houses emphasized family living, minimal plans without halls or servants. Ralph Rapson's 1945 "Greenbelt House" (55), designed for a built-up area, "reduced to a microcosm R. Buckminster Fuller's Autonomous Living Package with its artificial environment created under cover to shelter great numbers of people" (56). Separated living and sleeping blocks looked onto a trafficable glass-roofed court that joined the two areas.

The court was a place where children and adults might live and play in close association with nature. By creating a large inside grass and planting area, the artificial barrier between man and nature is dissolved. For once, the open plan will have been achieved; for once, the complete integration of inside and outside will have been accomplished (57).

Light and heat were controlled by adjustable louvres below the glass. The only solid partitions in the house were the enclosed bathrooms; all other walls could disappear. Unfortunately the project was never built.

The transitional house of the series was the Eames House, Pacific Palisades, 1949 and the Entenza House next door of the same year by Charles Eames and Eero Saarinen. These two architects were the first to experiment with plan and structure, and bring industrial materials and techniques into the Case Study Program.

The frames of both houses were composed of four inch H-columns and 12 inch open web steel beams. The original scheme for the Eames House was a bridge structure built between two trusses. The floor and ceiling made the house a huge box beam that cantilevered out and beyond two steel supports to offer a view above the meadow, and out to the Pacific (58). Eames abandoned the design, considering the large amount of steel to be used, a waste, in terms of the small volume that was to be contained. The house was brilliantly re-sited behind a row of giant eucalypts to leave the meadow untouched.

55. "Proposal for Case Study House #4" (Greenbelt House by Ralph Rapson), *Arts and Architecture*, August 1945, pp.30 - 34.


57. Ralph Rapson, quoted in "Proposal for Case Study House #4", *Arts and Architecture*, August 1945, pp.30 - 34.

58. "Case Study Houses #8 & #9: Charles Eames and Eero Saarinen, Associate Architects", *Arts and Architecture*, March 1948, pp.39 - 41. This article describes the original scheme for the Eames House.
The house was now a two-storey rectangular prism, 8 bays long and 3 wide with a courtyard separating the studio. The structural members, fabricated originally for the first design were reused with the glazing carried in off the shelf standard window frames ordered from the Truscon catalogue (59). Apart from minor modifications made to some of the parts, the house was a collection of ready-mades; windows, doors and structure were all ordered from their manufacturers' catalogues (60). The interior of the living cube contained a double height living space and bedrooms tucked over a kitchen and service core below. By comparison to the apparent rigidity of structure, the surfaces and interior were treated in a free manner. The repetition of the window sash, translucent panels of glass, stucco panels of white, blue, red, black and earth, the texture of the Truscon Ferroboard ceiling plywood panels and complemented by Ray Eames's interior collection of objets d'arts, stones, shells and huge books, laid upon the floor in spontaneous abandon, gave this house a textural richness. The tension between the industrial building aesthetic and the personal input of the dweller was never so poignant as in this house.

The siting of "Eames shed" was subtle, alongside a row of eucalyptus trees which filtered the light into an interior where judiciously selected objects were as much part of the architecture as the building, itself. The aesthetic effect arose from the careful juxtaposition of "ready-made" elements but without the claims on a higher abstract order implied by Mies (61).

By comparison to Mies van der Rohe's use of steel in the Farnsworth House, the steel used in the Case Study Houses that followed the Eames and Entenza Houses, was non-monumental and non-honorific. The metal sections of Case Study Houses by Raphael Soriano, Pierre Koenig, and Craig Ellwood were pragmatically minimal and, as Reyner Banham notes (62), not treated as being of any great visual importance in themselves. Both Soriano's and Koenig's details were designed for building and production; cross-slotted steel tube uprights to receive the fish plates of the horizontal beams. These were standard assembly techniques. Emphasis was on an open horizontal plane of uninterrupted space of which interior and garden were interchangeable. The steel houses of the Case Study Program emphasized long spans, replacing the timber post


61. William C. Curtis, Modern Architecture since 1900, p.263.

and beam with steel and infill panels of lightweight non-structural materials or huge sheets of sliding plate glass.

Between 1950 and 1960, the emphasis was on developing houses which might serve as prototypes for industrialized building. An important precursor to these studies had been Richard Neutra's Lovell Health House, Los Feliz of 1929 where the same issues of lightness and the clear span had been emphasized. Now, the house had been minimized beyond Mies's Farnsworth House. The climate of Los Angeles permitted such minimalism.

Soriano's Case Study House, Pacific Palisades, 1950 consisted of eight 10' x 20' structural steel bays (63). Six inch wide flange steel beams spanned the 20' intervals and steel decking spanned the 10' intervals. This was engineering. A later house by Soriano for photographer, Julius Shulman, showed the blending of the personality of the owner-landscape gardener with the pragmatism of steel construction, creating the ultimate "machine in the garden".

Craig Ellwood used Miesian reduction and proportion to achieve the slimmest of elegance. Case Study House #18, Beverly Hills, 1956 was an eight foot modular house of luxury, with vast entertaining spaces and a frame of 2" square steel tubing (64). Sandwich panels used for walls, were prefabricated with a coating of resin-impregnated overlays. The L. A. motif of Craig Ellwood appears; a swimming pool reflecting in the plate-glass of a pristine box.

In 1959, Pierre Koenig designed his second Case Study House #22 in Los Angeles (65). The L-shaped plan protected a swimming pool. All sides of the house were glass non load-bearing walls except for the solid wall facing the street. Situated high in the Hollywood Hills, the view from the cantilevered living room was spectacular. The frame of the house used just two structural steel sections; a 12" I-beam and a 4" H-column. The columns and beams were spaced to create 20 square feet grids of uninterrupted space. Exposed steel roof decking sat above, cantilevering out over the terraces. Yet despite the structural success of the house, the interior planning suffered with poor location of the bedrooms, that required access through the master bedroom and an oversized ensuite area due to the determinism of the large grid size.


The house had been reduced by the Case Study Program to an elegant gazebo, the order found in the rationality of the grid, an order that was able to remain essentially domestic and which did not overly stress or formalize the design. Reyner Banham has said that the houses had perhaps been stripped too bare, to a dangerously anorexic state (66). Affluent L.A. was not discreet enough for such an asceticism. Though the rationale and results of these houses had produced an aesthetic minimalism and spatial freedom, based on the steel post and beam and assisted by the lush undergrowth of Los Angeles to soften and embrace these houses; industry did not take to them. Building trades shied away from the steel house as standard construction and tradesmen would eventually be phased out, if it were to succeed. The houses remained elegant examples of what might have been. The Eames House has become an icon of the program, deservedly so, a unitary possibility rather than a reality. The houses, regardless of their failure in production, received extensive publicity; *The Architectural Review* in May 1959, described the Case Study Program as "one of the most distinguished and influential research programs ever inaugurated" (67).

Whatever the outcome, the Case Study Houses had exemplified the upper middle brow custom-designed home of the 1950s, complete with its interior of Eames, Saarinen or Bertoia furniture, the butterfly chairs on the patio beside a sparkling blue swimming pool, sliding glass doors, the barbecue and eating out of ramekins, the epitome of the L.A. good life with the night-time view of the infinity of suburbia that is Los Angeles. Supra-privacy was reserved for the street with screens and blank carports. The indoor plant, white walls and the metal sliding door, the translucent garden screen, the open plan, glass and the great outdoors were all part of the Californian recipe for the modern home.

At the same time across the other side of America, other architects were experimenting with post and beam and variations of it or using the new interest in structure prompted by the engineering feats of Pier Luigi Nervi, Eduardo Torroja and Felix Candela. The Ulrich Franzen House, Rye, New York by Ulrich Franzen and the Samuel H. Herron House, Sarasota, Florida by Victor Lundy are two such examples (68), where the main theme of the house is the structural solution of the roof which eliminates all load-bearing walls and partitions beneath it - light steel...
sections of a diamond frame truss forming a three hinged arch in the Franzen House and laminated glued timber arches in the Herron House.

On the West Coast, A. Quincy Jones, Whitney R. Smith and Thornton Ladd, among others, were also working with timber post and beam construction in their residential work. In New York State, Peter Blake and Julian Neski (69) with various beach house designs brought to the post and beam almost Brutalist themes. Emphasis on clarity of structure was all. Blake and Neski used sliding screens and timber deck platforms that gave a Japanese air to these houses, a Brutalist shibui.

The "Pinwheel House" (70) was a simple 24' square house of two storeys; the lower floor of bedrooms and bath embedded into the ground. The upstairs living area had four identical external walls. The key to the pinwheel plan was four large sliding walls hung from an overhead track. The walls could be moved along the outside face of the house to cover or open up the 12' wide opening at the centre. Its flexibility made it a "universal" vacation house applicable to almost any site.

Another vacation house by Blake and Neski (71) utilized a similar theme of sliding screens to make the central living area of this summer house act as a breezeway. The system of construction drew from pier and wharf building techniques and creosoted telephone poles were used as structural columns. The simple pavilion sat impregnable upon the dunes.

Yet another beach house, by Peter Blake and Alan Chapman (72), utilized a post and beam frame that strongly indicated the clarity of the spaces within. The house, designed for summer living, in Montauk, Long Island was designed on a 16' square module. Columns were now two vertical studs on either side of the beam. The house had become an expression of the frame.

As architects continued to persevere with the definitive order of the post and beam, one begins to wonder where it all leads. The obsession with structure saw a building industry that rarely took to the simplicity of the frame alone. The consumer was not interested in the honesty and simplicity of such houses. As the 1950s drew to a close, American homemakers were desirous of a more exotic

69. For biographical notes on Peter Blake and Julian Neski, see Esther McCoy, "Young Architects in the U.S.", Zodiac, vol. 8, 1961, pp. 168 - 185.
response to the home. In terms of the post and beam, that satisfaction was to come from the traditional architecture of the Orient.

**Exoticism and Japan**

Combined with the postwar interest in the formal and rational qualities of the post and beam was a renewed interest in the exotic architecture of Japan and the Pacific, notably Hawaii. This interest, both professional and popular, continued throughout the late 1940s, 1950s and into the 1960s.

Interest in Japan and the American house had previously been aroused by the Japanese Pavilion at the 1876 Centennial International Exhibition in Philadelphia (73) and the Japanese Ho-oden on Wooded Island at the 1893 Chicago World's Columbian Exposition (74) which had inspired much of the domestic work of Frank Lloyd Wright and developed by his experience in Tokyo with the Imperial Hotel commission of 1905. The influence of Japanese architecture on the West Coast of the U.S. was perhaps more pervasive than Wright's personal interests. The work of Greene and Greene, and Arthur Heinemann in Pasadena, Bernard Maybeck in San Francisco and the Bay Region with their homages to the traditional timber architecture of Japan would spread ultimately to the vernacular form of the Californian bungalow adding to that house form's rich pedigree of derivation (75). In the 1930s, Harwell Hamilton Harris's Lowe House, Pasadena, 1934 and the Fellowship Park House, Los Angeles, 1935 and the Clara Fargo Thomas House, Desert Island, Maine, 1939 by George Howe owe much to the screens and repetitive modular timber construction of the Japanese house (76).

After 1945, the rational post and beam systems of traditional Japanese architecture with its lightweight panel infills, and light exposed timber construction would find great currency in postwar American domestic architecture. The affinities of landscape and earthquake problems would make the connection, as Clarence Mayhew pointed out in 1949 (77), between Japan and Northern California, even stronger.

The light, rigid frame of post and beam construction was ideal for making repeated spaces of horizontal rectangular proportions whose sides could be infilled with glass or wood, if exterior, or screens if desired instead of solid
walls on the interior. The plan of the house and its immediate landscape is organized on a free rectangular grid which interrelates the indoor and outdoor spaces (78).

Overtly Japanese features were added with varying degrees of discretion by designers; shoji screens, sea-grass matting, oversailing gables and sharpened ridge beams, slatted decking and landscaped courtyards that contributed to the authenticity of the Oriental allusion. The California houses of Gordon Drake (79), Pietro Belluschi's and John Yeon's "barn" houses of the Pacific Northwest (80), the Charles and Ray Eames House, Pacific Palisades, 1949 with its screen-like fenestration and modulated box forms and the courtyard of the Rockefeller Guest House, New York, 1950 by Philip Johnson are some of the more sophisticated houses of the 1940s that gently allude to the influence of Japan. The "virtuoso of the grid module", Harwell Hamilton Harris's postwar houses such as the Ralph Johnson House, Los Angeles, 1949 and the Wyle House, Ojai, 1948 pay homage to Maybeck, Wright and Japan (81).

The Ralph Johnson House was designed on a module width of three 12" planks. The structure of the timber frame is spatially observable at all times. Exposed joints and Japanese detailing, outriggers, pergolas and decks complement the Wrightian overlay of gridded rectangular blocks of the house. These blocks are roofed by low pitched oversailing gables, wide eaved and with an intimate court entry (82).

The Gerald Loeb pavilion, a summer house at Redding, Connecticut, 1949 and designed by Harris is more specifically Japanese with the scale of a tea house. It hovers in the trees, containing an interior of shoji screens and a sparsely furnished single living space of natural textures and whole walls that slide away to the outside (83). Inside, Harris included authentic detail; a tokonama and open ramma above the lintels, and the shoji were protected externally by wooden night panels or amado, that fit into attached storage boxes, to-bukuro.

By 1954, when Harris designed the 1955 Pacesetter House for House Beautiful in Fair Park, Dallas, Texas, the house was now a vast courtyarded family of gabled wings, pergolas, screens and covered porches, a blend between a Texan ranch and a sprawling Japanese palace (84).
Appendix 4: The Ideal of the Ideal: Palladio, Post and Beam, and the American desire for authority in grammar and syntax

The more literal usage of Japanese imagery on the West Coast was to be found in the houses of Charles Warren Callister, who left Jack Hillmer to form his own practice in 1948. Callister's creative eclecticism included Japan, Maybeck and the Pacific. His houses between 1948 and 1960 develop themes of the pavilion, the module and the repetition of timber construction, the gradation of the timber member from heavy post to the delicacy of the shoji screen. Balconies, stairs and windows give "rhythmic definition to the simple static forms" (85).

For example, the William McCullough House, Berkeley, 1958 by Callister is a simple one-bedroom pavilion, nestling into an exquisite natural setting of gnarled trees and a densely forested gully. The simple 3 1/2 foot module gives order and repose. The roof line is carried back and almost touches the slope of the earth, while a timber deck extends out into the trees. Within, shoji screens conceal kitchen and storage areas. A skylight along the central ridge of the low pitched gable centres on a raised fireplace pagoda. The furnishing is sparse and elegant, reminiscent of an austere Japanese tea house (86).


In June 1954, a Japanese teahouse, modelled on prototypes of the 16th and 17th centuries was designed by Junzo Yoshimura, built first in Nagoya in 1953, and then reassembled by Japanese craftsmen in the garden of the

85. Woodbridge, op. cit., p.214.
Museum of Modern Art in New York. In the same tradition of the model houses of Marcel Breuer, 1949 and Gregory Ain, 1950 exhibited at the Museum of Modern Art, this house saw 121 000 visitors to its authentically landscaped garden complete with raked sands, pools and interior furnished with tatamis and the traditional wares of the tea ceremony. The Japanese carpentry was widely admired and highly influential.

He achieves richness in his structures not with arbitrarily introduced ornaments but through subtle utilization of exposed structural elements, natural materials and meticulous craftsmanship. Such contemporary features of Western architecture as the post and lintel skeletal frame construction, the modular-system, flexibility of plan, the close indoor/outdoor relationship and ornamental quality of the structural system were anticipated by the design principles of such an architectural discipline (89).

Walter Gropius’s visit to Japan in 1955 on a Rockefeller grant and the subsequent publication of his observations in Perspecta, vol.3, 1955 (90), reveals a lively interest in the traditional architecture of Japan, in particular the Katsura Imperial Villa at Kyoto and the temple complexes of Nara. Gropius’s article also illustrates three contemporary Japanese houses by Kiyose Seike (91), speaking with admiration for the handling of scale and the relation of indoors to out, and how the West could learn from the old Japanese experience, how to combine the seemingly incommensurable opposites, simultaneously to acquire by intensification of our life, a common cultural standard and infinite individual variety, i.e. an organic cultural entity (92).

In the same issue of Perspecta, the article, "Actuality" (93) by furniture designer, George Nakashima, appears with illustrations of his recently completed house at New Hope, Pennsylvania. A beautifully crafted Japanese house of sliding shojis, timber platform decks, tatami mats; the module of the post and beam created subtle contrasts of texture and void. Nakashima talks of mastering the art of building, in particular the mastering of timber construction. Drawings of Japanese timber jointing methods accompany the article.


91. The three houses by Kiyose Seike are the Dr. Mori House, Tokyo, 1951; Dr. Miyagi House, Tokyo, 1953; Professor Saito House, Tokyo, 1952.


Other articles of the time, encouraging the appreciation of Japanese architecture included "The Spirit of Japanese Architecture" by Antonin Raymond in the A.I.A. Journal, December 1953 (94); "Some Aspects of Japanese Architecture" by Walter Dodd Ramberg, Perspecta, no.6, 1960 (95); and Minoru Yamasaki's "A Humanist Architecture for America and its relation to the Traditional Architecture of Japan", Architectural Association Journal, January 1961 (96). In Arts and Architecture, March 1955, three contemporary houses in Japan by Japanese architect, Kenji Hirose were published where openness, standardized construction, deep and low eaves, and sides that opened up completely to the outside are traditional features of the Japanese house reused postwar (97).

But it is in the popular home journals that the strongest interest in the Japanesque was to be shown. In a House and Garden special feature entitled, "Why the Japanese Look is here to Stay", in June 1957, the magazine insisted upon the positive influence of Japan on contemporary U.S. domestic architecture.

You may think that the Japanese influence does not appeal to you, but perhaps American packaging hides the ancestry of many of the things you live with. Wherever you live, on the Oriented Pacific Coast or in the Mid-western Heartland, the Japanese influence touches you today. That gleaming electric chafing dish from which you serve your guests carried lobster came off an American assembly line, but the idea of using it at the table is Japanese. If your house is new, the chances are it reflects Japanese design somewhere in the construction or decoration. Even our post-war discovery of the pleasures of "indoor/outdoor living" was no discovery; the Japanese invented it centuries before (98).

The feature then goes onto describe the Hollis M. Baker Jr. vacation house of 1956, near Holland, Michigan, designed by Obryon and Knapp and inspired by the Japanese house displayed the year before at the Museum of Modern Art. The house was an authentic and scholarly reinterpretation of the M.O.M.A. House, an L-shaped house of zoned blocks. Details were "correct" and thorough; the ramma (post of honour), the slender beams crossing the ceiling of sugi wood as well as tatami, shoji, exquisitely landscaped garden were all intensely and rigourously imitated (99).
But it is the August 1960 issue of *House Beautiful* which truly transports American enthusiasm for the Japanese to new heights. The whole issue was entitled "Discover Shibui, the word for the highest level in beauty", and the Katsura Imperial Villa, Kyoto graced its cover. Inside one could learn how to eat, sleep, live, shop, listen to and read Japanese.

*Our American ways are predominantly emphatic, exuberant, positive and forceful. The cultured ways of Japan are restrained, non-emphatic, suggestive, tranquil and understated. Yet Japan's aesthetics have produced depths of beauty of which we can be very jealous* (100).

Americans had an insatiable appetite for what was not theirs. "Japan is a gold mine", the magazine candidly stated. In fact, the issue was impressively thorough, describing comprehensively the traditional tea ceremony, the Japanese garden, and in an article by Anthony West, "What Japan has that we may profitably borrow" (101), the traditional Japanese house is taken apart, and its virtues of tranquillity, extendibility, lightweight construction, the details, and the introduction of diffuse light are explained. The concept of the Japanese idea of beauty, shibui, is carefully explained by Elizabeth Gordon (102).

The following issue of *House Beautiful*, September 1960, was devoted to "How to be shibui with American things" where the transformation from Japan to America has taken place and is described in detail. Articles on Hawaii and its adoption of Japanese design ideas appear. Houses in the U.S. by architects, Walker and Moody, Gardner Dailey, Leslie I. Nichols, Albert Ely Ives and Charles Warren Callister testify to the degree with which thorough eclectic interpretations had taken place in the design of the home. *House Beautiful* confirms the consolidation of Japanese taste in America. Americans warmed to the concept of shibui, perhaps out of a desire to escape the cult of consumerism that had by 1960 swept the country, or was it simply another American exotic acquisition?

Interest in the exotic had also been found on the West Coast and Florida, with the inclusion in many sprawling indoor/outdoor houses, of the *lanai*, a room with one wall open to the weather, invariably overlooking the ubiquitous


swimming pool (103). The April 1952 issue of *House and Garden* was devoted to "Pacifica",

*where inspired by the islands and countries of the Pacific, this new visual trend creates an atmosphere of serenity, a low tension pattern for the high tension world in which most of us live today. You don't have to escape to the South Sea Islands to achieve it. You don't have to play Gaugin, Stevenson, or Nordhoff and Hall to enjoy it. In this issue we show you ways and means to capture its charms* (104).

Lanai living, "open yet sheltered" was stressed along with a blend of Japanese or Polynesian inspired elements of "Pacifica"; bamboo, palm leaf wallpaper, tropical fish prints, Chinese tables, koa plates and big wooden salad bowls and other reminders for the average American that he is on the eternal holiday and still be at home in Cleveland. Houses by Albert Ely Ives and Vladimir Ossipoff accompany this issue.

The grammar and order of the post and beam was subsumed by the exotic interests promulgated by the popular journals. Yet again,"the American tradition of making things seem to be what they are not has found a new expression" (105).

What these ventures into the vagaries of the post and beam had confirmed was an American penchant for stylistic authority together with an appetite to acquire for the home any image desired and which could be afforded. Grammar and the syntax of styles were to be the irresistible providers of authority. Order was sought and found.

103. For example, "You can learn a lot about indoor/outdoor living from Hawaii", *House and Garden*, October 1951, pp.132 - 135.


APPENDIX FIVE:

THE ARCHITECT-DESIGNED HOUSE IN ENGLAND
1952 - 1967

The Architect-Designed House in England
1952 - 1967

Introduction
This brief paper describes twenty single family houses built in England between 1952 and 1967.

It is an attempt to show by description and illustration the changes in architectural thought and the various approaches to the design of the single family house over fifteen years in a country where the architect-designed house has played an ever decreasing role in housing the nation. Yet it is this small number of houses which show the acute shifts in architectural thought, patterns of family living and attitudes to structure and materials.

The house in England, has traditionally, and even throughout the 1920s, 30s and 40s, been about varying degrees of enclosure, as opposed to openness. The climate of England has never truly allowed the spatial or social visions of the open-plan to be practically realized - except, of course with the luxury of air-conditioning and full central heating.

Between 1952 and 1967, the following observations can be made:

1. the idea of enclosure moves gradually from the essence of enclosure, i.e. the structural and material bare necessities of shelter to include the essential image of enclosure, i.e. to include the symbolic expressions of shelter in their traditional associational way, e.g. a hipped roof, a chimney, and the massive wall as well as the return of social and formal hierarchies of space.

2. lack of experiment with structure and the preoccupation with the essential rightness of traditional building materials.

3. hence, the predominant use of brick and a transition in the early 1960s to concrete block.

4. concern for the honest and frank expression of materials and their structural connections, i.e. exposed brick, timber and blockwork.
5. gradual acknowledgement of the scale and texture of the street, i.e. the recognition of the need for an urban responsibility even with the single family house which is the penultimate expression of individualistic freehold.

6. separation of children's bedrooms and parents' bedroom into completely different zones.

7. increasing internalization of service spaces via skylights or mechanical ventilation.

8. concern for economy achieved by modularization of materials, structure, space and production.

The problem in such a study is of course the inability of the researcher to study the needs and desires of the client and the detailed information missing regarding construction information and building details.

However such a study for the designer is of inestimable use. To observe the plan, scale, the cycle of development, and the unique solution which has implications for many others, are just a few of the reasons. The study also points to the importance of the plan in post-war architecture as the delineator of changes to structure, ways of living and ideas about space. The plan is especially important in the years studied as the concept of elevational composition was generally mistrusted even seen as morally dishonest. Correctness of style was replaced by an arch-morality of honesty to materials and structure, in some cases to the point of discomfort in truly English style.

The study is therefore a virtual pattern book of English houses between 1952 and 1967 (1).

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1. The paper owes its model to David Dunster's book of 1985, *Key Buildings of the Twentieth Century: Houses 1900 - 1945* and I would like to thank him for his assistance during my stay at the Bartlett School in June and August 1987.
The Architect-Designed House in England
1952-1967

This paper includes the following houses:

1952
House in Soho, London by Alison and Peter Smithson.

1953
House at Ham Common, London by James Cubitt and Partners.

1955 - 56
Sugden House, Watford by Alison and Peter Smithson.

1956
House near Cowes, Isle of Wight by James Stirling and James Gowan.

1956
Lyttleton House, Arkley, Hertfordshire by John Voelker.

1956

1957
Village Housing, Rushbrooke, Suffolk by Richard Llewelyn Davies and John Weeks.

1958 - 60
North House, Bromley, Kent by Howell, Killick, Partridge and Amis.

1959
House in Hampshire by Edward Cullinan.

1960
1962

1963 - 64

1963 - 64
Two houses at Grantchester Road, Cambridge by Colin St. John Wilson.

1964
House at Burrell's Field, Cambridge by Patrick Hodgkinson and Frank Newby.

1964
Milton Grundy House, Shipton - under - Wychwood, Oxfordshire by Stout and Litchfield.

1965
Wendon House, Barton by Barry Gasson and John Meunier.

1965
Frost House, Thundersley, Essex by Brian Frost.

1966
House at Creek Vean, Foeck, Cornwall by Richard Rogers, Norman and Wendy Foster.

1966 - 67
Cornford House, Conduit Head Road, Cambridge by Colin St. John Wilson.

1967 - 68
Spender Housing, Ulting, Essex by Richard and Su Rogers.
1952
House, Soho, London by Alison and Peter Smithson

The term "New Brutalism" was first used in public by Peter Smithson to describe a small house project for a site in Soho (1). In the statement which accompanied this design, he said:

*It was decided to have no finishes at all internally, the building being a combination of shelter and environment..... Bare concrete, brickwork and wood..... In fact had this been built, it would have been the first exponent of the "new brutalism" in England, as the preamble to our specification shows: "It is our intention in this building to have the structure exposed entirely, without internal finishes wherever practicable. The Contractor should aim at a high standard of basic construction as in a small warehouse"* (2).

The three storey townhouse projected for a tiny inner-city site, was indeed the epitome of primitive simplicity and a reaction against the tendency to over-refine and academicize the geometries of the International Style and the prevailing empiricist romanticism in Britain.

The internal order of the house was such that the air and sunlight of the attics in the daytime suggested that living quarters should be on the top floor with the bathroom in the basement. Each space was generalized and universal with minimal physical interruptions. The staircase formed the core and spatial divider of the house. Externally, window size reflected the generalized functions within and exposed reinforced concrete lintels delineated floor level and graphically symbolized the elemental structure of the house.

This raw simple vocabulary insisting on a pure geometrical grid of horizontals and verticals and an air of "suppressed extremism imprisoned within the grid" (3) was one that was to dominate architecture in England for the next fifteen years, and find its first built example in the Smithson's celebrated Hunstanton Secondary School, 1949 - 54.

1. The complete origins of the term "New Brutalism" are described by Reyner Banham in *The New Brutalism: Ethic or Aesthetic?*, p.10.

**Bibliography:**


Fig.1 Alison and Peter Smithson, architects. House, Soho, London, 1952 (*AD*, December 1953, p.342.).

Above: Sections (scale 16 ft. = 1 in.). Below: plans and elevations (Scale 24 ft. = 1 in.)

Appendix 5/7
1953
House, Ham Common, London by James Cubitt and Partners

This small three bedroom house epitomizes the minimal architect-designed house of the early 1950s. The rectangular plan is pragmatic and compact. The car is accommodated under the all-encompassing 3/4-inch asphalt flat roof. The centre of the house is an internalized service core containing central heating chamber, hot water service and parents' ensuite bathroom which is toplit from above. The parents' bedroom is separated from the children's and opens off the large open-planned living/dining room. One enters the house from an airlock hall directly into a kitchen/meals area. The children's rooms with their shower and w.c. are completely separate.

To increase the feeling of apparent space, the ceiling height was set at 8-feet 9-inches and around the core, the number of permanent divisions was reduced to a minimum and replaced by glass, curtains, bookshelves and cupboards. The divisions between main bedroom, living room and kitchen were not taken up to full height and the ceiling could be seen extending beyond these rooms through the glazed upper portions of these walls.

The house sits on a concrete slab and has panels of 11-inch cavity walls. Glazing divisions were minimized, and where possible, glass was taken from floor to ceiling. A brick chimney and fireplace was dispensed with and replaced by an asbestos-lined stove - enamelled metal hood. The same floor covering was used in kitchen, passage, living room and main bedroom.

Bibliography:

Fig.2 James Cubitt and Partners, architects. House at Ham Common, London, 1953 (AR, December 1954, pp.363 - 366.).
1955 - 56
Sugden House, Watford by Alison and Peter Smithson

The Sugden House was built traditionally, using load bearing walls of second-hand London stock bricks, a gabled roof of dark red Marley tiles, standard Crittall's steel windows in timber frames and Batley's up and over doors. It is from the use of these conventional as found materials and their direct handling that the house gains its interest.

The spontaneous use of vernacular materials was proposed by the Smithsons as

the idea that an understanding of the way of making the building - the putting together of bricks or blocks......will help to crystallize out a work of seeming ordinary naturalness......(and) by this naturalness bringing about a coming together with the occupier's activities and things... their bicycles, wheelbarrows, grasscutters; their chairs and their cups and saucers; and their vases of flowers (1).

This apparent "naturalness" however, belied tendencies to formality in elevation with its symmetrical chimney pots and matching bedroom windows and juxtapositions of scale with the big window for the big space behind. Though the openings are punched into the simple brick wall as a functional diagram, what seems to be a conventional exterior conceals a complex interior of light and open space freed from the rigours of structure.

Internally, the essential fireplace, the stair and an exposed concrete beam become the sole dividers of the very large open living/dining/kitchen area beneath a conventionally planned upper floor of bedrooms. Exposed brick walls delineate their structural purpose and on the first floor, the ceilings follow the roof line, allowing windows high up in the gable to spill light down the stairwell. By packing bedrooms under this all-encompassing gable, the living room is given a larger volume, the dining room a slightly smaller one, confirming traditional hierarchies of dwelling space.

1. A. & P. Smithson, Alison and Peter Smithson - The Shift, p.73.

Bibliography:

Architectural Monographs, Alison and Peter Smithson - The Shift, pp.73, 86 - 87.


Fig.3 Alison and Peter Smithson, architects. Sugden House, Watford, 1955 - 56 (AD, June 1958, p.240 and Banham, The New Brutalism, p.77.).

1956

House near Cowes, Isle of Wight by James Stirling and James Gowan

This bi-nuclear house for an artist, his wife and two children was built on the basis that a small builder works best and tenders lowest with brick and timber. Consequently a simple repetitive structure was adopted. It consisted of a 5-foot wide brick pier with a discontinuous brick footing and a 5-inch by 3-inch timber trimmer spanning a 5-foot wide opening. These carry 5-inch by 2-inch joists which span 10-feet.

The service core of kitchen and bathroom is the link between living and sleeping wings, with an atrium and service court on either side. Internally the chimney flues are carried on in-situ reinforced concrete beams, their outer lining of precast concrete drainpipes, and the inner of refractory concrete units.

The repetitive as-found vocabulary of exposed brick and timber, standard windows and timber floors is more "New Brutalist" (though Stirling never aligned himself with the so-called "Brutalists" (1)) and less sculptural than the overtly derivative Corbusian vocabulary, Stirling and Gowan had used the year before at the Ham Common flats where the model had been Le Corbusier's Maisons Jaoul, Neilly-sur-Seine of 1954 - 56.

The use of structural brick infill panels (effectively piers) separated by window openings was a rational means of reduction for economy and liberated the wall from the dominating pattern of the window frame. The functionally and structurally generated fenestration has links to the utilitarian load bearing brick tradition of the nineteenth century while the interior is left virtually as a negative shell and an open floor space into which the occupier could inject his own personality and alter at will.


Bibliography:


Fig.4 James Stirling and James Gowan, architects. House near Cowes, Isle of Wight, 1956 (AD, September 1958, pp.356 - 357 and James Stirling: Buildings and Projects 1950-1974, p.7).

Above: plan. Key: 1 entrance 2 dining area 3 living area 4 courtyard 5 bedrooms 6 studio-bedroom 7 store 8 kitchen 9 bathroom

Appendix 5/13
1956
Lyttleton House, Arkley, Hertfordshire by John Voelker

The Lyttleton House is a cluster of spaces organized around a courtyard. Three wings enclose this court while the fourth side is a free-form garden wall. Each wing is zoned according to function - living, kitchen and sleeping.

The simple inward sloping skillion, the austere outer brick wall with minimal penetration, sliding barn door and strip windows with horizontal weatherboarding above give a Scandinavian air to the house which bears comparison to Alvar Aalto's summer villa at Muuratsalo, Finland of 1953, and predates Jorn Utzon's Kingo Terraces of 1958 - 60 where each house had a courtyard opening onto a communal green space.

John Voelker was a member of Team 10, and the house is an enlarged version of the aspirations of the British members toward anonymous architecture of simple rugged geometrical forms, plain unadorned surfaces, small windows, unaffectedly sited - a vision of a basic architecture with veiled allusions to vernacular farmhouses and the natural aggregation of spaces to form dwelling and shelter.

Bibliography:


Fig.5 John Voelker, architect. Lyttleton House, Arkley, Hertfordshire, 1956 (Banham, op.cit., p.107.).
1956
"House of the Future", *Daily Mail* Ideal Home Exhibition, London by Alison and Peter Smithson

The "House of the Future" was a fusion of Le Corbusier's Citrohan/Citroen - a house built like a motor car and one of the most traditional types of architectural conceptions, the patio-dwelling. A simple box without external windows and a door on only one side, rooms were freely placed around a patio like compartments of a cave. Each compartment was a different size, a different area, and a different height - a totally differentiated shape to achieve its purpose.

The house was moulded in plastic impregnated fibrous plaster, a kind of skin structure built up from separate parts with flexible joints to allow for thermal movement and to provide structural discontinuity which (apparently) reduced noise. Fittings were moulded into the wall surfaces as required. The double plastic shell structure was conceived as the equivalent of the panelling of a car body, where no same panel was interchangeable with any other in the same house, only with its twin in another house, quite different from ideas then current in architectural circles on prefabrication where the search was for a single universal element that could fulfil any role the structure required. The "House of the Future" therefore implied a volume of production comparable to a major automobile manufacturer.

The roof was doubly curved and dished to allow sunlight penetration. The dishing also carried the rainwater to a single point, through which it was to flow down a gargoyle into a container within the garden.

Bibliography:


Fig.6 Alison and Peter Smithson, architects. "House of the Future", *Daily Mail* Ideal Homes Exhibition, London, 1956 (AD, March 1956, pp.101 - 102 and Alison and Peter Smithson - *The Shift*, pp.80 - 85.).
1957

Village Housing, Rushbrooke, Suffolk by Richard Llewelyn Davies and John Weeks

The first stage in the rebuilding of Rushbrooke was the building of two houses as a pilot scheme on a vacant site just beyond the edge of the village. Using a basic single house plan, Richard Llewelyn Davies and John Weeks proposed the linking of small houses to create a homogeneous village by staggering the buildings and joining them with high walls to promote a sense of enclosure; a continuity of surface and a natural repetition of a single house type with minimal variations.

The two identical plans, reverse handed, accommodated two bedrooms, living room and parlour in a simple butted-zone plan. In each house there was a large room in the roof used for storage or for children's playrooms.

As the ground sloped, the houses were placed so that a linking brick wall connected the lowest point of the upper house to the full height wall at the centre of the lower house. The entrance to the upper house was through a gap in this wall, while that to the lower house was at right angles to the wall on the face of the building. The brick walls were painted white, the roof was slate, fixed portions of windows were painted black with white opening lights, traditional colouring for that part of Suffolk. The same roof pitch was used on both houses with the eaves height varying according to the distance of the lateral walls from the centre line of the roof. Though their architects were never aligned with the so-called "New Brutalists", these two houses like Voelker's Lyttleton House translate into built form the basic architecture of the rural housing projects prepared by English architects, James Stirling, the Smithsons, John Voelker, and William Howell and John Partridge, for C.I.A.M. - X in Dubrovnik in 1955 (1).

1. "Village Projects, Architect's Journal, 19th September 1957, p.434. Heated correspondence took place in AJ over the next two months over these proposals and the Rushbrooke housing whose architects were not aligned with the English members of C.I.A.M.-X.

Bibliography:
"Houses at Rushbrooke, Bury St.Edmonds", Architectural Design, June 1958, p.239.
Fig.7 Richard Llewelyn Davies and John Weeks, architects. Village Housing, Rushbrooke, Suffolk, 1957 (AJ, 19th September 1957, pp.428 - 433.).
1958
North House, Bromley, Kent by Howell, Killick, Partridge and Amis

This single storey house was built in the grounds of a large Victorian house. The plan consists of three pavilions. The centre one contains the kitchen, playroom and living areas. Linked on either side is a children's pavilion and a parent's wing which is at a higher level elevated on posts with a carport and laundry underneath.

The three pavilions are linked by bridges, one being stepped and the other flat. Rooms are planned on a three foot grid, the scale of a tatami, and construction is entirely in cedar, with bolted posts and split timber beams.

The linguistic allusions are frankly Japanese inspired by the client's knowledge of recent Californian domestic architecture. Wide overhanging eaves, explicit and simple timber jointing, sliding screens, gutters discharging into a garden pool and block drop chains which guide water to stormwater drains, pergolas, Japanese landscaping and the pavilion siting indicate a shift to an exotic vocabulary of simple structural and material expression.

The exposed western red cedar structure is clearly expressed through walls and roofs, pergolas and stairs, with no deviation from this theme. External wall panels, where solid, are rendered a stone colour with a base of expanded metal on studs and a plasterboard lining within. The ground floor is a concrete slab with concrete corbel blocks to carry the cedar columns.

Bibliography:

Fig.8 Howell, Killick, Partridge and Amis, architects. North House, Bromley, Kent, 1958 - 60 ( Whiting, New Single Storey Houses, pp.14 - 20 and AR. October 1964, pp.288 - 292.).
1959

House in Hampshire by Edward Cullinan.

This long and thin house at the foot of a steep bank facing south has a blank north wall to make full use of the south sun. The middle of the house is a large gallery/living room, exaggerating the contrast between the small and enclosed private bedrooms at either end of the house and the large shared gallery between.

A sloping south wall of patent glazing, shaded by bamboo in summer and generously welcoming the sun is winter has at either end, two pivoting doors to allow cross ventilation. The enclosed bathroom and kitchen are both top-lit.

The house was built on a pre-cast concrete slab resting on two rows of five concrete filled asbestos pipes, built of 6-inch lignacite blocks and braced by two tilted-up concrete door frames.

Cullinan built the house himself with Max Moodie and a 75 year old gardener named Horace Knight. The sensual and tactile qualities of the house arise from Cullinan's interest in the process of self-building and its direct experimental method, of which he notes,

Of course, the main thing that limits amateur building is the inconsiderable incapacities of the amateur. This tends to lead to a mode of construction and expression that uses a severely limited range of available materials, puts a stress on "placed together" joints and junctions, has materials mastering and oversailing one another and avoids the partial sophistication of "flushness" and hidden detailing (1).


Bibliography:


Fig.9 Edward Cullinan, architect. House in Hampshire, 1959 (AD, March 1962, p.133 and Edward Cullinan Architects, pp.8 - 9.).
1960
Architect's own house, Hampstead Heath by Michael Brawne

Michael Brawne's own house is a townhouse, a vertical structure attempting to restore the street pattern of nineteenth century townhouses. Tightly planned on the sloping site, one enters the three storey house at mid-level from a bridge directly into an open floor containing living room and a step up to the kitchen and dining area. The kitchen is screened from the living and dining areas by bookshelves and service equipment. Above are children's bedrooms and below is the parents section complete with ensuite and dressing room.

The structure, finishes and detailing are the simplest possible - solid side walls of 11-inch cavity brickwork, simply painted white internally; the floors are precast concrete beams and screed. The roof is a simple skillion. The windows have alternating fixed lights and opening louvres sitting between floor to ceiling vertical softwood mullions.

The result is a minimal townhouse frankly expressive of its structure and materials.

Bibliography:

Fig.10 Michael Brawne, architect. Architect's own House, Hampstead Heath, 1960 (AR, November 1961, pp.345 - 348.)
1962
Architect's own house, Highgate, London by Walter Segal

This pioneering house was built by Walter Segal as temporary accommodation for himself, his second wife, Moran and their combined total of six children while their house in Highgate was being rebuilt. In 1962, when designing the first of what are now known as "Walter Segal Houses", his thoughts were dominated by the revolutionary idea that it should be possible to build with lightweight building materials in their standard market sizes, so that when the dwelling was demolished, the materials could be resold and used again. Segal believed that the contemporary search for an "abstract intellectual building module" (1) was a dubious effort and that the same, or better results could be achieved by developing a modular form of construction out of standard components. And so,

The building was an assembly of materials in their market sizes, held together with a support structure which should have been steel, but for reasons of economy was wood instead.

Elements were reduced to their essentials to obtain maximum economy of materials and effort. The house was organized on a modular grid determined by the standard size of the materials. Components were assembled using simple dry joints formed with bolts and screws and therefore wet trades such as bricklaying and plastering were eliminated. The method of resale and disassembly was not impossible but ended up being unnecessary. This house, in fact, founded a school of lightweight construction particularly adaptable for those interested in the process of self-build housing.

The Highgate House was built in two weeks in 1962 for a material cost of 800 pounds, and it gave birth to over two dozen houses in England and Ireland over the next fifteen years based on the success of its method.

The Highgate bungalow had no foundations apart from concrete paving slabs. Its timber framing was clad in woodwool faced with roofing felt on the exterior and chipboard waste paper on the inside. The roof was flat, important for the self-builder as there was no need of


Bibliography:


Fig.11 Walter Segal, architect. Own House, Highgate, London, 1962 (AJ, 20th June 1984, pp.35 - 38.).
scaffolding. Surfaced with two layers of built-up felt, the roof was held down only by scattered bricks and 35mm of standing water designed to remain on the surface. The underside of the woodwool roofing slabs and the rafters were exposed internally, as were the staggered nail plate joints. The windows, frameless glass sliding in aluminium angle tracks, fitted between the 6-foot 8-inches structural grid.
1963 - 64

The Schreiber House is a large gaunt and gridded house built for an industrialist amidst a suburb of prosperous suburban villas. The house is stratified functionally over four floors; service rooms in the basement, living rooms on the ground floor, the master bedroom on the first floor and bedrooms and studio on the second.

The piers in blue rustic Staffordshire engineering bricks are in 18-inch cavity brickwork and internal walls 9-inches solid. Floors are 18-inch wide and 9-inch deep pre-cast concrete units. The structure, components and finishes are set out on a three foot module.

It is this module which dictates the design of everything in the house, a superimposed rule which effectively hermeticizes the design along with an almost too rigorous interpretation of Louis Kahn’s served and servant spaces where geometric determinism effects a loss of scale. The Schreiber House bears comparison with the exterior of Kahn’s project for the Morris House, Mt. Kisco, New York of 1958. However unlike Kahn, Gowan fails to develop a centre for this house. Circulation axes split symmetrical unitary volumes defeating the fastidious attention to detail and adherence to the grid. All openings follow the grid and all wall surfaces suggest it by means of raised plaster panels.

Yet as Neave Brown points out,

*Despite the lack of a unifying space system, the house has indeed a sense of interior as the internal fragmentation of volume forces attention on the external walls. These walls, formidable black cliffs of brick externally, effect internally a strong sense of enclosure (1).*


**Bibliography**


Fig.12 James Gowan, architect. Schreiber House, Hampstead, 1963 - 64 (*AD*, June 1965, pp.294 - 308).

Fig.13 Louis I. Kahn, architect. Morris house, Mt. Kisco, New York, 1958.
1963 - 64
Two Houses at Grantchester Road, Cambridge
by Colin St. John Wilson

These two houses on long narrow plots of land suggest a fragment of a city, referring to terrace houses of the 18th and 19th century. An almost blank wall of concrete blocks connects the first floor level of the two houses on the street, while below there runs a continuous colonnade of piers. To prevent overlooking at the rear, the two houses were staggered in plan to create private walled patios. One house is entered directly through a four bayed loggia; the other is set back beyond a paved court closed on three sides by a studio, a study and the neighboring garage.

The two houses are basically L-shaped with kitchen and dining room in one leg and living in the other with access to the first floor via a stair in the outside corner of the L. Bedrooms are on the upper floor and the court house, actually the architect's own, has a double height living room.

The building system is modular. The whole building is set out on a modular planning grid by a regular bay space of 4-foot 4-inches located on an irregular tartan of 1-foot in the east-west and 1-foot 4-inches on the north-south. Both houses are constructed from a standard 8-inch by 16-inch concrete block made with crushed Abergele limestone and waterproof white cement with white aggregate concrete beams exposed and it is this use of concrete block as a luxury material which gives these houses a special brilliant white roughness. Within, traditional notions of entry hall, gracious staircase, the central and monumental fireplace and the formalized double height of the living room portray Wilson's advice "that it now seems more necessary than ever to recover the notions of a house as the embodiment of calm, of fixity" (1).


Bibliography:


Fig.14 Colin St.John Wilson, architect. Two Houses, Grantchester Road, Cambridge, 1963 - 64 (AD, November 1965, pp.546 - 549.).
1964
House at Burrell’s Field, Cambridge by Patrick Hodgkinson and Frank Newby.

Built for the retiring Master of Trinity College and his wife, this house includes a guest room and staff quarters designed as self-contained units at ground level which can be put to alternative use in the future without affecting the rest of the house.

Taking advantage of false levels created by the need to import soil as a precaution against flooding from nearby streams, the house is planned as a series of three interconnecting levels with the middle level being the spacious great hall of the house, used for dining and entertaining, as well as the drawing room. This large one and a half floor high room overlooks the private garden lawn to the rear of the house.

The house is entered between a bank of densely planned secondary service spaces. This deep entry increases the apparent massivity of the L-shaped wall to the street. One ascends past these spaces and into the great hall, from which the other spaces interconnect both up and down.

The main body of the house is the L-shaped two storey block built of brick with concrete floors, facing the street. On the inside of the L, the structure lightens over the interconnecting volume of study, sitting room and great hall. The roof and upper parts of the living room and study walls are in board and batten construction with vertical timbers alternating with opaque fixed continuous lights to give a white filtered highlight while clear glazed opening windows admit sun and provide selected views. Both the timber and bricks have been left to weather.

Bibliography:

Fig.15 Patrick Hodgkinson and Frank Newby, architects. House, Burrell’s Field, Cambridge, 1964 (Stephen, British Buildings 1960-64, pp.67-70).

Ground floor plan

Upper floor plan

1 porch • 2 entrance lobby • 3 living and dining room • 4 guest bedroom • 5 maids quarters • 6 study • 7 dressing room
1964

Milton Grundy House at Shipton-under-Wychwood, Oxfordshire by Stout & Litchfield.

This is a single storey three-bedroom house, planned as a tight cluster of separate but linked pavilions, each with a monopitch roof. It is a picturesque composition, an aggregation of parts, with each part given an internal identity of its own but linked by exterior similarities of form and construction.

The walls are of Cotswold stone, the roof in local stone tiles, and roof spaces are exposed internally. The floors are brown quarry tiled and the internal walls, backed with brick, are white plastered. The furniture is built into quarry tiled blocks or cantilevered slabs.

The discrete units of the house, informally composed together produced a plan of secluded outdoor courts and a large amount of external wall, which emphasizes the solidity of the 1-foot 4-inches thick stone walls. The roofs slope down to the open side of each building, where there are floor to ceiling windows, each looking out onto a different view. Each unit has the same form, with the long wall sloping, to narrow down one end of the plan. Roof pitch is constant but the long raked wall in each wing results in a tilted ridge line and unexpected slopes at the gable ends.

Externally the house resembles vernacular farm buildings like old barns. A garden complete with lake lapping at the house walls and an inner courtyard of raked gravel and cyclopean rocks inspired by the Temple of Ryoan-Ji in Kyoto lends an exotic and tranquil air to these sculptural masses and their strong definition of opening and closure. From a distance the house appears almost windowless.

Bibliography:

Fig.16 Stout and Litchfield, architects. Milton Grundy House, Shipton - under - Wychwood, Oxfordshire, 1964 (Webb, Architecture in Britain Today, pp.132 - 135 and AR, February 1965, pp.144-146.)
1965
Wendon House, Barton by Barry Gasson and John Meunier

This house in a village close to Cambridge is a formalized cube, a tribute to the ideas of Louis Kahn, of served and servant space. The house is planned as a helix within a square. The family room which opens onto the garden, acts as the core. This is a multi-purpose space intended for games and parties. The organization of the interior is based on a vertical ramp which leads from the central volume in the well of the building to the living room at the top, which further opens onto a roof terrace. Onto this ramp, open all the subsidiary spaces, rotating around it in an ordered sequence, relating both to the outside world and to the inner family core. Five bedrooms, study, kitchen, cloakrooms, bathroom and laundry fit between the two major public spaces of the house.

The central well is defined by four freestanding blockwork piers around which the ramp winds. The structure is load-bearing concrete block, fair-faced inside and out. The boarded ceilings and joinery are treated with a clear preservative. The glazing consists of vertical lights, the width of the ramp, except in the living room and family room which have large floor to ceiling glazing. The four faces of the house are consequently all the same and reflect the formalism of the plan within.

The front door is halfway up and reached by an external flight of stairs which carries on up to the roof terrace. One enters directly onto the ramp, the public street of the house. The formalized circulation and volume result then in a highly introverted and impregnable castle house.

Bibliography:


Fig.17 Barry Gasson and John Meunier, architects. Wendon House, Barton, 1965 (Booth and Taylor, Cambridge New Architecture, pp.196 - 198 and AD, October 1967, p.480.).

Top: roof plan. Bottom: ground floor. 2 intermediate levels
1 Family room 2 Study 3 Bedroom 4 Laundry
5 Kitchen 6 Dining room 7 Sitting room

Appendix S/37
1965
Frost House, Thundersley, Essex by Brian Frost

This house, designed for the architect's parents, was constructed around a large central fireplace, and is a tentative return to the literal images associated with traditional conceptions of a house - a hearth, a pitched roof, thick protective walls and solid embracing corners. The form of the house coincides with investigations by contemporary American architects, notably Louis Kahn, Robert Venturi and Charles Moore into the symbolic imagery of dwelling and the formality of symmetry and dominant roof form. A comparison however could also be drawn between C.R. Ashbee's Little Coppice, Pinewood Road, Iver Heath of 1905 with its strong pyramidal roof and essential domestic form.

The exterior of the house expresses mass with a deep recessed clerestory light that encircles the house above door-head height and a concrete perimeter beam which is also continuous around the house except over entrances which are also recessed to express the depth of the external wall.

The structural piers of the external walls form alcoves into which built-in fittings are inserted. The living room ceiling slopes upwards to the chimney. The compact two bedroom house gains maximum space by the centring of the fireplace which acts as the emotional, circulation, service, and structural pivot of the whole house.

Bibliography:

Fig.18 Brian Frost, architect. Frost House, Thundersley, Essex, 1965 (AD, February 1966, p.98.).

1966

House at Creek Vean, Foeck, Cornwall by Richard Rogers, Norman and Wendy Foster.

This house perched at the top of a steep slope overlooks the sea to the south, a creek to the west and north up a valley. The rooms of the house fan out to these different views. The house is built along a rear skylit circulation spine that follows the contours of the land. This spine is split by the entry axis, a pathway, beginning at a bridge from the road and carparking, crossing over the internal spine and descending a flight of steps to the boathouse on the water.

One enters the two-storey living block from above and descends to the spine which connects all the rooms, starting at the highest roof terrace and ending as a path to the underground garage. Large sliding screens open up all the private rooms to this passage so that there are long vistas throughout the house. The circulation spine also acts as a gallery for paintings and sculpture.

From above the house seems embedded into its site. The roof is covered in earth and planted with hanging creepers. The road elevation of the house consists of a 5.5m high blank wall running the full 43m length of the house broken only by a group of trees and the entrance bridge.

Materials are left in their natural state. The walls are honey coloured concrete block. The floors are blue Welsh slate. The windows are frameless toughened glass, sliding in anodized aluminium tracks.

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Fig.19 Richard Rogers and Norman and Wendy Foster, architects. House, Creek Vean, Cornwall, 1966 (AR, August 1968, pp.95 - 96 and Richard Rogers + Architects, pp.30 - 33.).
1966 - 67
Cornford House, Conduit Head Road, Cambridge by Colin St. John Wilson

The Cornford House is an example of Colin St.John Wilson's skilful and subtle use of geometry. This house represents a meeting of the desire for interior, inward looking space and outward, exterior space, organized along a north-south diagonal axis. To achieve this, two squares were overlapped on the diagonal. A main double height living square was superimposed onto a covered patio square which was reached through glass doors.

The internal square was further divided by a peristyle of three Columbian pine columns and a drop of two steps between circulation and a sitting space. At the north corner of this internal square was the fireplace lit by a highlight at the peak of the pyramidal roof which followed the rise of the chimney. Opposing this was the roof structure of the terrace which burst open outwards to the sky to externally reveal the timber truss and pole structure of its roof. Its apex was at the opposing corner to that of the chimney with its turret skylight.

To either side of the two double height interlocking squares were two single height squares, kitchen and dining room which open onto the main living space. On the first floor sit the major bedrooms, study, gallery and deck to the patio outside.

Approaching the house, the entrance court reveals a brick walled cube that has been carved away in facets. On the garden side, the cube is broken away entirely to reveal its skeletal structure. The soft timber structure of the interior breaks out of a hard protective brick shell.

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Fig.20 Colin St.John Wilson, architect. Cornford House, Conduit Head Road, Cambridge, 1966 - 67 (Webb, Architecture in Britain Today, pp.123 - 125.).

Diagram showing layout of a house with sections labeled as follows:
- Terrace
- Dining
- Kitchen
- Bedroom
- Living
- Garage
- Studio
- Porch
- Forecourt

Scale: 0 5 10 feet

Appendix 5/43
1967 - 68
Spender Housing, Ulting, Essex by Richard and Su Rogers

Behind the design of this private house and adjoining studio for an artist was the intention to develop a prototype house for single and multiple application within the widest social and technical context. The system which was developed provided for flexible planning around a service core with each unit capable of lateral expansion.

In this case, the brief for a two bedroom house plus studio, resulted in two boxes separated by a 12 metre court. The smaller unit housed the windowless, rooflit studio.

The structure of the house was exposed steel: 12-inch by 5-inch steel beams spanning 43-feet 10-inches at 13-feet 4-inch centres site welded to 12-inch by 5-inch columns effectively forming six rigid portals permitting maximum demountability and reuse of the enclosing envelope and internal partitions. The walls were corrugated plastic coated steel cladding with expanded polystyrene sandwich insulation with inner lining plastic coated plaster board or enamelled asbestos composite panels. The roof was plastic corrugated steel deck acting as a diaphragm to stiffen the portal frames in the transverse direction. The windows are a standard modular single glazing system in nylon coated aluminium frames.

The system, aimed at multiple use, was used again in the Rogers's own house at Wimbledon.

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Fig.21 Richard and Su Rogers, architects. Spender Housing, Ulting, Essex, 1967 - 68 (AD, October 1967, p.475 and Richard Rogers + Architects, pp.38 - 39.).

Appendix 5/45
Abbreviations

The following list includes commonly used abbreviations employed in architectural literature and practice and which have been cited in this thesis. Abbreviations such as U.S.A. (United States of America) have not been noted. The list has been ordered alphabetically.

A.I.A. American Institute of Architects
C.E.B.S. Commonwealth Experimental Building Station
C.H.I. Consolidated Homes Industries
C.I.A.M. Congres Internationaux d'Architecture Moderne
F.H.A. Federal Housing Authority
H.C.V. Housing Commission of Victoria
I.I.T. Illinois Institute of Technology
M.I.T. Massachusetts Institute of Technology
M.L.T.W. Moore Lyndon Turnbull and Whitaker
M.O.M.A. Museum of Modern Art
M.U.A.A. Melbourne University Atelier of Architecture
R.A.I.A. Royal Australian Institute of Architects
R.I.B.A. Royal Institute of British Architects
R.M.I.T. Royal Melbourne Institute of Technology
R.V.I.A. Royal Victorian Institute of Architects
S.A.H.A.N.Z. Society of Architectural Historians of Australia and New Zealand
S.E.C. State Electricity Commission
S.H.S. Small Homes Service
S.R.W.S.C. State Rivers and Water Supply Commission
V.A.S.S. Victorian Architectural Students Society
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