WALLS OF LIGHT – IMMATERIAL ARCHITECTURES.

Scott McQuire

Alex Proyas’ film *Dark City* (1997) begins when a man wakes up to find he is sharing a room with a woman who has been brutally murdered. His memory is hazy, fragmented. He can’t remember what happened. He can’t remember his own name. The film conjures a compendium of *noir* elements: seedy hotels, shadowy streets, a string of dead women, hard-boiled cops, a hero accused of murder, a torch singer heroine, all set in what seems to be the *noir* heyday of the 1940s. The plot, as with so many *noir* tales, revolves around a search for memory and identity. Underneath the surface of everyday life lurks a massive conspiracy. Someone – a group of strangers – is after him. They want to kill him, but no one believes it. His quest for personal identity becomes a journey into the underbelly of the city, an exposure of its double life.

*Dark City* keeps faith with the *noir* tradition in which urban alienation is cloaked with sexual overtones and redemption from the night-world is the task of an individual man. The most interesting aspect of the film is the way its striking visual design marries the possibilities of digital imaging in cinema to an urban fable in which brute materialism is explored as a narrative conceit. The city is explicitly figured as a pseudo-sociological experiment run by aliens, and a science fiction story is augmented by science fiction modes of perception – photo-realistic images which warp and morph before our eyes in “real time”. Liquid architecture is born.

The modern city is as much an image or an idea – an ideology – as a material construct, and the ways in which the city is represented play a significant role in what might be called the discourse of the metropolis, including art and architecture. New visual technologies such as the camera impact not only on the way in which we depict space, but also the way we experience it, utilise it, and inhabit it.

Under the eye of the camera, there has been a discernible and recurrent tension between attempts to figure the city as a grid of stable and monumental structures, and its apprehension as a dynamic and ephemeral territory, an oscillation which is today converging somewhere between the decline of physical landmarks and urban reference points and the loss of photographic referentiality in the digital era. While this tension has been consistently registered in attempts throughout the twentieth century to render representation more kinetic, it shouldn’t be measured out neatly in a linear transition from the still image of photography to the moving images of cinema or video. It is important to recognise that torsion between stasis and movement is equally evident within the field of photography itself – for at bottom the photograph embodies the wonderfully contradictory possibility of, as Hart Crane aptly put it, “the moment made eternal”.1 With respect to the image of the city, the tension is less to do with whether or not the image moves, but depends upon changes in the frame of perception, both in terms of speed (exposure time) and mobility (multiplicity and fragmentation of perspective). This is the field I want to begin to trace by mapping historical changes in the camera’s urban topography.

NINETEENTH CENTURY PHOTOGRAPHY: DRAWING, MONUMENT, RECORD

Alongside landscape and portraiture, architecture is one of the “classic” photographic genres. The camera, with its ability to translate the Renaissance optic of geometric perspective into an automatic image, seemed ideally suited to the rendering of the built environment.
Architecture, in its turn, was an ideal subject — it “sat” patiently for the length of the exposure. And when you consider that the slow speed of early emulsions necessitated exposure times of up to half an hour, you can appreciate that this was no small advantage. A building didn’t have to be strapped into a neck brace, as did a human body, in order to register a clear image. (While it became possible to “freeze” movement photographically in certain circumstances as early as 1859, even into the 1880s photographs of buildings seldom included people, except as specifically posed for the camera. What you do often see in early photographs are ghostly traces of human figures and other moving entities like horses and carriages. Slow emulsions turned these mobile presences into apparitions, lending early images of the city an enigmatic quality which is only partly to do with the subsequent passage of time. Looking at these unnaturally deserted streets, it seems the camera presaged the neutron bomb, that inhuman “improvement” on nuclear weapons which was designed to destroy organic life while leaving material structures intact.)

There has been much speculation in recent years about the “delayed” birth of photography — why something for which the major optical and chemical principles had been well known for several hundred years was not, in fact, invented far earlier than the nineteenth century. Given its lengthy pre-history, it is not surprising that photography — and particularly the way photographers approached buildings — was heavily influenced by established visual forms, notably the predominance of drawing as a basic design tool. Comparisons to drawing were commonplace at photography’s origins. In 1839 (the year Daguerre and Fox-Talbot both unveiled their processes to the world) an English reviewer noted:

... the effects produced are perfectly magical. The most fleeting of all things — a shadow, is fixed and made permanent; and the minute truths of the many objects, the exquisite delicacy of the pencilling, if we may be allowed the phrase, can only be discovered with a magnifying glass.2

Unparalleled detail was a principal fascination of the first Daguerreotypes, which seemed to offer a veritable incitement to decipher visual clues. Edgar Allen Poe, inventor of the modern detective story — a genre notable for its faith in the capacity of scientific reason to deduce an image of the whole from a series of apparently unconnected fragments — declared:

If we examine the ordinary work of art, by means of a powerful microscope, all traces of resemblance to nature will disappear — but the closest scrutiny of the photographic drawing discloses only a more absolute truth, more perfect identity of aspect with the thing represented.3

This aura of accuracy was important in the architecture context in which photography first appeared, coinciding with revivalist debates which invited the production of an inventory of historical architecture. Since many of the first photographers were either trained in drafting, or were painters themselves, it is not surprising that early architectural photography generally reproduced forms such as the frontal elevation and the diagonal perspective, which were familiar to viewers from illustrations.

The elevation was probably the dominant way to view buildings in the 1850s.4 The emphasis was on providing the maximum amount of information about a particular building, but this occurred within certain constraints. Compared to lithography, it was difficult for early photography to reconcile extremes of light and shade. Photographers compensated by allowing the building to “fill the frame”, which meant that the sky and surrounds of individual buildings were often excluded. Coupled to the difficulty of including people in the frame, the general effect was to isolate buildings from their settings. This abstraction was accentuated in many cases by the common practice of “whiting out” the surrounds in the final print.

Elevations were usually taken from above street level. In a practical sense, this helped to overcome the problem of converging vertical lines, enabling camera images to conform more closely to the conventions of orthographic projection. But it also played a significant ideological role, enabling the viewer to dominate the scene, and conferring a sense of visual mastery which has been a consistent strategy for negotiating the sense of rupture produced by modern technologies of vision such as photography and cinema.5 Photographic elevations which included the streetscape became more common in Paris from the 1850s in order to depict the great work of “modernisation” undertaken by Haussmann. This change in representation mirrored the change in urban conception: the aspiration to create a grand unified urban environment.

Urban photographs from this period embodied the desire to monumentalise the new city. In this regard, it is important to recognise that the metropolitan facade of nineteenth century Imperial capitals such as Paris, Berlin and London were increasingly counterpointed by a stream of images taken in the antipodes, notably Greece and the Middle East, by photographers such as Francis Frith, who levered the profits from
his trips into the world's largest postcard company. This traffic in images was an integral part of the colonial project, legitimating a social Darwinism in which the periphery was not only represented by ruins but figured as a ruin. In contrast, the metropolitan centre stood as the indisputable site of progress and modernity.

Images of ancient ruins functioned to authorise new dreams of eternity. As Roland Barthes has pointed out, this turn to photography as a general witness to history registers the deep contradictions suffusing modern social relations of time:

By making the (mortal) photograph into the general and somehow natural witness of 'what has been', modern society has renounced the Monument. A paradox: the same century invented History and Photography. But History is a memory fabricated according to positive formulas, a pure intellectual discourse which abolishes mythic Time; and the photograph is a certain but fugitive testimony; so that everything, today, prepares our race for this impotence: to be no longer able to conceive duration, affectively or symbolically.8

Part of the condition that Barthes is pointing to is the fact that photographs of the city have often outlasted the buildings and landscapes they once represented. One of the principal fascinations of the urban photographic archive is that, at the very moment photography arrives as a new art of record, the city begins to change its face at an ever faster rate. (Here Susan Sontag's observation that photography constructs the ultimate Surrealist universe melds productively with Walter Benjamin's dictum that 'no face is as surrealistic to the same degree as the true face of a city').7

It took some time for photography to descend to the streets and when it did so it was initially in the context of recording modernity's assault on urban space. As is well known, European cities were subject to phenomenal growth in the first half of the nineteenth century: between 1801 and 1861, the population of Paris doubled, while that of London tripled. Increases in the number of people living in these cities was accompanied by their physical spread. London seemed vast and apparently limitless to Friedrich Engels, who wrote in 1844 of 'a town where a man may wander for hours without reaching the beginning of the end'.8

The nineteenth century industrial city was also sharply divided along class lines. Writing in 1840, Charles Dickens noted the existence of different worlds in a single city, each of which 'has its own inhabitants; each is distinct from and almost unconscious of the existence of the other'.9 Yet, up to the mid-nineteenth century, the impact of industrialisation seems largely absent from urban representation. Most commercial photography — and by the 1850s there was a growing market in architectural photography — tended to conform to the established categories of urban topography derived from lithography. The usual menu of images consisted of the principal churches, civic buildings and palaces, major streets, bridges, parks, clubs and monuments — the ingredients of what would today be called a tourist itinerary. Writing in the British Journal of Photography in 1864, George Washington Wilson emphasised the importance of conforming to established visual habits:

I have to study the popular taste as well as my own, and must try not only to get a pleasing picture of a place, but one that can be recognised by the public: and the public is not much given to scrambling to out of the way places where a superb view may be had of a celebrated spot, if it can be seen tolerably well from the Queen's highway.10

Wilson's comment is worth taking with a grain of salt — photographers at the time generally sought to idealise their images — but it is revealing in terms of its stark contrast to the approach taken by photographers half a century later.

By the 1850s, industrial society was firmly gripped by the contradictory temporality embodied in the ideology of Progress, stretched between unlimited aspirations for future development, and the sense that the past, long taken for granted, was suddenly threatening to disappear. Photography, with its speed, relative low cost, capacity for wide circulation, and air of objectivity, offered an important placebo to this looming crisis of memory. The first major preservationist project was the Heliographic Mission of the Commission of Historical Monuments established in 1851 to record the architectural and archaeological heritage of France. While the Heliographic Mission concentrated on the ancient, it was soon followed by projects to document the urban fabric slated for demolition in the name of modernisation.

One of the earliest and best known of these surveys was the work of Charles Marville, commissioned by Haussmann's Prefecture of the Seine around 1856. For the next 15 years, Marville worked as 'Photographer of the City of Paris', adopting an unusually systematic method of photographing each street
twice from different angles, and then the successive stages of destruction and construction. What is also significant in his work – and in the multitude of similar projects which followed it (Annan in Glasgow, Boil and Dixon in London, Kopppmann in Hamburg, Burgoyne in Birmingham to name a few) – was the gradual shift in emphasis from individual views to the cumulative knowledge established by the series or set. In these urban projects, images of the city coalesce into an information flow in which relations between images assume heightened importance in establishing the meaning of individual shots. Walter Benjamin would later highlight the closeness of photographic seriality to the “reality-testing” of statistics, a system of knowledge born, like photography in the 1830s.11 Paul Virilio underlines the same point when he discusses the increasing use of photographic surveillance to map the front-line in WWI as physical landmarks disintegrated under the impact of high explosive artillery.12 But the origins of such an approach are arguably found in the “war” waged in the old metropolitan centres in the second half of the nineteenth century, as major cities outgrew their densely built narrow streets.

Some of these projects, such as Thomas Annan’s work for the Glasgow City Improvement Trust (1868-1871) – the first major urban redevelopment scheme undertaken in Britain – or Jacob Riis’s How the Other Half Lives: Studies Among the New York Tenements of 1890 – were explicitly reformist in bent, seeking to garner support for “slum clearance”. Given the prevailing class segregation of the city, they also offered the first glimpses of working-class life that many middle-class viewers had experienced, other than from the windowed safety of their railway carriages. If these images of the urban underbelly initially broke with established tourist conventions of urban view making, they rapidly inaugurated a new tradition: the metaphor of “urban explorer” commonly attached to photographers entering such uncharted territory suggests their proximity to the visual booty which flowed back home from the colonies overseas.

**POSTCARD**

It was really only in the 1880s, with the appearance of the Kodak camera and half-tone printing, that many of the things we associate with mechanical reproduction – such as a proliferation of cheap, widely circulated, disposable images – came to the fore.

One result of the rise of photo-mechanical reproduction was a new level of tolerance for the cropped image. Prior to the 1880s, photographs were conventionally reproduced singly on an entire plate. With half-tone reproduction by letterpress, images and text could be printed in the same run, which meant, according to the priorities of the time, that images were often cropped to fit the text.

The stereoscope, which was at the height of its popularity at this time, also played a significant role in customizing eyes and minds to modes of framing which previously would have been unthinkable. To a certain extent, this occurred by accident: stereoscopy demanded the production of two linked images using special plate cameras, and the time taken between focusing the lens and inserting the plate meant that objects often moved and were sometimes cut in half by the edge of the frame. But “accidents” of this kind were only productive in the context of a new sensibility in which a fragmentary view of the city – if not the world – was fast coming to the fore.

The other innovation of the time which altered visual culture was the postcard, which gradually took over the role of urban representation, but – arguably through sheer excess – eventually undermined the solidity of the ground on which nineteenth century topography had once believed itself to stand. More than any other contemporary element of metropolitan discourse, the postcard revealed the depth of the modern desire to submit the social body to exhaustive scrutiny and record.

The postcard was officially invented in 1869, when Heinrich von Stephan (the Postmaster-General of Germany) argued that a new form ofmissive was needed in order to facilitate the briefer messages appropriate to the changing times. A sign of social acceleration, it didn’t really come into its own until later in the century in the context of the circuit of World’s Fairs which exemplified the modern obsession with the display of new commodities. Both an image of modernity and a modern commodity in its own right, the postcard played a critical role in disseminating the city as a visual spectacle. Souvenir postcards from the Centennial Exhibition in Paris in 1889 established the Eiffel Tower as modernity’s first great icon, while, a decade later, the Universal Exhibition in Paris in 1900 marked a high point in postcard panopticism.

Naomi Schor has noted that major postcard series produced for the 1900 Exhibition comprised some 10,000 views of the city, not including many more specialised series. Schor adds: “In the most extensive series each number corresponds to a particular view and major sites are photographed from every conceivable angle...”13 Such an inventory, made district by district and sometimes street by street, literally constructs a “territory of images” (to borrow Allan Sekula’s evocative phrase), grafting the photographic grid of a virtual city over Hausmann’s boulevards and arrondissements. Paralleling the photographic apparatus
mobilised in prisons, police forces, workhouses, asylums, and other disciplinary institutions of the time, the postcard exemplified the extension of the panoptic gaze into the domain of pleasure as much as power. Similar undertakings were repeated (although rarely as exhaustively or systematically as in Paris) over much of the globe. By World War I, a billion postcards were being delivered annually in England and Wales alone, leading James Douglas to question the totalising reach of the camera in a tone which is still familiar today:

Nobody need fear that there is any spot on the earth which is not depicted in this wonderful oblong. [...] It is impossible to gaze upon a ruin without finding a Picture Postcard of it at your elbow. Every pimple on the earth’s skin has been photographed, and wherever the human eye roves or roars it detects the self-conscious air of the reproduced. The aspect of novelty has been filched from the visible world. The earth is eye-worn.

What the success of the postcard confirmed was the increasing uncoupling of image and referent, as images took on a new sense of autonomy, feeding the modern understanding of the city as a fragmented, discontinuous environment, essentially unrepresentable except as a series of partial, shifting images, too numerous to be perceived all at once. When points of view multiply so excessively, it is more difficult to believe in the authority of a master shot or the stability of a single, centred perspective. It is this sense of a city of ex-centric spaces in perpetual transformation which, consciously or unconsciously, informs the work of every photographer in the twentieth century.

NEW VISIONS

The new century brought a new city and a new way of seeing. In the twentieth century, the undisputed icon of the modern city became the skyscraper, less a practical answer to a shortage of urban space than a symbol of unbridled faith in capitalism and the ideology of progress. Early images of these so-called “Cathedrals of Commerce”, such as Steiglitz’s renowned City of Ambition, showing the New York skyline in 1910 tended to conform to established topographical views.

But the architectural revolution arising from steel frame construction, which switched the primary axis of central urban development from the horizontal to the vertical, was soon paralleled by a series of ruptures in representation. The extreme verticality of modern structures clearly posed new problems for artists. Seen from a distance, they dominated the horizon, and yet, from immediately below, they defied the eye’s capacity to grasp them whole.

However, it is far too simple to say that the need to master new structures inspired the new photographic vision. Nineteenth century photographers had faced the spires of Gothic Cathedrals, and never felt authorised to tilt the camera up, or down for that matter: as one historian of architectural photography has commented: “using radical perspectives seems to have gone against their sense of what was fitting”. It is in the context of a more far-reaching shift in subjectivity that the new photography appeared in the 1920s – the decade that cinema consolidated its place as a major cultural institution and the construction of skyscrapers boomed. The factors contributing to this transformation are well known, so I will only briefly list a few here. In the decades between 1880 and World War I, the city concentrated a vast number of technological innovations into its infrastructure: electrical power and electric lights, steel construction and assembly lines, automobiles and aeroplanes, radios and telephones, subways and elevators, synthetic materials and X-rays, air-conditioning and the beginning of television. The modern industrial city, with its new modes of display, transportation and communication, its dazzling array of commodities and crowds, became a living experiment in specia effects whose impact on the human sensorium promised to alter the parameters of human identity.

As intoxicating as the image of the city was the fact that the fundamental grounds of human knowledge were themselves shifting – exemplified by the new physics of Relativity and quantum mechanics and the new art inspired by the Cubist destruction of Renaissance perspective. Revolution was not only in the air, but had come down to earth in Russia, and seemed imminent elsewhere. It was in this context of revolutionary ferment that photographers, such as László Moholy-Nagy, a key member of the second phase of the Bauhaus at Dessau and the Russian Constructivist Aleksandr Rodchenko, proclaimed the need to adopt unusual camera angles as a means of actively transforming human perception. Their common impulse, shared by many other photographers and artists, was to de-familiarise familiar scenes, to shake ingrained habits of perception, and in this way prepare the ground for the widely heralded arrival of the “new man”.
Even in the USA, where the impulse to political revolution was more muted and the spread of the machine world seemed more mundane, the new photography, with its ultra-sharp focus and glossy prints, took on the force of moral stance, starkly contrasted to the blurry, hand-touched "art" photography of 1890s Pictorialism. Edward Weston, part of the Camera Work group around Stieglitz in New York, argued:

Only with an effort can the camera be forced to lie: basically it is an honest medium: so the photographer is much more likely to approach nature in a spirit of inquiry, of communion, instead of with the saucy swagger of self-dubbed 'artists'. And contemporary vision, the new life, is based on an honest approach to all problems, be they morals or art. False fronts to buildings, false standards in morals, subterfuges and mummeries of all kinds, must be, will be scrapped.  

Few buildings in the US, other than industrial structures such as grain silos, fulfilled this modernist credo in the 1920s – certainly not the skyscrapers, whose curtain walls remained a blank canvas for unbridled displays of architectural eclecticism. Ironically, it was in the old world of Europe, and especially Germany, where the most striking examples of the new architecture were built – and new conventions for posing buildings were developed. One was photographing a car next to a building in order to signal the latter's incontrovertible modernity: Lucia Moholy-Nagy's 1926 image of the new Bauhaus building at Dessau was precocious in many ways, not least for including a car in frame even before the road on which it sat had been paved! (Le Corbusier was the key practitioner of this trope, constantly juxtaposing images of modern architecture with images of modern machinery in his journal L'Esprit Nouveau. The 1929 film L'Architecture d'Aujourd'hui, for which he wrote the script, contains a montage sequence which presents a shot of a car, followed by the intertitle: "A machine for driving in...", then an aeroplane ("A machine for flying in...") and finally Corbusier's Villa Savoye ("A machine for living in..."). Le Corbusier himself then pulls up in the villa's driveway.)

To be modern was to be mobile. But the modern city-machine, in which all parts had become mobile and all surfaces seemed to interpenetrate one another, where telephones and radio seemed to extend human presence in space as photography and cinema extruded vision across time, was a milieu which deeply disoriented its inhabitants. Or rather, it provided so many orientations that it overwhelmed with abundance, suspending the eye in perpetual fascination. This new environment, with its forest of signs and fantastic shop window displays was something which attracted the Surrealists, who, unlike Le Corbusier and his followers, were fascinated by glass not for its transparency, but its translucency; reflective glass which exposed the self to an uncanny doubling.

The most promiscuous modern sign was the printed image itself, which suddenly seemed to be everywhere, in postcards and snapshots, advertising catalogues, mass circulation newspapers and the new illustrated magazines. From this litter of images grew some of the most distinctive metropolitan visions of the 1920s: photo-montages, in which the increasing abstraction of the image from its putative referent in the real world became the basis for a new construct.

On the one hand, photo-montage can be seen as a response to the density of urban experience, the loss of natural co-ordinates and their replacement by the new "nature" of the mechanical-industrial environment. In photo-montage, signs are multiplied, fragments piled upon fragments, the camera's vision is increasingly estranged from the human eye, but perhaps moves closer to subjective experience. The invention of photo-montage signalled a growing distrust in certain quarters in the capacity of photo-realism to register more than the surface appearances of modern experience: as Brecht put it, when reality slips into the functional, realism must be built up, constructed, posed. (Moholy-Nagy offered a similar rationale, claiming photomontage aimed to produce a "concentrated gymnastic of the eye and brain to speed up the visual digestion and increase the range of associative relationships".)

What photo-montage did in space (on the page), cinema could do along the axis of time. Film made the duration of perception an integral aspect of the image, while camera movement and montage made the image a mobile frame of perception akin to a moving vehicle. In the midst of the new city and alongside the new photography, the 1920s was the decade of the "city symphony" film. Prominent examples include Paul Strand and Charles Sheeler's short Manhattan (1921), a Whitemanesque paean to the skyscrapers of New York, Alberto Cavalcanti's pioneering 1926 study of Paris Nothing But Time, which opens with a memorable shot in which a picturesques scene of the city freezes and is then torn into pieces, like a postcard being shredded; and Walter Ruttman's Berlin: Symphony of the City (1927) which eulogised the pace and rhythms of modern life. Paradoxically, the best depiction of the kinetic energy of the modern city came from a Moscow still in the first stages of industrial transformation. Dziga-Vertov's Man with a Movie Camera, released in 1929, embraced the tension between the still and the moving image as an explicit
element of its constructivist aesthetic, revelling in showing its viewers how its new vision of the city was built up out of discrete parts.\textsuperscript{19}

In a 1927 essay in defence of Eisenstein's \textit{ Battleship Potemkin}, Benjamin extolled cinema's capacity to reveal the quotidian secrets of urban space:

To put it in a nutshell, film is the prism in which the spaces of the immediate environment, the spaces in which people live, pursue their avocations, and enjoy their leisure – are laid open before their eyes in a comprehensible, meaningful and passionate way. In themselves these offices, furnished rooms, salons, big-city streets, stations, and factories are ugly, incomprehensible, and hopelessly sad. Or rather, they were and seemed to be, until the advent of film. The cinema then exploded this entire prison-world with its dynamite of fractions of a second, so that now we can take the extended journeys of adventure between their widely scattered ruins. The vicinity of a house, a room, can include dozens of the most unexpected stations, and the most astonishing station names. It is not so much the constant stream of images as the sudden change of place that overcomes a milieu which has resisted every other attempt to unlock its secret, and succeeds in extracting from a petty-bourgeois dwelling the same beauty we admire in \textit{An Halfa Romeo}. And so far, so good.\textsuperscript{20}

But the politics of this increasing tendency towards the abstraction of the image were inevitably ambiguous. As Siegfried Kracauer suggested in the same year, on the one hand the camera offers a "warehouse of appearances" at the very moment when the natural environment is undergoing unprecedented change:

Just as consciousness finds itself confronting the unabashedly displayed mechanics of industrial society, it also faces, thanks to photographic technology, the reflection of the reality that has slipped away from it.\textsuperscript{21}

However, the photographic fragments which inculcate what Kracauer termed "distracted" perception offer only symptomatic insight into modern social conditions, revealing the chaotic and fragmentary nature of social existence under capitalism. As Kracauer put it, by offering appearances in a configuration which is so arbitrary, the photographic blizzard enables us to imagine a different configuration of those elements outside the confines of tradition. Writing a few years later in the early 1930s, Walter Benjamin was still able to extol the revolutionary virtues of the new media, and its privileged relation to modern urban experience:

Of the countless movements of switching, inserting, pressing and the like, the ‘snapping' of the photographer has had the greatest consequences. A touch of the finger now sufficed to fix an event for an unlimited period of time. The camera gave the moment a posthumous shock, as it were. Haptic experiences of this kind were joined by optic ones, such as are supplied by the advertising pages of a newspaper or the traffic of a big city. Moving through this traffic involves the individual in a series of shocks and collisions. At dangerous intersections, nervous impulses flow through him, like the energy from a battery.\textsuperscript{22}

The risk that both Kracauer and Benjamin saw was that, in the absence of political change, such experiences would install themselves as a new nature, leaving the urban dweller benumbed and alienated, twitching to the mechanical drill of commodified spectacle.

\textbf{LIQUID ARCHITECTURE:}

I don't think it's an exaggeration to suggest that camera images have transformed our place in the world; that is to say, they have altered both our relation to place and our sense of world. And despite various attempts to contain the sense of rupture posed by the grafting of camera eyes onto the human eye, we still seem to lack an adequate protocol for re-situating ourselves. Perhaps this explains the astonishment, mingled with anxiety, which has greeted contemporary techniques of digital imaging, with their promise to transform perception and representation as greatly as developments in photography and cinematography did earlier this century.

With the capacity to composite discrete elements seamlessly into live action shots, or to generate photo-realistic images entirely in the computer, photography and cinematography have become increasingly malleable, further loosening their referential bonds to the physical world and returning them to something approximating the traditions they once sought to escape: drawing and painting. Rather than montage
produced by the collision of separate shots, digital technology enables montage within individual images, exemplified by the slow melt of morphing.

What should we make of the fact that, at the same time the image has become more liquid and increasingly abstracted from any system of physical reference, digital technology has become increasingly popular in architecture? This marks a significant shift from the oft-noted resistance to the computer in architecture in the 1970s and 1980s, which followed the initial burst of enthusiasm in the 1960s.23

Clearly, computers have changed enormously in this time, and debates over virtual architecture are too numerous and complex to more than index here. Part of the historical sub-structure of these debates is the history of interactions between architecture and camera which I have begun to trace here. Camera images are the most common way for buildings to “circulate”, allowing the globalisation of architectural horizons even for those who don’t travel. And architects have always loved the camera for its capacity to idealise their buildings, through lighting, framing and other elements of mise-en-scene. Some critics have gone as far as to accuse contemporary architects of “director-envy”, referring to the level of control a film director is able to exert over the finished product, while others would no doubt see some film-makers as frustrated architects.24

A significant part of the attraction that digital technology holds for contemporary architecture is not its design capabilities, but its enhanced imaging capacity (corresponding to the second wave of computer graphics which saw photorealism become the prime goal). Rather than using computers to translate the raw data of project parameters into a menu of client choices, or to produce hardline drawings from hand sketches, digital technology is today most often equated with providing realistic images of prospective designs; images which can be rotated and viewed from every angle, manipulated and coloured, walked through and flown over. The virtual camera of the computer seems to be bringing architecture ever closer to the virtual studio of contemporary film-making.

This convergence has produced heated debates within architectural circles over the way computers are used: should the aim be to reproduce something like an interactive photo-realism? Or should architects seek to create new conceptions of space and form by utilising the computer’s capacity to generate images from algorithms and mathematical data to model the invisible lines of force which structure contemporary cities?25 Marcus Novak, a well-known advocate of digital avant-gardism, stresses (as Corbusier did in the 1920s) the need for architecture to understand contemporary science: “To be effective, the strategies we employ to generate a new architecture must reflect our current understanding of physics and cosmology, utilise our most current concepts and methods of understanding the world...”26 For Novak this means: “Learning from software supersedes learning from Las Vegas, the Bauhaus or Vitruvius.”27

Even if this is true, I’m not sure that it also supersedes the need to learn from the camera or the politics of spectacle it has entrained. While Novak extols morphing as a superior form of 3D collage, I think he underestimates the extent to which the disjunctive vision of the camera is now embedded in the computer system itself. As film theorist Lev Manovich has pointed out, the avant-garde aesthetics of collage and montage are embodied in software commands such as cut and paste, which are the most basic operations one can perform on digital data.28

This suggests that, whatever visions of the city come to dominate the twenty-first century, they will consist of increasingly layered images, produced by the manipulation of increasingly heterogeneous and abstract data. While this will undoubtedly provide architects and film-makers with new territories to conquer, and offer their audiences new pleasures for their hungry eyes, it still leaves hanging the question as to how the co-ordinates of home, self and community are to be plotted in an urban environment whose commodified spaces and accelerated rhythms no longer seem to offer a repository for collective memory. To return to Benjamin’s analogy, we may have blown the old city apart with the camera’s dynamite, but we haven’t yet developed the social and political values that might allow us to reconstruct its image – let alone its spaces – anew.

I want to close by returning to the liquid architecture of Dark City where I began. Read symptomatically, its fable of strange beings who conjure a city out of stolen memories and change it overnight for their own ends, offers a parable for the mutation of the cityscape which has proceeded apace with urban “redevelopments” in the 1980s and 1990s. Our cities dissolve and coagulate around us, populations are dispersed, lives re-routed, identities changed, subject to invisible forces which render the metropolis as malleable as the moving images which have been its mirror for over a century. To put a name to these forces – which are not the work of alien strangers but of an implacable economic system – and to address the politics of urban spectacle it authorises, needs to be as urgent a task for contemporary architecture as is understanding the abstract spaces of physics or the virtual spaces of software.
ENDNOTES


5 This is also clear in the popularity of photographic panoramas, which derive from the earliest topographical views of the city developed in late fifteenth century cartography. (As early as the 1850s, Nasar had photographed Paris from balloon, pointing forward to the crucial strategic role that aerial and satellite surveillance plays in modern warfare.)


9 Blué, ‘Patterns of Fact’ 36.

10 Quoted in Blué, ‘Patterns of Fact’ 43.


15 Quoted in Schor, ‘Cartes Postales’ 216.


17 Quoted in Sontag, On Photography 186. Weston’s statement counterpoints the idealisation of architectural “openness” by Sheldon Charney in his The New World Architecture, (1930): “Many times I have mentioned the word ‘openness’ as an ideal of the new home building. I use the word more with than a spatial connotation. It seems to me that there is going on a freeing process in regard to both our physical and our mental lives. While the old walled-in house, the essentially caste-refuge sort of structure, is giving way before less-confined living space, women are discarding most of their clothes, and human minds are freeing themselves slowly from old superstitions, old limiting religions, old narrowly selfish motives. This is a general coming-forth – which seems to me selected for the better health and the greater happiness of mankind.” Quoted in D. Albro, Designs Dreams (New York: Harper and Row/MoMA, 1986) 12.


19 Vertov constantly uses moving trams, as an image and as a platform to film from, recalling Walter Benjamin’s observation made when he visited Moscow in 1927: “Travel by tramcar in Moscow is more than anything else a tactical experience. Here the newcomer learns perhaps most quickly of all to adapt himself to the curious tempo of this city and to the rhythm of its pestant population. And the complete interpretation of technological and primitive modes of life, in this world historical experiment in the new Russia is illustrated in miniature by a streetcar ride.” See Walter Benjamin, ‘Moscow’ in W. Michael et al. (eds.), Selected Writings 32.


22 Benjamin, Illuminations 176-77.


24 Kester Kammersgarden, 160, A lot of architects’ obsession with film is director-ey” Echo and Narcissus in Architecture and Design: Architecture and Film Special Issue (1994) 35.

25 In comparison to the modern architectural revolution, which arose from the application of new materials such as steel, reinforced concrete and glass, the major challenge facing postmodern architecture is less the production of new structures than of new social spaces and social relations via screen interfaces and new protocols for the circulation of information.


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