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The Concept of Functional Differentiation and the Logic of Comparative Functionalism

A Study in Sociological Theory

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Abstract

The concept of functional differentiation is one of sociology's oldest and most lasting analytic tools, having its roots at the very beginning of the modern discipline. Among both classical and contemporary scholars, one sees a pervasive belief that functional differentiation – broadly understood as the process by which functional distinctions emerge between social units, or as the degree to which social units diverge in their functional orientations – is an especially significant construct in the comparative study of social structure. Despite this prominence, the notion of functional differentiation is currently marred by significant ambiguity, with uncertainty surrounding its meaning, purpose, and general utility in the contemporary discipline. Addressing this confusion, this thesis presents an explicative analysis of the functional differentiation construct, tracing its historical development through the work of four major figures in functionalist sociology: Herbert Spencer, Emile Durkheim, Talcott Parsons, and Niklas Luhmann. It evaluates the intellectual foundations on which their particular understandings of functional differentiation rest, delineates points of divergence in their respective approaches to 'differentiation theory', and considers the enduring problems which have frustrated attempts to translate their ideas into a concrete program of cross-societal comparative research. Through these discussions, it is argued that theorists of functional differentiation have, due to persistent conceptual issues in their understanding of three key terms (society, structure, and function), consistently struggled to provide an adequate empirical interpretation of the differentiation construct, and have, as a result, left us without a satisfying defence of its theoretical or explanatory significance. The thesis thus contributes to a broader critique of the logic of comparative functionalism as a general method in macrosociological inquiry.

Declaration

This is to certify that:

(i) the thesis comprises only my original work towards the degree of Doctor of Philosophy,

(ii) due acknowledgement has been made in the text to all other material used,

(iii) the thesis is fewer than 100,000 words in length, exclusive of words in tables, maps, bibliographies and appendices.

Signed

Mitchell J. Taylor

Preface

This thesis was supported by an Australian Government Research Training Program (RTP) Scholarship and a Melbourne Research Scholarship.

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List of Abbreviations

DL	The Division of Labour in Society	(Durkheim 1984)
PS:1	The Principles of Sociology, volume 1	(Spencer 1898)
*PS:*2	The Principles of Sociology, volume 2	(Spencer 1898)
*PS:*3	The Principles of Sociology, volume 3	(Spencer 1898)
RSM	The Rules of Sociological Method	(Durkheim 1964)
SS	Social Systems	(Luhmann 1995a)
TS:1	Theory of Society, volume 1	(Luhmann 2012)
*TS:*2	Theory of Society, volume 2	(Luhmann 2013a)

Introduction

"Ever since there has been sociological theory it has been concerned with social differentiation" (Luhmann 1990a, 409). While claims of this kind have become a customary starting point in discussions of the differentiation concept, they often appear, at face value, to be little more than truisms. As its commonality attests, the differentiation term seems indispensable to most scientific disciplines, which must necessarily delineate distinct objects, and must then consider those processes by which distinctiveness is produced. The common claim must therefore be amended. What is notable about sociology is not that it considers social distinctions, or has done so since its inception, but that it has maintained an especially strong preoccupation with distinctions arising from divergence in *function*. Indeed, the focus on functional distinctions has been so strong that the differentiation term is today almost wholly associated with its functional sub-type. While functionality is but one principle on which social elements may be divided and organized, and while one can also speak of differentiation in *rank*, *culture*, and *interest* (North 1926, 5), discussions of *social* or *structural* differentiation are typically concerned with *functional* differentiation alone.

Despite the long history of inquiry in this area, and the evident enthusiasm it has often aroused, many have questioned whether our understanding of functional differentiation shows concrete evidence of progressive development. Rueschemeyer (1977, 1), for example, noted some four decades ago that a genuine theory of functional differentiation was "still more a goal than an accomplished reality." So-called "differentiation theory" was, he argued, not a well-integrated set of general definitions, propositions, or causal hypotheses, but a ragtag assortment of metatheoretical assumptions, conceptual schemes, and descriptive generalizations about the directional tendencies of long term social change (Rueschemeyer 1977, 1). For this reason, differentiation theory had – despite the ambitions of its key progenitors – failed to inspire a long-standing program of empirical research (Rueschemeyer 1977, 2).

Today, the situation seems largely unchanged. While the notion of functional differentiation continues to enjoy widespread appeal in certain sectors of the discipline, the concept is marred by a number of prominent issues, and is rarely deployed as an empirical variable in macrosocial research. Its ambiguities are numerous, its use

inconsistent, and its theoretical utility highly questionable. There is, quite simply, widespread confusion as to its general meaning, purpose, and merit – even among those who advocate for its use. As such, it seems high time for the concept to receive a thorough explication. The present thesis is intended as a contribution to this goal.

Any analysis of functional differentiation is immediately confronted by difficulties of scope. In collating all those authors who have been associated with the notion of functional differentiation we amass an extraordinarily diverse array of theoretical perspectives. This includes those who come from an explicitly functionalist perspective, and discuss the differentiation of functional institutions (Spencer), action systems (Parsons), or function systems (Luhmann); those who come from a more hermeneutic position, and discuss the differentiation of cultural systems (Dilthey), life-orders (Weber), or sovereign spheres (Kuyper); those who come from a phenomenological perspective, and speak of the differentiation of interpretive frames (Goffman), unique realities (Berger and Luckmann), or provinces of meaning (Schütz); and those who comprise what is commonly called 'field theory', and who speak of distinctions between different competitive fields (Bourdieu) or fields of strategic action (Fligstein and McAdam).

Each of these theorists speaks to a process which is broader and more inclusive than that described by the economic concept of the division of labour (Rueschemeyer 1977, 2; Smelser 1959; North 1926, 12). Rather than concentrating on functional divergence in occupational roles, or focusing specifically on tasks for which remuneration is offered, they postulate a broader process of *institutional specialization*: a situation in which broad, macro-social entities – spheres, subsystems, fields, or similar – gradually disentwine and become more distinct. Some of these theorists describe these entities as having different functions; others merely consider them to possess different mandates, play different roles, address different purposes, or privilege different activities. Nonetheless, each has, at some point, been explicitly said to have advanced a theory of *functional* differentiation.[1]

[1] Many examples of this can be listed. Hilgers and Mangez (2015, 5) speak of field theory as a variant of differentiation theory; this is extended by Lahire (2015). On the phenomenological tradition, note Thomas (2013, 30), who argues that "[f]unctional differentiation is the centrepiece of Berger and Luckmann's (and almost everyone's) description of the modern world." Note also the equivalence made in Ziemann (2007, 221), who argues that Luhmann understands functional differentiation, "in line with many other sociologists from Durkheim and Weber to Parsons and Bourdieu, as a key characteristic of modern

Efforts of this kind have greatly expanded the boundaries of the differentiation construct, and have thereby subjected it to a gradual process of conceptual stretching (see Sartori 1970). The concept has, in other words, been extended to a number of divergent conceptualizations, and has by consequence lost precision. In considering all of the aforementioned scholars as theorists of functional differentiation, or in arguing that they each participate in a single theoretical enterprise, we ignore the fact that they are committed to vastly different meta-theoretical positions. This means that each author does not simply have a different 'theory' of functional differentiation, in the sense of providing different explanations of the same phenomenon; rather, they *see* this phenomenon in entirely incommensurable ways. In attempting to group them under the same banner we construct a category with dubious scholarly utility.

Rather than speaking of differentiation theory as a single enterprise, it is better to speak of different *research traditions* within which notions of differentiation have been deployed. In speaking of research traditions, we borrow a term from Laudan (1977), who introduced the concept in his general philosophy of science. For Laudan (1977, 71-72), specific theories – that is, sets of related propositions with which one can make "specific experimental predictions" or provide "detailed explanations" of some particular phenomenon – will always be situated within broader sets of general presuppositions. They will rely, for instance, on certain *metaphysical* and *methodological* commitments: beliefs about the appropriate objects and methods of research (Laudan 1977, 79). These commitments form the basis of a research tradition. While such traditions house specific theories, each extend beyond them, and can "go through a number of different, detailed (and often mutually contradictory) formulations" without dissolving (Laudan 1977, 78-79). The unity of a research tradition is thus found at the level of meta-theoretical commitments. One 'belongs' to a tradition by sharing its commitments, and one repudiates it by referring to entities, methods, or explanatory mechanisms which the tradition does not recognize or else considers illegitimate (Laudan 1977, 78).

Although each of the above authors use the differentiation term, or speak to similar social processes, their specific theories of functional differentiation are distributed

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society." A similar grouping of theorists is found in Kaldewey (2015, 89), who argues that Dilthey's approach to cultural systems, Weber's approach to value spheres, Parsons' approach to subsystems, Luhmann's approach to function systems, and Bourdieu's approach to social fields "have enough in common to be subsumed under the general label of *functional differentiation.*"

across distinct research traditions. In Spencer, for example, the notion of functional differentiation implies the specialization of component *parts* within some encompassing *system*, to whose wellbeing or needs the function term refers. By contrast, Weber's theory of differentiation makes no reference to a supervenient entity; instead, differentiation is read – or, more accurately, read *into* Weber's work – as the process by which distinct 'spheres' of value, or distinct domains of human activity, are brought into sharper relief (Tyrell 1998). Thus unlike the Spencerian model, in which the *integration* of differentiated components is a key feature, Weber reads differentiation as a process of cultural *fragmentation*, which the individual is forced to navigate. As such, these two theorists have little in common at the level of *metaphysical* commitments. The same may be said of their *methodological* commitments: Spencer approaches social inquiry from a resolutely positivist perspective, whereas Weber is typically thought to display a more interpretivist stance.

As different research traditions begin with incommensurable assumptions, and possess entirely different standards of validity, there is little sense in attempting to explicate and evaluate concepts *across* traditions. As such, the present dissertation focuses solely on a specific research tradition, in which the theorization of functional differentiation has been an especially prominent element. Though scholars within this tradition have diverged on their precise conceptualization, and on their analyses of differentiation's causes and consequences, their ideas about this process stem from a similar set of meta-theoretical commitments. These commitments include:

a) Commitment to the idea of *functional analysis*, with all the epistemological and ontological loyalties this entails.

b) Commitment to what may be termed, following Zelditch (1971), a *comparativist*, rather than a *historicist*, mode of inquiry.

c) Commitment to an *interdisciplinary* model of scientific analysis, or to the use of general concepts which are in principle transferable across disciplinary borders.

Together, these commitments catalogue some definitive features of sociological functionalism, conceptualized here as a single research tradition. I contend that this tradition houses a distinct concept of functional differentiation and a wide-ranging body of specific theories which make use of the term. These theories are the target of analysis

in the present thesis. My intention is to clarify the meaning of the differentiation concept within the functionalist tradition, to trace the development of associated theories through four prominent theorists (Herbert Spencer, Emile Durkheim, Talcott Parsons, and Niklas Luhmann), and to evaluate whether this chain of theory, which stretches back to the beginnings of the discipline, displays any evidence of progressive advancement with respect to the fundamental aims of comparative social inquiry. In so doing, I question not only what is meant by the functional differentiation term, but whether the tradition in which it first arose, and in which it was most extensively developed, can provide us with a satisfying defence of its continued use.

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To better delimit our object of inquiry, and to justify the selection of our four key theorists, it is instructive to demonstrate how the functionalist approach to differentiation theory diverges from approaches evident in alternative research traditions. Distinctiveness can be demonstrated via the three key commitments mentioned above:

1) *The commitment to functional analysis*

The first commitment relates to the *nature* of the functional differentiation term. While a number of traditions use this concept, or have been associated with it by secondary scholarship, they do not each operate with properly *functionalist* assumptions. The characteristic feature of sociological functionalism is, as Turner and Maryanski (1988) argue, a notion of functionality whereby the action of a *part* is linked with some quality, capacity, or condition of a *whole*. Throughout the thesis, I will refer to this notion as the *mereological* model of functionality. In this model, it is assumed that some aspect of a designated whole is dependent on the proper working of the parts contained therein, these workings being considered functions. Differentiation occurs when parts become more specialized vis-à-vis the needs or capacities of their containing whole.

In alternative research traditions, this specific conceptualization is often absent. For example, Tyrell (1998) notes the existence of a distinctly German tradition of differentiation theory, traceable to the work of Dilthey and Weber. As discussed in our comments on the latter, this tradition typically describes differentiation as a process by which distinct ‘spheres’ of human action, or distinct ‘systems’ of human culture, are

afforded greater autonomy. While some of its prominent theorists – including Dilthey himself – refer to these spheres as having different functions, and have thus been described as theorists of functional differentiation (e.g. Kaldewey 2015, 89-90), they do not typically conceptualize functionality via the mereological model. Instead, elements are said to be differentiated whenever they perform different actions, contribute to different cultural projects, or serve different values.

Because this thesis is focused on the functionalist research tradition, we will only examine theories of differentiation which deploy the mereological model. Theories in which the function term is indiscriminately applied to any activity, or in which consideration of some systemic whole is absent, are thus excluded. In this category are the theories of figures like Weber and Dilthey, who treat societies as abstract ideals, and who cannot then tie the function term to some capacity or condition of an existing social *entity*. For the same reason, I also exclude theories developed in the phenomenological tradition, as well as those which belong to the tradition of field theory. Though theorists in these research traditions may, on occasion, speak of functions, and of the differentiation of 'functional' entities, they do not typically conceptualize these functions in accordance with the mereological model; indeed many are explicitly hostile to sociological functionalism. As such, they do not share the commitments of the tradition under study.

2) The commitment to comparative inquiry

The second commitment relates to the *purpose* of the differentiation concept. In many of these alternative traditions – especially that of Weber and Dilthey – the differentiation concept is primarily treated as an *interpretive* tool, and typically that which is being interpreted is the developmental history of Western European culture. The concept is, in other words, connected to a thematic account of *modernity*, and is thereby wedded to a specific context and period. The major developments associated with Western modernity are reformulated as instances in which a specific institutional complex gains autonomy from others; one makes sense of these changes by considering them as part of a general pattern of functional differentiation.[2] In these accounts, the

[2] For example, Alexander gives the following description of the "process of differentiation":

> "Institutions gradually become more specialized. Familial control over social organization decreases. Political processes become less directed by the obligations and rewards of

concept of differentiation is not a means to *explain* the transitions in question; rather it functions as a concise and convenient image to convey – and often to judge – the general trajectory of the age. If an explanation of this pattern is sought, it will not be formulated in the manner of generalized laws, but in the particularistic, contextual mode of explanation common to more idiographic analyses.

Approaches of this kind are characterised by what we can, following Zelditch (1971), refer to as a *historicist* model of inquiry. Historicist studies seek to produce contextual, localized knowledge about specific facts or events. Emphasis is placed on particularism, subjectivism, and holism. It is argued that the *meaning* of a particular cultural trait can only be interpreted in the context of its culture, and that the formulation of generic, cross-cultural variables relies on a gross violation of ethnographic fact (see, for example, Leach 1964, 5; 1959). Thus while one might, under the historicist paradigm, argue that modernity was marked by a process of rationalization, and may conceptualize this as the differentiation of 'religion' from 'science', one would not attempt to present a universal definition of these two clusters, nor aim to determine their co-presence (and its correlates) across a range of distinct societies. One would instead hold that the meaning of terms like science and religion (and, indeed, of differentiation itself) is always bound to a particular cultural context, abstraction from which is intrinsically damaging to the goal of understanding (Zelditch 1971, 277).

The functionalist tradition begins from an entirely different set of meta-theoretical assumptions, for it is typically committed to a broadly *nomothetic* model of inquiry, or to the discovery of causal generalizations which hold *across* different societies. Under this model, abstraction is not only permissible, but mandatory: the meanings of key concepts cannot be unique to specific societies because propositions including these concepts could only then apply to particular cases. For this reason, functionalists do not generally depict functional differentiation as a historically specific process or event; rather they treat it as a generic variable, applicable in principle to all societies. One sees this in their use of the function term: rather than using it to delineate *any* action which a

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patriarchy, and the division of labour is organized more according to economic criteria than by reference to age or sex. Community membership can reach beyond ethnicity to territorial and political criteria. Religion becomes more generalized and abstract, more institutionally separate from and in tension with other spheres. Eventually cultural generalization breaks the bonds of religion altogether. Natural laws are recognized in the moral and physical worlds and, in the process, religion surrenders not only its hierarchical control over cultural life but its institutional prominence as well." (1990, 1)

social element might perform, or tying it to specific problems of specific societies, members of the functionalist tradition have typically sought to define functions with reference to universal, invariant catalogues of 'societal pre-requisites'. This ensures that the meaning of the term is stable across different contexts, and allows one to speak of functional institutions which exist, in principle, in every society (Zelditch 1971, 275; Goldschmidt 1966).

Conceptualization of this kind is oriented to the demands of *comparison*: an essential component of nomothetic inquiry and a key feature of functionalism as a research tradition. From a nomothetic perspective, one 'explains' trait *t* when one demonstrates that *t* is a determinate consequence of initial conditions *c,* and is predictable from knowledge of them (Zelditch 1971, 278; Hempel 1942). To 'theorize' functional differentiation is, under this model, to hypothesize a relationship between the level of differentiation and a potential covariate, which might explain differentiation (if differentiation is taken as *t*) or, conversely, be explained by it (if differentiation is taken as *c*). One would then seek to demonstrate concomitant variation, and to confirm the absence of confounding factors (Zelditch 1971, 267). Comparison is here of fundamental importance, because to compare is to control, and to control is to augment one's ability to make reliable inferences about the interdependence of variables (see Sartori 1991, 244; Zelditch 1971, 288).

I take this aim to be a point of commonality in the functionalist research tradition, which is focused on the development of *general* claims, and which deploys comparison towards this end. As such, theories in which functional differentiation is conceptualized as a singular historical event, or is wholly associated with the description and interpretation of Western modernity (rather than the more comparativist notion of *modernization*) will not be discussed. Instead, I will focus on those who deploy differentiation as a comparative construct, applicable in principle to all social formations and identical in meaning across them.

3) The commitment to interdisciplinarity

The final commitment relates to the *style* of theorizing associated with the functionalist tradition, and in particular to its use of interdisciplinary concepts and arguments. In the classic thinkers, this commitment stemmed from a shared belief in the unity of science, and from the experience of these men in other fields of inquiry. In later theorists, it

came through explicit engagement with the interdisciplinary program of general systems science. Such approaches were motivated by a conviction that concepts, models, and methods could apply *across* distinct disciplines, despite any material differences in their objects of study. Indeed, the functionalist model of social differentiation is itself borrowed from other sciences, and is best described via analogical links to two of its most important sources of inspiration: the division of labour in manufacture, a concept developed in economics, and the division of labour in physiology, a concept developed in biology.

The interdisciplinary commitment of the functionalist tradition stands alongside its other two commitments, each working to support the others. Both the mereological model of functionality – which underlies sociological functionalism – and the nomothetic model of explanation – which underlies the comparative approach – were initially developed in the natural sciences, and were incorporated into sociology via a range of analogical inferences. Here, the conceptualization of society as a *system*, equivalent to those studied in other disciplines, proved essential. In more historicist accounts of social differentiation, such as the one proposed by Weber, societies are often treated as convenient theoretical abstractions: if defined or identified at all, they are generally afforded ambiguous, indeterminate, and largely subjective boundaries. Comparison is thus ruled out, as are the key assumptions of the mereological model. By contrast, the systems paradigm treats societies as bounded entities, equivalent in kind to organisms, machines, or productive enterprises. As such, it postulates that the comparison of societies – and moreover, the comparison of social functions – is both possible and logical.

The affinities in question are easily demonstrated. The logic of comparative control demands that units of comparison should share two major traits. They should first be statistically independent, events in one not impacting the other, and should second be of like kind, having some common variable as a shared attribute (Zelditch 1971, 267). The systems paradigm supplies this, because it allows one to treat societies as discrete, boundary maintaining entities with common traits of organization or behaviour (Ragin and Zaret 1983, 737). In a similar vein, applications of the mereological model rely on a distinction between part and whole, as well as on the thought that the health, operation, or existence of the whole can be threatened. In describing society as a system, one can see it as a whole, with a discrete boundary and a set of internal elements. One can,

moreover, treat the *maintenance* of this boundary as the reference point of the function term; indeed one can argue that all societies will, by virtue of being systems of the same class (rather than unique, *sui generis* objects), face *identical* problems of boundary maintenance, regardless of their size or internal composition. Functions thus emerge as a stable point of comparison, and traits associated with them – such as functional differentiation – can be treated as universally applicable comparative variables.

In presenting this method, which Goldschmidt (1966) has termed *comparative functionalism*, we note the links between the three broad commitments of the functionalist research tradition. By conceptualizing societies as concrete, bounded, and independent units, each with a set of common, invariant problems, members of this tradition sought to *make* societies comparable. Systems concepts were essential in facilitating this endeavour, because they legitimized the thought that the method of functional comparison – which had first developed in economics, and which soon became prominent in physiology as well – could also apply to the study of society. This is most notable in a theorist like Spencer, who, holding that organisms and societies are systems of equivalent kind, argues that the *exact* same list of existential requirements can apply in comparisons of either kind of entity, providing that these requirements are formulated at the correct level of abstraction.

While the functionalist tradition does not always reach these extremes, its key figures hold that the concepts and methods of other scientific disciplines – biology in particular – have relevance in sociology, or can be applied to a general class of systems in which societies may be grouped. In the following, I argue that this is a definitive commitment of sociological functionalism as a research tradition, and has had significant influence on its understanding of functional differentiation. As such, I exclude consideration of those theories in which the differentiation term has a unique, sociological meaning, inequivalent with its use in other disciplines, or in which the social sciences are held to be fundamentally distinct from the natural: not insofar as they are each said to have a unique subject matter, or to each speak to distinct, *sui generis* levels of reality, but insofar as it is denied that a general conceptual register, such as that provided by systems science, can be of explanatory value in both forms of inquiry.

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By focusing solely on the functionalist tradition, I do not wish to imply that alternative research traditions cannot house legitimate and useful concepts of functional differentiation. Rather I am simply carving, from the great mass of material associated with this idea, a coherent object to discern and assess. In order to avoid any confusion, it should be noted that I will from hereon use the terms 'differentiation theory' or 'the theory of functional differentiation' only in reference to theories developed in the functionalist tradition. Likewise, when speaking about 'functional differentiation' or 'differentiation' in general, I will be specifically referring to the idea of differentiation common to this tradition.

A number of concerns motivate this specific choice of focus. First, the functionalist tradition houses a single *sequence* of differentiation theory, which began with the founders of the modern discipline and has continued ever since. For over one hundred and fifty years, a lineage of prominent scholars has successively renewed, updated, and preserved the functionalist notion of differentiation, despite it being a key component in a number of analytic systems – namely those of Spencer and Parsons – which have not only exited the theoretical stage, but which are today targets of significant disdain. Though sociology is undoubtedly marked by a perverse degree of loyalty to classical ideas, the concept of functional differentiation seems possessed of a disproportionate, nigh inalienable appeal, and one must wonder why it continues to be salvaged – with all its associated accoutrements – from the wreckage of paradigms past.

Second, functionalist theories of differentiation have generally been developed as subsidiary components in comprehensive theoretical systems, and have thus been imbued with many of the faults for which 'grand theory' is often chastised. They are, for instance, typically expressed in natural language, rather than in a more formal manner, and they typically deploy the differentiation term alongside a range of specific, idiosyncratic terminology. Together, these issues have drastically reduced the communicability of the functional differentiation construct, and have dampened our ability to use, or at the very least to assess, associated theories. While most sociologists have heard of functional differentiation, and will likely have intuitions of its general meaning, the principle claims of its prominent theorists are cloistered within abstruse, ambiguous, and arcane language. This is, in part, why I wish to revisit the work of these scholars. My aim is to reconstruct the intellectual milieus in which they developed and

advanced their theories of functional differentiation, in the hope that we can find more efficient ways to convey these theories to the discipline at large.

Third, in focusing specifically on the functionalist tradition, our analysis is afforded a clear evaluative standard. While historicist accounts of differentiation remain purposefully and intrinsically open-ended, there being no agreed-upon method to adjudicate their merit, it is generally acknowledged that the functionalist tradition, being conjoined to the comparative approach, is marked by a relatively unambiguous analytic purpose: the generation of empirically falsifiable explanatory propositions. In assessing its claims about functional differentiation, we can thus refer to a well-defined set of evaluative criteria, and need not be unduly distracted by insoluble questions about the meaning or morality of modernity. This does not mean that each of our four primary theorists agree with this particular standard; rather they are, taken together, committed to a wide range of unique epistemological positions. Nonetheless, I believe that each deploy differentiation as a generalized comparative construct, or implicate the term in generalized explanatory propositions. This is not *all* that these theorists do with the concept, and in some the term is more obviously used for descriptive, interpretive or normative ends. But each theorist clearly participates, at least to some degree, in the domain of explanatory-comparative research. With this in mind, we can evaluate their contributions to this area – and not, it bears stressing, the value of their work as a whole – with the goals of the comparativist in mind.

Finally, if it is held, as per Luhmann's above statement, that the concept of functional differentiation has been a part of sociology since its very beginning, then it stands to reason that our examination of differentiation theory will at the same time be an examination of the discipline itself, which may illuminate its particular history and improve our understanding of contemporary debates. Indeed, one cannot interrogate the nature and meaning of the differentiation construct without thereby debating the nature of the science. In speaking of functional differentiation, functionalists do not apply a neutral label to some agreed-upon phenomenon, but designate a process whose existence and expression is utterly bound up with their particular meta-theoretical assumptions. The very *idea* of functional differentiation, in the form we will examine, is in other words reliant on a host of contested claims about ontology, epistemology, and the place of sociology in the wider world of science. In evaluating the differentiation idea, and in assessing a range of associated claims, we are thus engaged with the

discipline's foundational disputes. It is hoped that the thesis will therefore be of relevance beyond its specific subject matter, and can speak to points of conflict which are common to sociology as a whole.

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The following material is presented in two parts. Part I examines the development of the differentiation concept in the functionalist research tradition, following it through four major figures. We will see how Spencer first imported this notion into sociology, and will note Durkheim's early attempts to theorize its causes and consequences. We will then examine how Parsons sought to extend this classical legacy, and will finally consider Luhmann's attempt to surmount it. In assessing these theorists, I am consciously focused on that which is important from the perspective of explanatory-comparative analysis, whose general methodology invites a certain rigour in theoretical construction. As such, the presentation is designed to extract, from these theorists' work, the elemental components of scientific theory: definitions, postulates, propositions, and similar. Though this may not capture all that is valuable in the theories under study, it provides us with a succinct way to convey and assess them in light of our particular evaluative criteria.

Part II provides a detailed evaluation of the differentiation construct, focusing on the methodological demands of comparative functionalism. I will here consider problems which are common across our four key theorists, and will examine the major obstacles which have frustrated attempts to deploy functional differentiation as a comparative concept. It is, then, again noted that I will evaluate this concept solely from the perspective of comparative inquiry, or from within a broadly nomothetic stance about the nature of social science and the meaning of progress therein. In judging the concept's ultimate utility, not just for comparative analysis but for sociology in general, one must juggle a range of conflicting paradigms about what sociology should be, about what it can know, and about the standards to which it should aspire. This thesis has a narrower aspiration. I will outline the various models of functional differentiation one finds in the functionalist tradition, and will appraise them against the logical demands of comparative social inquiry. Whether these models have merit beyond this is a question for the reader, to be judged by the particular standards which they hold dear.

As a final word of warning, and to provide a pre-emptive defence, I wish to note that the following analysis is occupied with points of logical debate which may, if indulged to excess, unduly frustrate one's ability to conduct social inquiry. It is acknowledged that from the perspective of the empirical scholar – who, in advancing *any* claims about the social world, must for a moment discount certain philosophical objections – much of the following material may seem excessively, if not oppressively punctilious; indeed I may well be accused of an unhealthy commitment to logical perfectionism. Yet at the risk of becoming what Sartori (1970, 55-56) has termed an "overconscious thinker" – a man who, it is said, "refuses to discuss heat unless he is given a thermometer" – my guiding ambition is to clarify, for the discipline at large, not just *what* we talk about when we talk about functional differentiation, but what it is, in fact, both *possible* and *logical* to say, and in this we must give serious attention to a range of difficulties which are quite conspicuously neglected by the research tradition under study. Our task is, in other words, not just to describe how this tradition has *conceptualized* functional differentiation, but to uncover all those barriers which have, and which continue, to frustrate the development of a genuine *theory* of the phenomenon in question, however minor these barriers may initially seem. While this may temper our ambitions, and restrict our imagination, I must agree with the statement of Dowse (1966, 622): that "to ignore trivial logical points is to risk being not even trivially true." Let us take this as our motto and begin.

PART I

The Development of Differentiation Theory

CHAPTER ONE

Unlike Parts; Unlike Functions: Herbert Spencer's Organic Analogies

"Who now reads Spencer?" Brinton's famous question, immortalized by Parsons (1949, 3) in the opening lines of *The Structure of Social Action*, has today made the expected transition from curiosity to cliché, becoming an all too familiar, and thus somewhat ironic, opening statement in discussions of Spencer's work. While many have sought to question the veracity of the verdict, the claim that we have, as a science, "evolved beyond Spencer" (Brinton 1933, 226-227) clearly possesses some enduring appeal – perhaps because it speaks of progress in a discipline that often feels want of it. As a result, the collapse of the Spencerian project is now seen as a watershed moment for the science of society: a development by which its maturation may be marked. It is thus unsurprising that Spencer's ideas are, in comparison to those of many other classical figures, readily dismissed as irrelevant, outdated, or otherwise unworthy of attention.

Things are not so simple for those interested in the concept of functional differentiation. Although Spencer was by no means the first to apply this notion to the study of society, the basic contours of differentiation theory, and of the functionalist research tradition, were deeply influenced by his concepts, methods, and hypotheses. For this reason, Spencer's model of differentiation continues to show influence, and is still echoed in the work of many contemporary scholars. Spencer is, moreover, unique among the classic authors in the sheer significance he affords to functional differentiation. Our sense of the concept's importance owes much to his opinions, and his work is therefore a logical starting point for the present inquiry.

At the same time, it is important not to overstate the novelty of Spencer's approach. In speaking specifically of *social* differentiation, Spencer sought to pioneer a new field of scientific inquiry. Most of his ideas about this process were, however, directly borrowed from the biological literature of the time (to which Spencer himself made substantial contributions). For example, his argument that early societies were undifferentiated

aggregates, in which gradually emerged multilayered distinctions between specialized components, is a simple generalization of von Baer's laws of embryonic development, which held that specialized forms always arise from more general ones (Taylor 2007, 60). Analogies of this kind were, moreover, by no means unique to Spencer's work; in fact many of the key ideas of nineteenth-century biology had themselves been imported from the nascent social sciences (or had developed in light of its findings). This is especially evident in regards to the notion of functional differentiation, whose expression within the organism was commonly described as a *physiological* division of labour, akin to that studied in political economy (Taylor 2007, 60).

In taking ideas from biological science, Spencer shows fidelity to the three major commitments of the functionalist tradition: the mereological model, the comparative focus, and the interdisciplinary commitment. Motivated by the latter, or by the idea of a unified scientific approach, Spencer examines the topic of *social* differentiation using the concepts and tools of comparative physiology. Societies are thought to contain component parts – analogous to cells, tissues, and organs – which function to benefit the wider whole. Differentiation occurs when these parts become more functionally specialized, and societies are – as per Spencer's understanding of organic evolution – thought to be more developed, or more evolved, the more differentiation they display. Differentiation is thus quite clearly treated as a comparative tool: it is the means by which we can, Spencer believes, rank societies on a scale of progress.

These statements present Spencer's approach in wholly abstract terms. Broad assertions about societies, their components, and their functions can, however, translate into a variety of distinct empirical theories, depending on one's specific conceptualizations. What are the equivalents, in societies, of organs, cells, tissues, and so forth? What, precisely, is meant by the concept of differentiation, and by what logic is it connected with evolution? The present chapter tackles such questions, and gives flesh to Spencer's theory. It begins by outlining his general conceptual vocabulary, before then analysing his specific account of functional differentiation. This is followed by a discussion of the purposes for which the construct is deployed, and, finally, by an examination of critical

objections. To facilitate comparison with our other major theorists, this structure will be duplicated in the following three chapters.

I. BASIC CONCEPTS

Society

Spencer does not offer a straightforward definition of society. His major attempt at definition, presented in his 3 volume work *The Principles of Sociology* (1898; hereafter cited as *PS*), is instead an analogy, by which it is claimed that societies are equivalent to organisms (*PS:*1, 449). For Spencer, the analogy in question is not based on material similarities, but on an equivalence in "fundamental principles of organization" (*PS*:1, 592; see also Elwick 2014; Reynolds 2007, 75). Societies and organisms are, he argues, both *aggregates* of elemental *units*, and each display similar principles of development: they grow, their parts become more distinct (both structurally and functionally), and said parts thereby come to depend on one another (*PS*:1, 449ff.). Thus, though there are evident differences between the two types of entities, each is marked by both differentiation and integration – i.e. by the presence of distinct parts which cooperate "in service of the whole" (*PS*:1, 598).

One outcome of this stance is that Spencer (1851, 455; see also *PS*:1, 596), drawing on Coleridge's theory of individuation, argues that societies become more definite as they develop, or as their parts become more mutually dependent. A simple organism, he claims, is not injured when divided, but instead multiplies, for each of its parts contains all the necessary elements of independent existence (Spencer 1851, 455). By contrast, higher levels of organization imply higher levels of interdependence: the removal of a part from a complex organism would in most instances prove fatal for both organism and part. As per the organism analogy, Spencer holds that the same pattern is evident in societies. In small-scale, family-based societies, where differentiation of function is largely absent, each family can provide for its own existence. The society can thus divide and subdivide "with little or no inconvenience to the several sections" (Spencer 1851, 454). A large-scale society is, on the other hand, marked by greater

interdependence, and would, Spencer (1851, 454) believes, face immediate adaptive challenges if one part (e.g. the manufacturing portion) was severed from the whole.

Cooperation is thus central to Spencer's understanding of society, contrary to his reputation as a vulgar social Darwinist. The growth of "mutual dependence" is, he believes, the very process which makes society a "living whole" (*PS:*1, 593, 453), and a society can only then exist if individuals cooperate to achieve some common end (*PS*:2, 244). This does not mean that cooperation is a sufficient condition for the existence of a society, for individuals quite often work together in temporary arrangements (*PS*:1, 447). To speak of a society, one needs to see a "general persistence of the arrangements among [individuals]" within a given territory (*PS*:1, 448), in addition to a number of other characteristics listed in the following definition:

> **(1.1) Society $=_{df}$ a system of individuals who: a) are independent from one another in parentage (*PS*:1, 6); b) are united by altruistic sentiments and feelings of commonality (*PS*:2, 277); c) cooperate with one another in service of mutually held or mutually beneficial ends (*PS*:2, 244); and d) are arranged into a functional structure which is relatively permanent and capable of existing beyond the lifespan of its particular constituent individuals (*PS*:1, 447, 457).**

Equilibrium

The notion that societies must, by definition, show some level of structural stability (or possess a relatively permanent organizational structure) is a key aspect of Spencerian functionalism, and is conveyed via the concept of *equilibrium*. For Spencer (1855, 374; 1864a, 207; *PS*:1, 448), an entity is in a state of equilibrium when it can maintain a distinction between itself and its environment, or can sustain its internal patterns in the face of environmental disturbances (as in the case of thermoregulation). If this cannot be done, the entity ceases to exist as something distinct from the environment: a state of death, in organisms, or dissolution, in societies.

> **(1.2) Equilibrium $=_{df}$ a state in which the forces acting on a system are balanced by forces emanating from that system.**

The notion of equilibrium is essentially equivalent to Bernard's (1974) concept of the *milieu intérieur*, as well as the related notion of homeostasis. Spencer's concept of equilibrium is, however, more general, as it applies not just to organisms but societies as well. For example, Spencer (1852, 475-476) argues that population levels are at equilibrium when the forces "destructive of race" equal the forces "preservative of race." In this case, a static level of population would indicate the presence of equilibrium, while an increasing or decreasing one implies disequilibrium. The general equilibrium of a society would, one presumes, need to be calculated with reference to a number of similar variables, something that Spencer himself does not do.

Function

In Spencer's work, *functions* are defined with reference to equilibrium. The functions of an entity's constitutive parts are, quite simply, the contributions they make to the maintenance of equilibrium in the entity. Spencer (1864a, 154) makes this clear in his biological works, defining functions as the "statical and the dynamical distributions of force which an organism opposes to the forces brought to bear on it."

> **(1.3) Function $=_{df}$ an action by which an element maintains the equilibrium of the system in which it is a part.**

For Spencer, the maintenance of equilibrium depends on the completion of certain tasks, or on the fulfilment of what may be termed *functional exigencies*. Functions maintain equilibrium by ensuring that the exigencies are met.

> **(1.4) Functional exigencies $=_{df}$ conditions which must be met for equilibrium to be maintained.**

Spencer speaks of a number of different social exigencies, but never provides a systematic list of them. The most prominent are those explicitly derived from his general theory of physical force, which holds that one can distinguish between the *accumulation* of force, the *expenditure* of force, and the *transfer* of force (Spencer 1870, 154). This theory is applied to the functional analysis of organisms in *The Principles of Biology*, in which Spencer (1864a, 155, 306) argues that organisms must contain mechanisms to

accumulate force (such as those providing alimentation and aeration), expend force (such as those facilitating nervous/muscular action) and distribute force (such as those catering for circulation). The same procedure is followed in *The Principles of Sociology*, where Spencer speaks of "operative" (accumulative), "regulative" (expending), and "distributive" systems in societies (*PS*:1). This work does, however, contain reference to a number of other functional exigencies, many of which do not have clear parallels in the objects of biology or physics. Those mentioned are summarized in table 1.1.

functional exigency	Spencer's terminology	example mechanisms
F1. Procreation	"maintenance of the race" (*PS*:1, 438)	family systems, kinship systems
F2. Production	"sustaining system"/"operative system" (*PS*:1, 498)	industrial structures, productive technology
F3. Control of individual behaviour	"regulative system"/"system of restraints" (*PS*:1, 438)	ceremonial institutions, political regulation
F4. Exchange	"distributive system" (*PS*:1, 505)	market systems, credit systems
F5. Communication	"internuncial function" (*PS*:1, 460)	language, news media
F6. Means for position-role placement	"transmission of positions and functions" (*PS*:2, 258)	family socialization, education systems

Table 1.1 – Spencer's typology of social needs.
Adapted from Perrin (1976); *PS*:1.

In Spencer's understanding, meeting of the exigencies is disrupted by various internal and external forces, such as those resulting from population growth, geographic dispersion, climatic change, and military conflict (*PS*:1, 96-97). While an exhaustive account of such forces is not, quite reasonably, presented, Spencer does attempt to create a systematic typology of the various "factors of social phenomena": the influences which he believes will determine the character of a social aggregate (*PS*:1, 8-15). Forces which disrupt the exigencies, and disturb equilibrium, would need to emanate from one of the cited factors, presented in table 1.2. The list is divided between *intrinsic* factors (those relating to individual character), *environmental* factors (those relating to the

physical environment), and what Spencer terms *derived* factors (those that emerge as a consequence of social evolution).

original factors	
Intrinsic factors	*Environmental factors*
I1. Physical traits	E1. Climate
I2. Emotional traits	E2. Surface
I3. Intellectual traits	E3. Flora and Fauna
derived factors	
D1. Modification of natural environment by social action	
D2. Increase in size and density of social aggregate, either through a. Autochthonous growth b. Fusion via conquest or incorporation	
D3. Reciprocal influence of society on its units	
D4. Super organic environment (relationship with neighbouring societies)	
D5. Accumulation of "super organic products," including: a. Material products b. Communicative products c. Knowledge d. Customs/Laws e. Mythology f. Aesthetic products g. Norms/sentiments	

Table 1.2 – The factors of social phenomena.
Adapted from *PS*:1, 8-15.

Functional mechanisms

States of equilibrium are, in Spencer's understanding, maintained by the action of *functional mechanisms:* social phenomena which perform functions. The production exigency (F2), for example, is met via the action of various industrial/agricultural structures, productive technologies, and distributive networks.

(1.5) Functional mechanisms $=_{df}$ structural elements which perform functions for the entity in which they are a part.

Mechanisms are thought to develop in response to the loss of equilibrium. For example, disequilibrating forces (such as seasonal change (factor E1), population growth (D2), or over-farming (D1)) may cause the productive exigency (F2) to go unmet. This may prompt the development of new farming technologies, or new trading relationships. Likewise, changes in norms, expectations, or prevailing sentiments (I2, I3, D5g) may lead to a decline in fertility. The society would then need to develop new mechanisms (such as immigration incentives) to meet the procreation exigency (F1) (*PS*:1, 603). In both of these cases, the loss of equilibrium threatens societal collapse, and functional mechanisms need to be developed or improved to 'solve' adaptive problems.

The concept of functional mechanisms is one of the more under-developed aspects of Spencer's theory, because Spencer does not operate with a systematic, well defined catalogue of social units. Instead, the mechanism concept is attached to an extraordinarily diverse array of social elements: individuals, organizations, classes, technologies, ideals, norms, agencies, institutions, policies, and so on. When Spencer does try to explicate the nature of these entities, he typically relies on analogies to biological phenomena. Individual citizens, for instance, are made equivalent to cells, collectivities or organizations are linked to organs (e.g. *PS*:1, 478), and the biological concept of organ systems is translated into the idea of societal *subsystems.*

This latter notion is especially ambiguous, and never formally defined. Spencer speaks, in both biological and sociological analysis, of three primary subsystems: the "sustaining system," the "regulative system," and the "distributive system" (*PS*:1). Yet at the same time, he also discusses six macro-social "institutions" (those being the domestic, ceremonial, political, ecclesiastical, and professional) each of which is said to address a specific social function. Domestic institutions, for example, ensure the preservation of the social aggregate (*PS*:1, 610), political institutions target "directive and restraining functions for public ends" (*PS*:2, 247), and professional institutions, such as those of medicine, law, and the arts, target the "augmentation" or improvement of life (*PS*:3, 180).

The relationship between the institution construct and the subsystem construct is largely unclear. In some cases they appear to overlap – the concept of political institutions, for example, seems equivalent to that of the regulative system – yet in others no clear relationship is evident. Spencer does, however, appear to use these constructs in similar ways, and I will therefore treat them as equivalents. Both appear, like biological systems, to be collections of functional mechanisms that collectively address a single function. The regulative system, for example, is made up of all those mechanisms which address regulative functions. All of the kinds of social units mentioned above can therefore act as components in functional subsystems. Spencer claims, for example, that in some societies a *class* of masters/warriors makes up the regulative system, while a class of slaves/workers makes up the sustaining system (*PS*:1, 492). These systems can, however, also house *technologies* (as in the case for roads and railways in the distributive system (*PS*:1, 495)); *roles* (as in the case of teachers and physicians in professional institutions); and any other type of unit that can act as a functional mechanism.

(1.6) Functional subsystems $=_{df}$ an interacting group of functional mechanisms which cooperate to fulfil a particular functional exigency.

Summary

Having outlined Spencer's major concepts, we are able to present his basic assumptions in a series of simple assertions.

(1.7) The existence of a society is dependent on the maintenance of equilibrium within that society.

(1.8) The maintenance of equilibrium in a society is dependent upon the fulfilment of functional exigencies in that society.

(1.9) The fulfilment of functional exigencies is dependent upon the action of functional mechanisms.

(1.10) Mechanisms which fulfil the same functional exigency are grouped into functional subsystems.

In Spencer's (1864a, 184ff.) view, the existence of a society – i.e. its capacity to fulfil its functional exigencies and maintain its equilibrium – is threatened by a range of external forces, and these forces are opposed by mechanisms which work to counteract them (see Carneiro 1973, 84). His theory of differentiation follows from this: when present mechanisms cannot fulfil one or more functional exigencies, differentiation – that is, greater *specialization* of mechanisms – presents itself as a possible solution.

II. THEORY OF DIFFERENTIATION

The process of differentiation

Spencer's sociological notion of differentiation is best understood with reference to its two primary sources of inspiration: the biological notion of the division of labour in *physiology*, and the economic notion of the division of labour in *manufacture.* Each of these concepts relies on the mereological model: a manufactory is thought to be made up of various functionaries, an organism is thought to be made up of organic components, and a society is, in Spencer's approach, thought to be comprised by various functional mechanisms. These lower order components are thought to function *for* the wider whole: workers function to fulfil the productive goal of the firm; cells, tissues, and organs function to preserve the organism's life; and various social phenomena function to preserve the equilibrium of a society.

The concept of differentiation relies on a distinction between parts which perform the same functions and parts which perform different functions. A manufacturing plant has a higher division of labour when components come to specialize in the performance of specific tasks, rather than each performing all tasks. Likewise, an organism develops a higher *physiological* division of labour whenever its parts diverge in the exigencies they address. Differentiation is thus simply defined as the process by which like structures with like functions transform into unlike structures with unlike functions. For Spencer, this process is evident in all entities subject to development, and development proceeds from lower states of differentiation to higher states of differentiation. Simple, relatively undeveloped organisms (polyps, for instance) are thus said to have functionally homogenous components – each of their parts performs identical functions, and each

thus performs *all* of the functions necessary to sustain the organism. The same is, in Spencer's (1891, 279) view, true of 'simple societies', whose members are thought to perform identical social functions (each is, Spencer (1851, 453) claims, at once "warrior, hunter, fisherman, builder, agriculturist [and] toolmaker"). For Spencer, this organizational pattern can be contrasted to those seen in vertebrate type organisms or modern industrial societies. Such entities are thought to show greater internal specialization, and thus higher levels of development.

In Spencer's notion of differentiation, as in the notions of the division of labour in manufacture or physiology, differentiation is treated as a process of *functional concentration*. The functions being performed do not diversify, change, or otherwise multiply, but are simply *redistributed*, becoming the responsibility of a more select, specialized group of elements. This process of concentration is illustrated in figure 1.1, in which the small circles represent single functional mechanisms, and the position of the circles represent the exigency to which they are oriented, or combination of exigencies in the case of multifunctional units. Each set thus represents a single functional subsystem. Processes of differentiation reduce the degree to which these systems have elements in common, making the systems more discrete and definite.

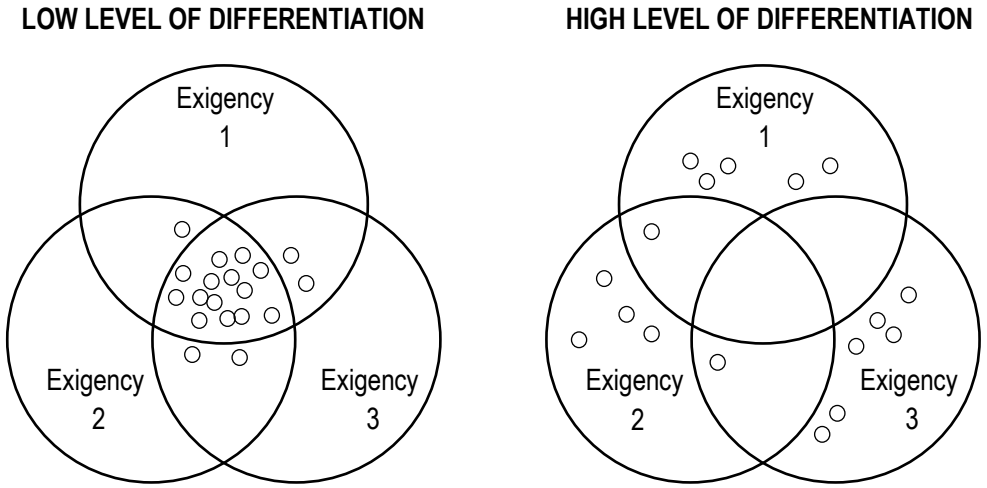

Figure 1.1 – Different levels of functional differentiation.

(1.11) Differentiation $=_{df}$ any process of change which increases the level of differentiation in a system.

(1.12) The level of differentiation $=_{df}$ the degree to which a system's functional exigencies are performed by disjoint sets of functional mechanisms.

Because it holds that differentiation does not alter the functional exigencies, Spencer's account of differentiation follows what Stichweh (2013a, 56) has called a *decomposition* model, in which differentiation is "thought of as the division of an antecedent unity into two new parts/systems deriving from this unity." Support for this model is readily found in Spencer's texts: he writes, for example, that evolution creates distinctions between things which were "originally mingled" (*PS*:3, 217), and that it is the process by which "all institutions, at first confusingly intermingled, slowly separate" (*PS*:1, 597). Differentiation is, as such, treated as a process of *division*. It occurs when the functions performed by a multifunctional unit are redistributed to new entities, each of which caters to a distinct subset of the original functions. The functions themselves do not change in any way.

An example is afforded by Spencer's analysis of occupational differentiation, or of the development of professional institutions. For Spencer, the growth of occupations is not a process of functional *diversification*. New occupations do not perform *novel* functions, but simply *specialize* in functions previously performed in multifunctional role constellations. The priestly role, for example, is said to have once encompassed religious, medical, artistic, scientific, legal, and educative functions (*PS*:3). These functions – bar the religious, which is left as the focal point of the priestly role – eventually form the basis for distinct professions: first via specializations *within* the priestly class, second via their establishment as entirely distinct professions (after which further specialization may ensue) (*PS*:3, pt. VII). It is thus assumed that each distinct profession, no matter its ostensible novelty, can be traced back to a single common ancestor, in which one could find incipient forms of *all* professional activities. This is expressed in figure 1.2.

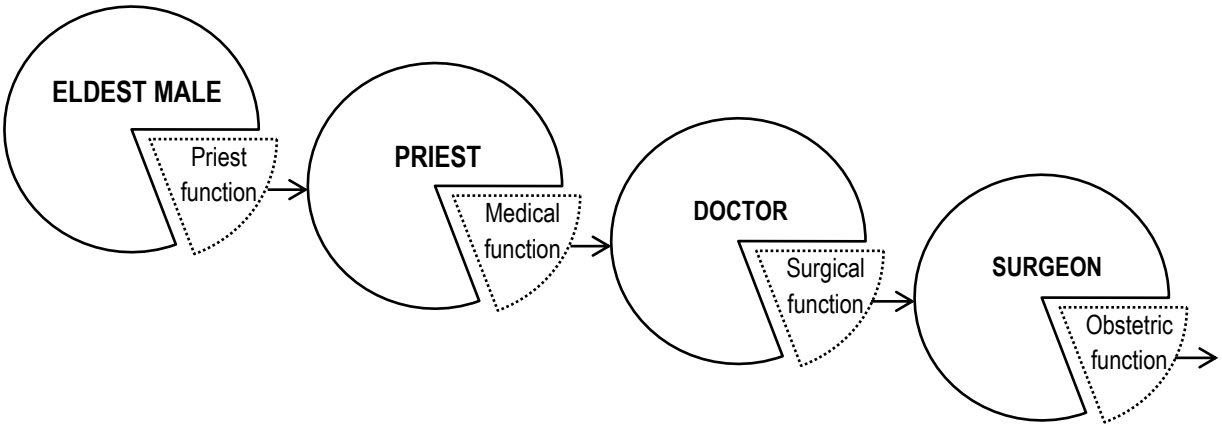

Figure 1.2 – A decomposition model of profession development.

Differentiation and integration

As discussed in the introduction, members of the functionalist tradition commonly operate with a *mereological* model of functionality: a model in which *parts* exist within, and function together to benefit, a wider *whole*. For this reason, these theorists' explanations of the differentiation process will typically display attention to the mechanisms which *integrate* differentiated components, or which allow for their cooperation and coordination. A full account of these theories must then consider questions of integration.

In Spencer's work, differentiation and integration are two sides of the same coin: together, they make up *organization* (Conklin 1924, 539). Higher forms of organization are not only marked by a stronger degree of functional differentiation, but by mechanisms which integrate these components, intensifying their interdependence (Taylor 2007, 62; Spencer 1891, 1-8). For Spencer, differentiation relies on, and prompts the development of, two distinct kinds of integrative mechanisms: those which allow for the *cooperation* of differentiated parts, and those which *unify* said parts. Cooperative mechanisms allow units to combine their efforts, or to make use of each other's outputs. A monetary mechanism, for example, facilitates cooperation between differentiated professions. In the absence of this mechanism, that is, in a system of straight barter, the exchange of goods and services is greatly limited. By contrast,

unifying mechanisms create social solidarity, ensuring that components remain committed to the overarching society. Political differentiation may, for example, multiply administrative divisions. In the absence of unifying mechanisms, such as values, symbols, and technologies (including those of authority and force), separatist sentiment may emerge.

Spencer's theory of unification anticipates Durkheim's well-known distinction between mechanical and organic solidarity. In Spencer's account, small-scale, undifferentiated societies are largely held together by *ideational* sources of cohesion, or by an "invisible framework" of norms and customs which, by assuring consensus in behaviour and values, gives rise to strong feelings of group identification (*PS*:2, 322-323). By contrast, large-scale, highly differentiated societies are said – in correspondence with increases in size, territorial diversity, organizational levels, and other such factors – to be marked by greater individualization, leading to lower levels of ideational integration. Such societies are instead said to rely on *organizational* sources of cohesion: those which create greater interdependence between parts. Differentiation is, then, *itself* considered to be an integrative mechanism. Though it creates further distinctions between parts, it also makes it harder for these parts to separate from the aggregate and survive (Perrin 1974, 358).

> **(1.13) The level of functional differentiation in a society is positively associated with the predominance of organizational mechanisms of social integration in that society.**

While organizational integration is expected to become predominant as societies develop, Spencer is clear that neither organizational nor ideational sources of cohesion alone are sufficient to unify a population. Relatively undifferentiated societies are, he argues, bound partly by shared *needs* (especially that of defence), and highly differentiated societies still rely on at least some degree of shared *sentiment* (see *PS*:2, 265-287). Societies with a high level of functional differentiation will, then, still contain mechanisms of ideational cohesion, examples being "pecuniary interests, family bonds, and love of country" (*PS*:2, 284).

The causes of differentiation

Differentiation is, in Spencer's work, synonymous with both development and evolution. This has led many to suggest that he sees evolutionary change, whether in species or in societies, as a process comparable to embryonic maturation: i.e. as the unfolding of a pre-existing disposition towards higher levels of differentiation (Taylor 2007, 75; Bowler 1989, 239). For such critics, Spencer does not then offer a true theory of evolutionary mechanisms, and cannot explain *how* differentiation occurs. Keller (1915, 9-10), for example, contrasts Spencer to Darwin, arguing that the former offers no concrete concepts, comparable to that of natural selection, by which to explain evolutionary change. Likewise, Alland (2009, 240) argues that Spencer disregards the influence of environmental conditions, and is concerned only with the general direction and outcome of evolution rather than with the mechanisms by which functional adaptations emerge.

Criticisms of this kind mistakenly read a contemporary definition of evolution into Spencer's use of the term. For Spencer, the concept of evolution is not, as it generally is today, synonymous with change, but is instead indexed to a *specific type of change*: an increase in functional differentiation. Evolution progresses, in other words, when differentiation occurs, but differentiation is simply *one* potential direction in which *change* can proceed. As Spencer writes:

> "Evolution is commonly conceived to imply in everything an *intrinsic* tendency to become something higher. This is an erroneous conception of it. In all cases it is determined by the cooperation of inner and outer factors…. If…the environing actions remain constant, the species remains constant. If the environing actions change, the species changes until it re-equilibrates itself with them. But it by no means follows that this change constitutes a step in evolution. Usually neither advance nor recession results; and often…there results a simpler form." (*PS*:1, 95-96)

Spencer does not then postulate a metaphysical or teleological law of development; instead, he argues that evolutionary advancements (i.e. greater differentiations) are one *potential* outcome of equilibrating efforts. Thus while Spencer does see differentiation as the general direction in which change *tends*, he justifies this with reference to purely

material considerations. For example, he argues that any entity is subject to a heterogeneous or "multiform" range of forces, which will likely influence the entity's parts in a disproportionate and uneven manner (Spencer 1864a, 422). Because they are exposed to different forces, or different intensities of forces, these elements will adapt differently, and hence diverge in structure and function.

In Spencer's (1870, 548) view, these initial differences typically induce further differences, leading to an exponential increase in functional differentiation. As he notes, every differentiated part, "in growing unlike other parts…becomes a centre of unlike reactions on incident forces, and by so adding to the diversity of forces at work, adds to the diversity of effects produced" (Spencer 1870, 548). Specialization in one area will, for instance, need to be counterbalanced by corresponding specializations in others, leading to "ever-complicating perturbations" across the entire entity in question (Spencer 1864a, 424). For example, Spencer (1864a, 425) argues that an increase of mass in the head of a mammal will provoke, and often be dependent on, compensatory changes across the entire vertebrae structure. Likewise, the centralization of political authority in societies (i.e. the differentiation of distinct *political* units) will generally rely on the existence of surplus resources (see Sahlins 1972, 140), and thus on a certain degree of productive specialization. In this manner, the differentiation of sustaining elements goes hand in hand with the differentiation of regulative elements, each process stimulating and reinforcing the other.

Statements of this kind reveal that Spencer does in fact postulate evolutionary mechanisms; indeed he speaks of two, direct and indirect equilibration. Direct equilibration is a Lamarckian process of adaptation to felt need; through it, mechanisms develop to counteract forces which disturb equilibrium. For Spencer, this process is essentially the same whether the unit in question is an organism or a society. Just as a muscle undergoes hypertrophy in response to repeated exertion, so too is a society's military apparatus thought to expand in response to endemic conflict. This process is, however, by no means automatic or inevitable. If forces of disequilibrium go unopposed,

the entity is subject to indirect equilibration: a Darwinian process by which the entities "least capable of maintaining their equilibria" are eliminated (Taylor 2007, 71, 73).

Indirect equilibration is not a creative process. It cannot produce greater differentiation, but will simply *preserve* differentiation in cases where it has demonstrated competitive superiority.[1] Differentiation must then arise via direct equilibration, and must then be an adaptive response to the malperformance of functional exigencies. This does not mean that differentiation *necessarily* follows from adaptive strain; in fact Spencer believes that de-differentiation, or "decay of structure," can be an equilibrating strategy (*PS*:1, 97). It does, however, mean that differentiation, where it does arise, is always a functional modification, driven by adaptive demands.

While differentiation is not the only way to address adaptive problems, Spencer does hold that higher levels of differentiation *generally* create adaptive advantages. This is one of the more important propositions in his work, for it underlies the conceptual link between differentiation and evolution. From Adam Smith, if not from Mandeville, Hutcheson, or Ferguson, the physiologists of the nineteenth century were well aware of a causal link between the division of labour and productive efficiency (D'Hombres 2012, 6). Just as Smith (1880, 12) saw the specialization of labour as the driving force of "universal opulence," so too did figures like Henri Milne-Edwards hold that physiological differentiation enhanced organic perfection, allowing organisms to meet their objectives in a more economical fashion (D'Hombres 2012, 6). In linking *social* differentiation with adaptive ability, Spencer simply continues this long train of thought. A more differentiated social system can, he holds, meet its functional exigencies in a more efficient manner, and can thus adjust to, and maintain its equilibrium within, a wider variety of external conditions (Spencer 1855, §122; 1864a, §36; *PS*:1, §237, §21; 1870, §173ff.; see also Turner 1981, 94).

[1] For example, Spencer notes that military conflict typically results in the disappearance of societies "in which there is little subordination," leaving "outstanding those in which subordination is great (*PS*:1, 595). Likewise, he depicts industrial change as a process through which "ancient corporate towns, with their guilds and regulations of industry gradually made more numerous and stringent, slowly dwindled, and gave way before towns in which the absence of privileged classes permitted freedom of industry" (*PS*:1, 589). In this case, the differentiation of sustaining systems from regulative systems is considered a source of competitive superiority.

Processes of functional differentiation will, then, always be preceded by adaptive problems, and if differentiation solves said problems it will generally be because of gains in efficiency. As such, the causes of differentiation can be located in the various 'factors of social phenomena', which are not only responsible for disturbing equilibrium, but will also influence the likelihood of differentiation emerging as an adaptive response. For example, territorial conflict (factor D4), may act as a catalyst for the centralization of political authority – or the differentiation of regulative mechanisms. Environmental factors (E1-4) can, however, dampen the pressure for structural innovation, for they may facilitate the retreat or relocation of the threatened group (*PS*:1, 522).

It is difficult to make general propositions from these various factors, because different units will likely be sensitive to different causal influences. Factors germane to the differentiation of political institutions will, for example, likely differ from those which influence the differentiation of ecclesiastical institutions. In addition, Spencer holds that every society will contain a range of local causes which cannot be captured in universal propositions. This does not, however, mean that general statements about the causes of functional differentiation are ruled out. Indeed, Spencer describes his own project as *general* sociology: its aim being, in comparison to what he terms *special* sociology (i.e. ethnographic or historical case studies), to discover "facts of structure and function displayed by societies in general, dissociated, so far as may be, from special facts due to special circumstances" (*PS*:1, 36-37). In this respect, Spencer is quite clearly committed to a comparativist model of inquiry.

In line with his generalist stance, Spencer argues that certain factors will be linked with functional differentiation in almost all instances, the most prominent being the size of the aggregate in question, or the level of population in the case of societies (*PS*:1, 471; *PS*:3, 368; Spencer 1852, 501). This argument is justified by a number of related assertions. As a matter of logic, Spencer asserts that a higher level of population *facilitates* a higher level of functional differentiation: the division of labour cannot, he notes, "be carried far where there are but few to divide the labour among them" (*PS*:1,

11). Growth in population can, however, also *cause* greater differentiation, in at least two ways. First, population growth is thought to intensify disequilibrating pressures, creating greater logistical loads and heightening organizational problems (see Turner 1984). Because functional differentiation typically provides efficiency gains, it is a common response to these problems. Second, Spencer argues that there is a relationship between the heterogeneity of a society's territory – that is, its diversity with respect to flora, fauna, topology, climate, and resources – and that society's level of differentiation (*PS*:1, 26ff.). A society with a more diverse territory is, he argues, generally exposed to a more diverse array of forces, and is therefore more likely to develop dissimilar activities and structures (*PS*:1, 474-475). As societies with higher populations are, Spencer reasons, typically spread over a wider surface area, and as larger territories generally display higher diversity, growth in population is thought to function as an indirect cause of differentiation.

From the above, differentiation can be implicated in at least three significant general propositions, the final following – via various intermediary assertions – from the former two.

> **(1.14) The level of functional differentiation in a society is positively associated with the efficiency with which it can meet its functional exigencies.**
>
> **(1.15) The level of functional differentiation in a society is positively associated with the level of biotic and abiotic diversity in a society's territory.**
>
> **(1.16) The level of functional differentiation in a society is positively associated with the level of population in that society.**

III. APPLICATION OF THE THEORY

To what end does Spencer deploy the concept of differentiation? To begin with, the concept fulfils the most rudimentary function of any descriptive concept in science, namely, to highlight uniformities in empirical phenomena. By applying the differentiation term to a number of different social transitions, across a diverse range of distinct societies, Spencer argues that these transitions have something in common, and can be the subject of comparative analysis. In other words, he does not, like the

historicist, see societies as unique entities, incomparable by their very nature. Instead, Spencer's concepts work to *make* societies comparable, or to draw out points of commonality in their general patterns and processes.

This is, in part, why Spencer assumes that all societies face the same functional exigencies. The universality of the exigencies makes them a stable point of reference for comparative study – and for the comparison of differentiation specifically. This thought underlies what was, in the introduction, referred to as *comparative functionalism*, a method which has long been attached to the differentiation concept. Take, for example, Adam Smith's famous example of the division of labour in manufacture: the manufacture of pins. The making of a pin depends, Smith (1880, 6) claims, on the performance of eighteen distinct operations, which are in some factories assigned to distinct roles, and in others combined within roles. The end product, the pin, remains the same, as do the tasks which need to be performed for its construction. The division of labour simply changes the *distribution* of these tasks among the roles.

Homogeneity of this kind allows for clear comparison, because it reduces the influence of confounding factors. Each factory exists for the same functional purpose, which in all cases requires the completion of the same number of tasks. The measurement of differentiation is not complicated by differences in context, and one can easily assess its impact on the productive process. If, by contrast, the comparison involved manufactories producing different end products, one would face complex issues about how to define a distinct 'task', these being qualitatively distinct forms of labour which are by no means standardized across all productive enterprises. This immediately raises issues of construct equivalence. In this case, *structural* equivalence (see Elkins and Sides 2007) is a particular concern, it being unclear whether the indicators that measure differentiation in one context can properly be applied to another.

Studies comparing the division of labour in different types of firms will, for example, typically rely on labour force surveys in which questions are asked about an abstract catalogue of tasks. Examples of this approach are found in both the *British Skills Survey* (BSS) and the BIBB/IAB- and BIBB-BAuA surveys of the German labour force. The

former presents a list of thirty-three separate tasks (such as “dealing with people,” “making speeches,” or “selling a product or service”), and asks respondents to rank the importance of said tasks in their occupation (Green et al. 2008). There is, however, little justification for why these thirty-three tasks were chosen, or were considered discrete, distinct tasks whose differences from one another are greater than the differences between potential sub-divisions of these tasks. For example, the BSS list distinguishes between reading written information, reading short documents, and reading long documents, but treats the use of strength as a single task, making no distinction between the manipulation of light versus heavy objects or large versus small objects (see Green et al. 2008). In a similar vein, “planning own activities” and “organizing own time” are considered to be separate tasks, even though the distinction between them is relatively intangible (see Green et al. 2008). Any metric of this kind will, of course, need to prioritize certain types of specialization at the expense of others – but the worry in this case is that the specific choice of tasks may better reflect the division of activities in certain industries or organizations.

Because of these problems, early attempts to treat differentiation as a comparative variable generally presented their objects of study as functionally homogenous entities. For example, advocates of the notion of the physiological division of labour (including Spencer) argued that all organisms were governed by the same set of functional exigencies – more evolved organisms simply displayed a higher degree of component specialization with respect to these exigencies (D’Hombres 2012, 9). In Spencer, the same thought is applied to societies. Development does not change the exigencies which must be met; instead, it simply creates more specialized means of responding to them. Every society is, for example, said to have regulative exigencies, or to need means for the control of individual behaviour. In simple, acephalous societies, the exigency is said to be performed by *all* individuals (members of such societies live, Spencer notes, without superiority or subordination (*PS*:1, 521)). By contrast, complex societies are said to achieve regulation via specialized governance structures (*PS*:1, 530). Likewise, the military of simple societies is, Spencer argues, generally “co-extensive with the adult male population” (*PS*:1, 528). As societies develop, responsibility for defensive

exigencies becomes concentrated within a specialized military apparatus. The exigencies themselves do not change.

Models of this kind are, as per the above comments, designed to facilitate comparison. But to what end are these comparisons oriented? In the case of biology, the notion of the physiological division of labour solved a very particular need. While biologists of the time spoke freely of evolutionary progress, and thus of higher and lower organisms, the criteria by which to judge such progress was a source of persistent dispute (D'Hombres 2012). The notion of the physiological division of labour gained currency in response to this problem. Because differentiation was thought to be connected to a host of adaptive advantages, it seemed to be a logical criterion of evolutionary development. And because organisms were thought to have the same functional needs, a comparison of their internal differentiation seemed methodologically sound, allowing for a rational, objective ranking of *all* organic life (D' Hombres 2012, 10). Spencer's sociology follows these assumptions. Differentiation is thought of as the means by which progress is measured, and comparisons of differentiation allow us to rank societies on a scale of social development (Spencer 1891, 8-62).

The Darwinian revolution – influential on biology and sociology alike – relativized the notion of evolutionary progress, tying it to the specific requirements of particular milieus (D'Hombres 2012, 21; Carneiro 1973, 92). As a result, it no longer makes sense to speak of a universal scale of evolution, on which one can rank all organisms, or all societies. While this raises important questions about the present utility of the differentiation construct, which has evidently lost its primary purpose, it must be noted that Spencer did not only apply the concept of differentiation as a criterion of progress. Stripped of any normative gloss, differentiation is simply a social attribute, and in Spencer's work one can find a number of positive propositions involving the term. The argument that more differentiated societies are more evolved than their less differentiated counterparts is, for instance, based on a postulated link between functional differentiation and productive efficiency, but the two claims are not inherently or

causally linked. If the former is dismissed, the latter can simply be taken as a testable hypothesis about macrosocial dynamics.

The ultimate aim of the comparative approach is to generate and confirm hypotheses of this kind – and Spencer's use of the differentiation concept is clearly tied to this end. By comparing differentiation across societies, and by assessing potential covariates, Spencer aims to uncover factual regularities of social organization, knowledge of which would enhance our capacity to explain and predict social change. For this end, one does not need to treat differentiation as a measure of progress, but one does need to treat it as a universally applicable variable, comparable across societies. Spencer's various conceptual decisions are best understood in light of this demand.

IV. CRITICAL ASSESSMENT

Having outlined Spencer's theory of functional differentiation, we will now consider various critical objections to his approach.

The units of analysis

One of the more prominent defects of Spencerian sociology – attributable, in part, to its classical nature – is the ambiguity of its basic concepts. Concepts such as society, institution, equilibrium, differentiation, and so on are all given basic shape, but no clear means for observation, in the case of unit concepts, or measurement, in the case of process concepts, accompanies these terms. As a result, Spencer's approach lacks consistency, transparency, and replicability, and is simply difficult to apply.

Take, for example, the question of social *units*. To determine the level of differentiation in a society, one must determine the functions which its various units perform. One must, then, know which units to count in the analysis, and one must know how to weight them when of dissimilar type. Answers to such questions are, however, not readily available in Spencer's work. When speaking of differentiation, Spencer freely refers to a diverse, unspecified range of social phenomenon, from roles and classes to organizations and technologies. None of these various units are defined in a formal, unambiguous

manner, and Spencer does not provide an exhaustive list of them. As such, one is never quite certain of the precise objects to which his theories apply.

For Spencer, the exact units in question are largely irrelevant, because all social phenomena are thought to follow the same general patterns. Indeed, the idea that one can theorize *social* differentiation as a general process rests on this premise, for it presupposes that one can combine, in a single concept, processes of occupational differentiation, role differentiation, institutional differentiation, and so on. It assumes, in other words, that the differences between these processes are of little consequence, and that the same theory can be applied to all of them with no difficulty. This is, however, a questionable assumption. As Rueschemeyer (1982) has argued, it is by no means certain that the factors which contribute to differentiation in one unit type will also contribute to differentiation in another, nor that each will engender the same consequences or follow similar patterns. Indeed, it is quite likely that differentiation in one level can be a cause or effect of *de*-differentiation in another (Rueschemeyer 1982, 588).

This is not just true of social phenomena, but of biological entities as well, and it is notable that theories of differentiation targeting the latter typically address single unit types. Thus one speaks, for example, of 'cellular differentiation' or 'species differentiation', but not, generally, of 'biological differentiation', it being acknowledged that the former two processes have little in common as empirical phenomena. This would suggest that theories of differentiation work best when they are tailored to the particular characteristics of a specific unit. At the very least, those with general ambitions must recognize the various problems at play, and must delineate a precise set of units to which their theories of differentiation are thought to apply. This is clearly not evident in Spencer's case.

The meaning of the function term

Assuming one can delineate the units under study, an analysis of differentiation would proceed by analysing the functions these units perform. Unfortunately, ambiguities again create problems. As noted above, Spencer links the concept of function to that of

equilibrium. The criteria by which one assesses equilibrium are, however, never specified at a sufficient level of detail, and this allows Spencer to skirt a range of thorny issues. For example, if equilibrium is linked to survival, then one must have a clear sense of when, exactly, the entity in question has failed to survive. Only then can one consider and catalogue functional exigencies. Defining states of mortality is, however, by no means an easy task, even in the case of organisms (Faia 2005, 38). Given that societies are a great deal more abstract, one must question whether a consensus on the meaning of societal equilibrium is at all realistic.

The broader issue at play is the mereological model, and its suitability in sociological analysis. The mereological model rests on what Merton (1968, 80-81) has termed "the postulate of functional unity": the assumption that certain social units function to benefit the total social system, rather than specific classes, groups, or individuals therein. One sees this in Spencer: equilibrium is a *societal* attribute, and societal parts function to maintain the equilibrium of society *as a whole*. It is, however, questionable whether it makes sense to apply this model – originally derived from physiology – when discussing social phenomena. While it is generally considered appropriate to say that organisms have needs, or have components which benefit, aid, or preserve the organism as a whole, the postulate of functional unity has proven far more controversial in sociology – indeed Merton (1968, 81-82) argues that it runs "repeatedly contrary to fact," and diverts attention away from the potentially "disparate consequences" of particular social traits.

Spencer's use of the organism analogy is more sophisticated than most, in part for reasons of personal politics. While many of his contemporaries used such analogies to justify authoritarian leadership, Spencer favoured a laissez-faire approach. As such, he did not argue that organisms are perfectly integrated totalities, in which each part is entirely subordinate to the needs of the whole (Elwick 2003; 58, Gray 1985), but that physiological components display "considerable degrees of independence," even in centrally regulated organisms (*PS*:1, 455). The human body, for instance, is described as a "commonwealth of monads" in which each part displays "independent powers of life, growth, and reproduction" (Spencer 1851, 451; see also *PS:1*, 456). As per the organism

analogy, societies are thought to display similar organizational patterns: their parts are, Spencer (1880, 386) believes, integrated only in a "tolerable harmony," rather than a strict system of command and control. Thus while social components necessarily work together, and do so in service of something beyond themselves, they have, Spencer argues, their own interests, and can in fact compete with one another (*PS:*1, 455ff., also 515ff.). Accordingly, Spencer does not downplay the deleterious consequences of functional mechanisms. The industrial workplace, for instance, is treated as an evolutionary advance, but Spencer also recognizes that it can have negative impacts on the wellbeing (both physical and mental) of workers (*PS*:3, 524-525).

At the same time, Spencer still bases his functional analyses on the notion of equilibrium, and thus operates with some idea of *social* needs. Thus while he notes, for example, that the welfare of a society cannot be "considered apart from that of [its] units," and that, further, "the society exists for the benefit of its members; not its members for the benefit of the society" (*PS*:1, 461-462), he also argues that industrial work is a case in which "parts [i.e. workers]…are sacrificed for the benefit of the society as a whole" (*PS*:3, 525). There is thus a tension in Spencer's positions. On the one hand, he argues that functional mechanisms can be detrimental for certain groups while at the same time benefitting society *as a whole* (not, it should be stressed, other groups *within* the society). On the other, he consistently maintains that society has no interests of its own, and exists only for the benefit of its members – including, one presumes, those being 'sacrificed'. The positions seem incompatible, unless one posits that the negative effects of functional mechanisms are outweighed by positive gains. In such cases, statements about 'social' benefits need to demonstrate that the fulfilment of the social need does in fact benefit individuals, and that the benefits offset any detriments, a calculation which would likely be frustrated by intractable disputes about the meaning and measurement of human well-being.

This discussion presents just a small sample of the problems caused by the mereological model, and in particular by its assumption of functional unity. This topic will be followed throughout the thesis, and is analysed extensively in chapter seven. For now, it

is enough to note that Spencer does not provide us with a clear set of procedures by which we can discern *whether* a unit is performing a function, *what* function it is performing, and *how well* it is performing that function. An analysis of *functional* differentiation thus faces obvious difficulty, it being uncertain what the former term means on all but the most abstract levels of depiction.

The universality of the functional exigencies

Aside from the mereological model, the other prominent aspect of Spencerian functionalism is the universality of the functional exigencies – i.e. the idea that *all* societies must 'solve' the same functional problems. This assumption is the basis for the decomposition model, for it means that units can only specialize in *pre-existing* functional labour, rather than specializing in *novel* functions.

There are several issues with this approach. First, Spencer's particular list of exigencies is not derived in a systematic and transparent manner: in part because of the above problems. Each exigency is linked to the maintenance of equilibrium, and yet as we have seen this concept is not anchored in a set of concrete observables. As a result, the list of exigencies has no clear point of reference, and seems based on arbitrary and inconsistent decisions. While Spencer links some of the exigencies to his general theory of force, others are afforded no logical or theoretical support, or simply follow, in a tautological manner, from the way he defines the society term (for a critique of this approach see Giddens 1976, 344). It therefore seems fair to be suspicious about their universality.

Second, one can ask whether it is appropriate to consider exigencies as universal in the first place. In taking this position, Spencer simply follows the concept of the physiological division of labour, advocates of which held that all organisms performed the same vital work. This claim was, however, quite controversial. For a number of physiologists, it was plain that functions could vary in accordance with the complexity of organisms: complex organisms did not, they argued, merely have more sophisticated or specialized tools with which to perform their work, but in fact had different kinds of work to perform (D'Hombres 2012, 13). Criticisms of this kind seem to have been

successful, for the notion of the physiological division of labour is no longer used in contemporary biology. Instead, it seems readily acknowledged that evolution can *create* novel functions. For example, Arendt's (2008) model of cell-type diversification argues that functionally distinct cell-types can arise from a variety of distinct processes, of which functional *segregation* – a process of decomposition in which the functions performed by a single parent cell are differentially expressed in emergent sister cell types – is only one. Cell-type specialization can, Arendt (2008, 887) argues, also proceed via a number of additional processes, such as the "extreme modification of existing functions" or the "acquisition of entirely novel genes," and in both cases genuinely *new* cellular functions are thought to arise.

The classification of functional novelty is, however, entirely reliant on the abstractness of the definitions at hand, and this is a largely subjective matter. Advocates of the notion of the physiological division of labour did not deny that a diversification of functions could occur; they simply argued that it could only occur at sub-functional levels, below that of the primary exigencies (D'Hombres 2012, 18). Thus an organism may, it was thought, develop genuinely new abilities (such as chewing, swallowing, or salivating), but these merely augmented its ability to perform a universal functional exigency (in this case alimentation) (D'Hombres 2012, 18). In Spencer's work, we see the same idea: a society may, he believes, develop a range of new productive technologies, but each is thought to serve the universal end of social sustenance (*PS*:1, 498ff.).

The benefits of this approach are clear: if functions are treated as static, constant attributes, then the comparison of functional organization, and of levels of functional differentiation, becomes a coherent and logical goal. The question is whether this position requires one to distort empirical reality to such an extent that comparisons produced on its basis will lack any theoretical value. To address this criticism, advocates of a decomposition approach need to demonstrate that they can produce a measure of differentiation which has theoretical significance, or can be empirically associated with a host of concomitant traits. While Spencer assumes, from his reading of historical and anthropological material, that such associations exist, he does not possess sophisticated

methods with which to evidence his beliefs. It remains to be seen whether future theorists in the functionalist tradition, most of whom continue to operate with the assumptions of the decomposition paradigm, are able to support this approach in a more robust and rigorous manner.

The theory of structural change

The final point of criticism speaks to Spencer's thoughts on the *causes* of differentiation. As previously discussed, Spencer contends that all structural change – including differentiation – occurs via the adaptive process of direct equilibration. Indeed, Spencer has no language to talk about change outside of this. Like Lamarck, and unlike Darwin, he does not see variation and adaptation as independent processes, but treats structural variation as an *outcome* of adaptive strain (Spencer 1864a, 271-272; Offer 2014, 165). Spencer's general theory of change is thus inherently monological, and follows what has become known as an 'adaptationist' approach (see Gould and Lewontin 1979). According to this perspective, structural change is *always* a process of adaptive adjustment, and new structures are always functional modifications. They may *become* afunctional, or even dysfunctional, but only as the result of change in the environment, rather than change in the structure itself (for an example see Spencer 1880, 19-20).

This theory is problematic in a range of respects – especially when taken as an account of *social* change. To justify the application of adaptationist ideas in sociology, Spencer relies almost entirely on the organism analogy, holding, as a basic assumption, that organic change and social change proceed via the same general mechanisms. Even if one agrees with this idea, Spencer's account of organic change is clearly faulty. Putting aside its Lamarckian aspects, the fundamental issue with Spencer's approach is the assumption that *all* change is *functional* change, or is always driven by adaptive needs. Positions of this kind are quite uncommon in contemporary evolutionary biology, in which one finds widespread agreement over the ability of nonselective mechanisms to shape population traits (though not over the precise degree to which they do) (see Gould 2002). It is, in other words, generally held that phylogenetic change is not driven by

adaptive dictates *alone*, meaning that wholly afunctional traits can be preserved and propagated within species (see Gould and Vrba 1982).

To support Spencer's view of social change, one would therefore need to argue *against* organic analogies, and to show that societies have – in comparison to organisms – some distinctive features that prevent them from changing for reasons other than functional need. Unfortunately, a consideration of such features suggests the opposite conclusion. Unlike biological components, which must generally conform to physical laws, the basic components of societies, human individuals, are typically thought to possess a capacity for voluntary action. As a result, one would assume that social structure could change for entirely capricious reasons, or change in a direction that offers no adaptive value – indeed one would expect such changes to be *more* common in societies than in species.

To argue otherwise, one must maintain that there are laws of social change which constrain or channel human will. It is thus unsurprising that Spencer, who treats the existence of such laws as a necessary precondition of legitimate social science, consistently seeks to downplay the causal power of human agency (Offer 2003, 6; see also Spencer 1855, §208). Indeed, two of his more prominent targets of criticism – great man theories of history, on the one hand, and collectivist social engineering, on the other – are singled out for precisely this reason. In opposition to the former, Spencer (1851, 433) argues that men are not the "prime movers" of history, but merely the "tools with which it works." In response to the latter, he argues that society is not a "plastic mass," "admitting of being shaped thus or thus at will" (Spencer 1981, 117). Positions of this kind are reiterated throughout Spencer's work, which affords no real role to purposive human endeavour. Spencer contends, for instance, that it was "not by intention that the processes and usages of early social life were reached, but through modifications made unawares" (*PS*:2, 448); that guilds "were not social inventions" (*PS*:3, 449); that "types of political organization are not matters of deliberate choice" (*PS*:2, 394); and that institutions arise "not by design but by incidental growth" (*PS*:3, 449).

These ideas place Spencer in a difficult position, and cause a range of issues in his model of change. In depicting change as a process of direct equilibration, Spencer's

accounts typically involve two analytic components: first, an analysis of the forces by which equilibrium is disturbed (a causal analysis), second, an analysis of the functional modifications by which equilibrium is restored (a functional analysis). These analyses operate entirely at the macro-level, and fail to explain *how* structural modifications actually arise. Unless it is assumed that society can change itself, and that functional need can act as a direct cause of change, Spencer's explanations presume a host of micro-level mechanisms. Take, for example, his argument that military conflict may cause the differentiation of leadership roles (*PS*:1, 522). Mapped onto Coleman's (1990, 8) famous boat diagram, it is clear that this explanation can only make sense with reference to the micro-context, in which individuals perceive or recognize the threat, decide on the differentiation of a leadership function as a way to address it, and, finally, find ways to implement their chosen solution.

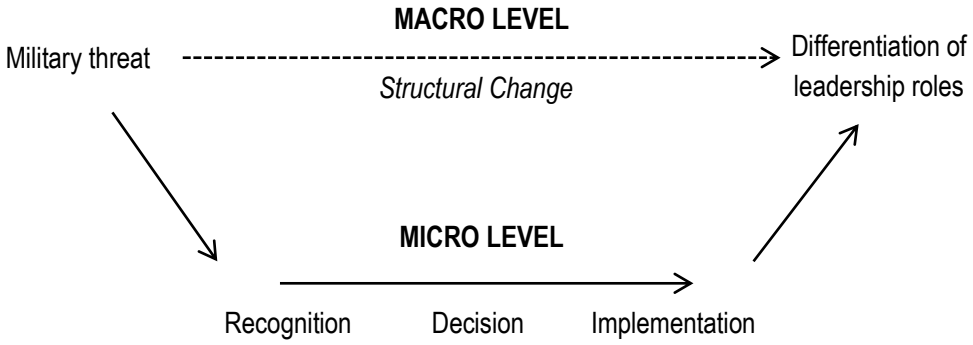

Figure 1.3 – Direct equilibration: macro and micro levels.

Spencer (1880, 406, 378) seems to recognize the need for micro-level analysis; indeed he explicitly claims that social evolution arises from the "voluntary efforts of citizens," and is unexplainable without reference to "the thoughts and feelings by which…individual actions are prompted." Yet at the same time, he must also hold that social change is *not* driven by design or intention, for then societies could change for entirely personal reasons – i.e. reasons other than those of social need. It is difficult for Spencer to reconcile these two positions (see Offer 2003), and his only option is to argue that direct equilibration occurs as an unintentional outcome of micro-level processes (e.g. *PS*:3, 448). This thought is once again justified with reference to organic analogies. Adaptive changes in organisms are, Spencer (1981, 459-460) argues, not

produced by intention, design, or central direction, but by the independent adjustment of component units to their particular local stresses. In other words, Spencer (1981, 459-460) holds that organic adaptation proceeds with the aid of the invisible hand: each part "follow[s] their respective 'interests'," and so induces improvements which benefit the organism as a whole. As per the organism analogy, social adaptations are thought to arise via the same process. They are not, Spencer (1981, 461ff.; 1864b, 231) argues, the outcome of conscious or deliberate planning, but emerge as inadvertent side effects of the pursuit of self-interest (see also Perrin 1974, 393).

While this idea may be applicable in certain cases, it has a number of deficiencies as a global theory of social change. For one, it relies on a perfect coincidence of *social* and *personal* interests (see Spencer 1851, 448) – a position already criticized above. It is, in other words, based on the assumption that self-interested action will, where it causes inadvertent alterations to the general social structure, always lead to positive outcomes at the level of society, and never to outcomes which are afunctional or dysfunctional for society at large. This position seems patently false, and circumvents any consideration of group power and conflict. In addition, the idea that all social change, and thus all social development, must be *unintended* is implausible prima facie. If one affords individuals the capacity to pursue their interests, then it seems unusual to argue that they cannot make conscious choices about the nature of the societies in which they live, or take conscious steps to shape said societies in a direction which benefits them.

In barring this possibility, Spencer quite clearly privileges his methodological ideals, if not his political commitments, above the dictates of empirical fidelity, and as a result his theory of change lacks verisimilitude. It cannot justify its disregard for conscious human action, and gives us no reason to believe that said action must in every case correspond with the adaptive exigencies of societies. One must therefore conclude that Spencer's position is untenable, or is at least needlessly restrictive. Even as a theory of differentiation alone, it simply seems unlikely that the great variety of transitions which Spencer associates with this term *all* arose as functional modifications, and attempts to read them as such would doubtless lead to a host of 'just-so' stories. A more pluralistic

approach, in which a variety of different mechanisms are recognized as legitimate agents of change, would likely provide for more appropriate explanations.

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These critical comments highlight several technical inadequacies within Spencer's framework, and show that he is, as a theorist, concerned more with the construction of broad, paradigmatic models than he is with content and particulars (Perrin 1974, 81). His account of functional differentiation should be interpreted with this in mind. It is not an exhaustive treatment, nor a systematic analysis of the phenomenon, but a rough collection of constructs, suppositions, and hypotheses, each formulated in a loose and often makeshift manner. To apply these ideas, they must first be refined, specified, and in some aspects corrected.

This is, in essence, how the functionalist theory of differentiation unfolded, and the presentation of our remaining three theorists will in each case reveal dialogue with Spencer's legacy. In Durkheim, we see further development of comparative functionalism, and of many of Spencer's key hypotheses. In Parsons, we see – despite his famous comments – a model of differentiation which is largely identical to the one presented above. Finally, Luhmann's work displays a clear tension. Though it seeks to overcome many of Spencer's ideas, it also remains committed to one of his strongest and most influential convictions: the belief that the concept of functional differentiation is a fundamental, indispensable, and especially significant tool of macrosocial analysis.

The tradition's engagement with Spencer's work was, then, in some cases repetition, in others refinement, and in still more a respectful rejection. But in each instance, its members constructed their own theories of differentiation with a close eye on the Spencerian heritage, and in accordance with the same metaphysical and methodological commitments which informed Spencer's thinking. It remains to be seen whether any of them can, working with the same meta-theoretical demands, advance beyond the ideas which Spencer presented, or whether they simply provide new vocabularies to disguise its numerous problems.

CHAPTER TWO

Differentiation takes a Darwinian Turn: Emile Durkheim and the Division of Labour

While the poor reputation of Spencer forces one to justify an interest in his work, the opposite is true of Durkheim: his status as a canonical figure, from whom there are always lessons to be learned, is almost entirely unquestioned. These differences in general esteem are, however, not matched by substantial divergence between the two figures on the subject of functional differentiation, the topic of Durkheim's own doctoral dissertation (published as *The Division of Labour in Society* (1984, hereafter cited as *DL*)). In both figures, we see a distinction between solidarity derived from commonality and solidarity derived from interdependence; analogies from developmental and evolutionary biology; a functionalist methodology based on the mereological model; the use of differentiation as a measure of development; and a belief that population growth is an indirect cause of differentiation. Indeed, even Durkheim's descriptive analogies, such as his claim that 'primitive' aggregates are the "real social protoplasm, the germ from which all social types…have emerged" (*DL*, 126), or that segmentary societies may be likened to "the rings of annelida worms" (*DL*, 127), could easily be mistaken as statements from Spencer.

From the perspective of this thesis, the similarities in question are unsurprising, for they reflect a common commitment to the three major elements of the functionalist research tradition. Thus while Durkheim consistently attempts to distinguish himself from Spencer, and often addresses him as a critical target, disagreement between the two figures is largely restricted to minor matters of emphasis (Perrin 1995). There is, however, at least one significant *theoretical* difference between the two. In presenting the various 'factors of social phenomena', Spencer refers freely to sociological, psychological, and ecological variables. By contrast, Durkheim believes that explanations of social phenomena should refer *solely* to the composition or collective properties of societies – i.e. to other social phenomena. The influence of non-social

variables is not disregarded entirely, but must, Durkheim holds, always be mediated through the internal societal environment, which is thus treated as the appropriate focus of sociological explanation.

This principle leads Durkheim to provide a unique account of the division of labour, and it is within his analysis of the division of labour that his theories of functional differentiation are found. For Durkheim, the division of labour is a social phenomenon; as such, it must be explained with reference to other social phenomena. For this reason, he disagrees with the classic explanation of the division of labour provided by political economists, in which specialization is thought to be pursued as a way to improve productive efficiency, and in which efficiency is thought to be pursued because it allows producers to better meet the needs or wants of individuals (by, for instance, lowering the price of goods). Durkheim rejects this conclusion on metatheoretical grounds, because it locates the cause of a *social* fact, the division of labour, within a *psychological* one: "the constant desire man has of increasing his happiness" (*DL*, 180).

Durkheim's dismissal of psychologism is remarkably resolute; indeed he claims, in *The Rules of Sociological Method* (1964, 104, hereafter cited as *RSM*), that "every time a social phenomenon is directly explained by a psychological phenomenon, we may be sure that the explanation is false." This is, Durkheim believes, because such explanations fail to recognize that the states and sentiments of the individual psyche are themselves products of the social environment. For example, Durkheim rejects the proposition that the division of labour leads, through more efficient and expansive production, to higher levels of individual happiness, because he believes that the division of labour does not cater to a static set of wants but can in fact stimulate new wants (Rueschemeyer 1982, 581). As such, Durkheim argues that the division of labour merely "bind[s] up the wounds that it inflicts" – adding, on balance, nothing to individual welfare (*DL*, 15).

In accordance with his methodological principles, Durkheim seeks to explain the division of labour with reference to variables which are irreducibly social in nature. In that sense, *The Division* is an experimental text, which attempts to deploy a highly

constrained model of sociological explanation. Its aim is not to provide a robust, complete account of the division of labour, but to demonstrate the merit and autonomy of sociology as a discipline, or to prove that social factors should be prioritized when analysing social phenomena (Merton 1994, 19). This gives the text its particular vitality, but it also leads to a range of issues. On the one hand, *The Division* is uncharitable in its presentation of opposing theories, dogmatic in its own assumptions, and often strains credibility in support of its general premise. On the other, the book is exceptionally creative in approach and analysis, and has, whatever its deficiencies, generated some of sociology's most well-known propositions on the topic of differentiation. These theories will be the primary topic of discussion in the present chapter, and will be examined and evaluated below. We must, however, first consider the basic concepts of which they are comprised.

I. BASIC CONCEPTS

Society

Like Spencer, Durkheim does not present a formal definition of society, and we must put together a position from various informal statements (Greenwald 1973, 157). While this procedure is complicated by the fact that Durkheim used different society concepts at different stages of his career (Greenwald 1973), the following focuses only on the conceptualization deployed in his early work, alongside his ideas about the division of labour.

In both *The Division* and *The Rules*, Durkheim conceptualizes societies in a systemic, mereological fashion, seeing them as wholes "comprised of various parts in combination" (*RSM*, 80). This raises the question of just which entities function as parts, and of how said parts are combined. Durkheim's answer initially appears to lead one into a tautology, for he holds that societies are in fact constituted by societies simpler than themselves (*RSM*, 81). The simplest possible society is, however, the protoplasmic horde: "a social aggregate which does not include, and has never included, within itself any more elementary aggregate, but is directly composed of individuals" (*RSM*, 83). Societies must then be collections of individuals; and at higher levels of

compounding they are simply collections of individuals who initially belonged to different societies (see *RSM*, 81).

The mere co-presence of individuals cannot, however, be sufficient to constitute a society; as per the above comments these individuals must be combined or associated in some way. This is where the notion of *solidarity* becomes particularly important, and Durkheim's concept of society is tightly linked to this term (Greenwald 1973, 157-158; see *DL*, 83). Solidarity is the means by which social aggregates are formed, and the force by which they are held together. Societies are thus collections of individuals who are linked together by bonds of solidarity.

(2.1) Society $=_{df}$ a set of individuals united by ties of social solidarity.

Solidarity

To give flesh to the above definition, one must further specify the solidarity term. As is well known, Durkheim distinguishes two types of solidarity: *mechanical* and *organic*. While this distinction is essentially equivalent to that of *ideational* and *organizational* cohesion, introduced in our discussion of Spencer, Durkheim develops these notions by linking them to specific empirical metrics (though it must be admitted that the rationale behind these metrics is not well articulated or particularly convincing (Gibbs 2003, 116; Merton 1994, 23)).

(2.2) Social solidarity $=_{df}$ the degree to which members of a group are inclined to form and maintain social relationships with one another (*DL*, 81, 117).

(2.3) Mechanical solidarity $=_{df}$ a form of social solidarity, arising as the result of similarity between the beliefs and actions of individuals.

(2.4) The level of mechanical solidarity $=_{df}$ the number of repressive laws in a society.

(2.5) Organic solidarity $=_{df}$ a form of social solidarity, arising as a result of the interdependence of individuals.

(2.6) The level of organic solidarity $=_{df}$ the number of restitutive laws in a society.

As there are, for Durkheim, two different types of solidarity, there are also two different types of societies. When individuals are united by mechanical solidarity, the resultant society is a "more or less organized society composed of beliefs and sentiments common to all members of the group" (*DL*, 83). When individuals are united by organic solidarity, the resultant society is "a system of different and special functions united by definite relationships" (*DL*, 83). These two are, however, ideal types, and for Durkheim the two types of societies are "really one," "two facets of one and the same reality" (*DL*, 83). A population bound *solely* by mechanical ties would be a horde of individuals lacking both personality and autonomy – an entity whose sheer implausibility prompts Durkheim to treat it as an analytic presumption rather than a historically existing entity (*RSM*, 83-84). Likewise, a society without *any* mechanical ties would possess no basis by which the war of all against all could be suspended, or upon which organic relationships could be built, and would thus exist in an asocial state of anomic individualism.

This latter claim is particularly important to Durkheim, and motivates his conflict with Spencer. In Durkheim's reading, Spencer treats *organic* solidarity as the sole source of social cohesion, believing, Durkheim asserts, that "a society that might be perfectly homogenous would not really be a society" (*DL*, 147n12). In other words, Spencer is thought to argue that societies are contractual associations of self-interested individuals who decide to cooperate for mutual benefit. For Durkheim, this argument incorrectly downplays the fundamental importance of mechanical ties, or the fact that "societies have a very strong collective life…which is manifested not by exchanges and contracts, but by a great abundance of beliefs and collective practices" (*DL*, 147n12). Durkheim thus believes that organic solidarity cannot *create* association; rather, cooperation presupposes some degree of mechanical cohesion and is only possible in a group already established. As he states, "the division of labour cannot be carried out save between the members of a society already constituted" – self-interest alone being

insufficient to transform "open hostility" into a social relationship (*DL*, 83, 144-146; see also Corning 1982, 364).

Durkheim's characterization of Spencerian ideas is, however, largely inaccurate. In Spencer's view, association and cooperation have a decidedly reciprocal relationship (Perrin 1975, 546). "Cooperation," he states, "is made possible by society, and makes society possible. It *pre-supposes associated men*; and men remain associated because of the benefits cooperation yields them" (*PS*:2, 263-264, emphasis added). Spencer is thus quite clearly aware that organic solidarity rests on a substrate of mechanical ties; indeed he often speaks of the very ties that Durkheim accuses him of neglecting. For example, Durkheim argues, against Spencer, that individuals are drawn into social association by a variety of "mechanical forces and instinctive forces such as affinity of blood, attachment to the same soil, the cult of their ancestors, and commonality of habits" (*DL*, 219). These factors are all present in Spencer's work; indeed Spencer explicitly claims that social union requires a "considerable homogeneity of nature among [individuals]" (*PS*:2, 272), such as is provided by "kinship in blood" (*PS*:2, 272); "community of religion" (*PS*:2, 275); a commonly shared set of "traditions, ideas, and sentiments" (*PS*:2, 276); and a common language (*PS:*2 276).

These comments highlight the deep affinity between Durkheim's theory, at this stage of development, and its Spencerian heritage. Indeed, not only do both agree on the necessity of mechanical ties, both also hold that organic ties give societies greater coherence. Thus, just as Spencer holds that societies become more definite as functional differentiation progresses, so too does Durkheim hold that "the unity of the organism is as great as the individuation of the parts is more marked" (*DL*, 85), and that societies "[become] more effective in moving in concert, at the same time as each of [their] elements has movements peculiarly [their] own" (*DL*, 85). Thus while organic solidarity is not, in Durkheim's view, the originary source of social life, societies without organic ties can only be vague and indeterminate entities, at constant risk of dissolution.

Function

The solidarity concept plays an essential role in Durkheim's analysis of social *functions*. For Durkheim functions are actions which have positive effects for the *needs* of a specific entity or whole (*DL*, 49). In the case of societies, such needs must ultimately relate to the primary requirement of any society, social solidarity. The solidarity concept thus performs the same function in Durkheim's work as does the equilibrium concept in Spencer's. As such, one can also speak of *functional exigencies* in the former case: though it would here refer to the pre-requisites of solidarity, rather than equilibrium. Durkheim does not use an explicit concept of this kind, but he does refer to a number of distinct social functions (such as political, administrative, juridical, military and religious functions (*DL*, 2, xxxiii)). While these functions are never given a systematic delineation, and are generally presented in a vague, inconsistent, and ad-hoc manner (Pope 1975, 366), it is clear that Durkheim operates with some idea of analytically distinguishable requisites.

(2.7) Function $=_{df}$ an action by which an element makes a contribution to the needs of its containing system.

(2.8) Social function $=_{df}$ an action by which a social element makes a contribution to the creation or maintenance of solidarity in its containing society.

(2.9) Functional exigencies $=_{df}$ conditions which must be met for social solidarity to be created or maintained.

Durkheim's functionalism shows clear fidelity to the mereological model. This is unsurprising, for his approach is – like Spencer's – inspired by the methods of physiology (see *DL*, 49). Thus while Durkheim holds that biological phenomena cannot be used to *explain* social phenomena, he happily draws parallels between the two kinds of objects (Hirst 1973, 8-9). Indeed, like Spencer and Comte before him, Durkheim argues that the biological and the social sciences have a particularly special relationship, in that both are engaged in the study of *emergent* entities (aggregates which can be distinguished from, and understood as something more than, their constituent elements)

(*RSM*, 102-103; see also Hirst 1973, 9-10). Ironically, this ontological parallel is thought to strengthen, rather than diminish, the autonomy of sociology, for it underlies Durkheim's belief that societies are *sui generis* objects, irreducible to the character of their non-social elements (Hirst 1973, 13).

Social facts

The *sui generis* nature of societies gives rise to the famous notion of "social facts": units of analysis which are intrinsically and irreducibly social. Durkheim defines such facts as "ways of acting, thinking, and feeling, external to the individual, and endowed with a power of coercion, by reason of which they control him" (*RSM*, 3). In this regard, they can perhaps best be considered as general norms or behavioural patterns, common throughout a society, which exert some influence over the behaviour or beliefs of individual members.

> **(2.10) Social facts $=_{df}$ ways of acting which are: a) "general throughout a given society"; b) external to the individual, existing independently of individual manifestations; and c) endowed with a coercive or constraining power over individuals (*RSM*, 13).**

For Durkheim, the purpose of sociology is to explain both the *causes* and *functions* of social facts: the former with reference to other, preceding facts, the latter with reference to specific *social* ends (*RSM*, 110-111). Social facts are thus seen as functional entities. As Durkheim notes, they work "to put society in harmony with itself and with the environment external to it," and thereby "function in the establishment of social order" (*RSM*, 97). Not all social facts have functions, or arise for functional reasons, but Durkheim holds that societies will generally not retain facts which are not useful to them (*RSM*, 97). Social facts thus appear to be analytic equivalents to the Spencerian notion of functional mechanisms. Both types of units function to benefit the wider society in which they are located (*RSM*, 110), and both work to create states of stability, harmony, and equilibrium therein.[1]

[1] Durkheim does not commonly use this latter term, but it does appear at several points in his work (see, for instance, Durkheim 1995, 206; *DL*, 3, 179, 238, 365, 397; for discussion see Pope 1975, 362-363).

Summary

The above four concepts are all interrelated. Social facts function to maintain solidarity in societies, and a functional analysis of them must consider *how* said facts contribute to this particular end. This is the primary task of *The Division*. For Durkheim, the division of labour is a long-standing social fact, and it must therefore have positive consequences for social solidarity. The purpose of the work is to justify this particular claim, and hence vindicate the theoretical apparatus. This raises a number of questions. What, precisely, is meant by the division of labour? How does it function to augment solidarity? How does it progress, if this function is not also its direct or immediate cause? These issues form the basis of our discussion in the following section.

II. THEORY OF DIFFERENTIATION

The process of differentiation

One of the more frustrating aspects of *The Division* is that its central construct, the division of labour, is never defined in any meaningful sense, let alone illustrated with reference to the definition of a social fact (Gibbs 2003). It is, furthermore, often conceptualized in an inconsistent and idiosyncratic manner, which does not abide by common distinctions. For example, political economists often distinguish between the division of labour in *manufacture* and the division of labour in *society* (see Marx 1976). The former refers to the specialization of tasks in a specific productive firm, the latter to the growth of distinct occupational specializations in society at large. In the former, we can speak of a single functional system, oriented to a specific goal; in the latter, there is complementarity and cooperation, but units are combining their labour for personal or individual gain, rather than specific social ends.

Durkheim's model does not fit neatly in either of these two categories. Ostensibly, *The Division* is concerned with the division of labour in *society*, for Durkheim obviously treats the division of labour as a societal attribute. His conceptualization is, however,

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Moreover, his thought that societies attempt to maintain states of harmony – both between internal elements and between themselves and an external environment (*RSM*, 97) – shows clear affinities with Spencer's theory of social equilibrium.

broader and more inclusive. Instead of focusing specifically on occupations, and specifically on the production of goods and services, Durkheim describes the division of labour as the process by which a broad range of *social units* become more specialized in the performance of *social* functions. He claims, for example, that specialization is evident in "the most diverse sectors of society" (*DL*, 2); that "functions, whether political, administrative or judicial, are becoming more and more specialised" (*DL*, 2); and that his causal analysis of the division of labour "is applicable to all social functions without distinction" (*DL*, 212).

Because it is tied to the notion of social functions, Durkheim's model of the division of labour in *society* actually follows the logic of the division of labour in *manufacture*. In accordance with the mereological model, societies are conceptualized as collections of parts which function to meet some overarching system goal. Societies are thus seen as analytic equivalents of machines, organisms, or productive firms. Just as the division of labour in manufacture occurs when workers take on specialized tasks in a single productive process, so too does Durkheim believe that the social division of labour occurs when social units each come to specialize in distinct social functions, each making a piecemeal contribution to the general welfare of society as a whole.

This is explicitly noted in Book III of *The Division*, where Durkheim argues that the specialization of criminal professions does not entail the division of labour proper, but merely exemplifies "differentiation pure and simple" (*DL*, 291). Durkheim thus makes a distinction between a general process of *differentiation*, thought of as a simple increase in the diversity of activities, and the division of labour (or what I describe as *functional* differentiation), in which the activities performed are distinct contributions to the needs of society itself. Durkheim is quite clear on this point, claiming that the division of labour must involve "allocation of a common function," and that the specialized units in question "[concert] with others to maintain life more generally" (*DL*, 291-292).

The following definition of the division of labour can thus be given:

(2.11) Division of labour $=_{df}$ a process by which units responsible for the performance of multiple social functions come to specialize in the performance of a smaller subset of these functions.

That Durkheim sees the division of labour in *society* as analogically equivalent to the division of labour in *manufacture* can also be seen in his commitment to the decomposition paradigm. In other words, Durkheim, like Spencer, sees differentiation as a process by which responsibilities for functions are *concentrated* in specific units, rather than a process by which novel forms of specialized activity emerge. In the case of religious functions, for example, Durkheim notes that:

> "Originally, [religion] extended to everything; everything social was religious – the two words were synonymous. Then gradually political, economic and scientific functions broke free from the religious function, becoming separate entities and taking on more and more a markedly temporal character." (*DL*, 119)

What does it mean for *functions* to break free from one another? It seems that Durkheim here deploys a very similar model to Spencer, in that differentiation is thought to reduce the degree to which social functions are performed by overlapping sets of elements. When this occurs, the functions disentwine, becoming more distinct and definite in nature. For example, Durkheim claims that:

> "…the functions of the scientist which formerly were almost always exercised alongside another more lucrative one, such as that of doctor, priest, magistrate or soldier, are increasingly sufficient by themselves." (*DL*, 2)

Likewise, he notes that, "in the beginning it was the gathering of the whole people which fulfilled the functions of a court of law" (*DL*, 59), and that the history of the family is an "…uninterrupted movement towards dissociation," during which the functions performed by the family "at first undivided and overlapping, have gradually separated out and been constituted independently…" (*DL*, 78-79).

As these comments show, Durkheim's approach to the division of labour closely mirrors Spencer's approach to societal differentiation, and Durkheim is clearly interested in the structural differentiation of "functionally specific domains of action" rather than the

division of labour as a purely economic or occupational phenomenon (Habermas 1987, 115). Both Spencer and Durkheim argue that there are a determinate set of social functions, that a diverse array of units can perform these functions (occupations, certainly, but also institutions, organizations, groups, and other such entities), and that one can speak of a general process in which these units come to *specialize* in the performance of certain functions, rather than being responsible for all of them in equal measure. If differences between the two figures are to emerge, then they must do so in regards to our following two questions: that of the relationship between differentiation and integration, and that of the causes which engender more differentiated states.

Differentiation and integration

Like Spencer, Durkheim draws a strong distinction between functional analysis and causal analysis. He thus distinguishes between *efficient* causes – those which bring something into existence, and *final* causes – the ultimate reasons for this existence. Final causes are the target of functional analyses, and the final cause of all long-standing social facts is, Durkheim believes, the need for social solidarity. *The Division* thus attempts to demonstrate that the division of labour makes some contribution to this particular end, or fulfils an integrative function.

Durkheim's argument rests on the distinction between mechanical and organic solidarity, and on his thought that mechanical solidarity *recedes* as societies develop. This argument is familiar to us from the previous chapter, for Spencer held the same position (though with reference to *ideational* cohesion). Durkheim's justifications are, however, slightly different – partly because he operates with a different model of social development. For Durkheim, societies develop via a process of *compounding.* Development thus occurs when distinct societal units are combined under a new, higher level of organization (see *RSM*, 84; also figure 2.1, below). *All* societies, except for primitive hordes, are thus thought to be compound unities of other, simpler societies, and more compounded societies are, in Durkheim's view, more developed.

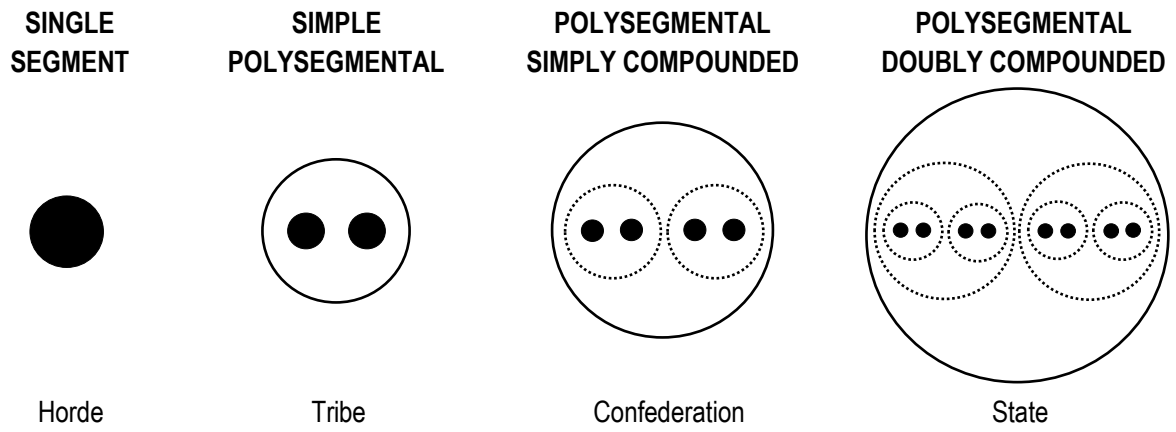

Figure 2.1 – The development of social types through progressive compounding. Adapted from *RSM,* 84.

For Durkheim, the compounding process has a range of corrosive effects on mechanical ties. For example, compounding unites a diverse array of groups, each of which was originally a distinct society. This necessitates increased abstraction in the collective consciousness, which must encompass each group without thereby levelling all distinctions between them (in which case the society would revert to a state of primitive homogeneity) (Hirst 1973, 18). Higher levels of compounding are thus associated with more general, and thus more indeterminate, norms of belief and behaviour (*DL*, 120). In a similar vein, compounding generally results in geographic expansion, allowing for movement or migration across a wider area. This reduces the ability of a centralized power to surveil and control activities. It also diminishes the force of traditional authority, which is heavily dependent on proximity to elder kin.

In all of these cases, individuals are afforded more freedom, and are thus more likely to depart from established laws, norms, or customs. Mechanical solidarity – which relies on similarity in belief and behaviour – is thereby weakened.

(2.12) The degree of compounding in a society is negatively associated with the level of mechanical solidarity in that society.

For these reasons, Durkheim argues that mechanical solidarity, the original source of the social bond, will always lose ground as societies develop; indeed he describes this as an "iron law" of history (*DL,* 121-122). As solidarity is an existential requirement of societies, social development can only proceed if an alternative form of solidarity can emerge. Mechanisms of organic solidarity fulfil this particular function.

For Durkheim, the division of labour is a mechanism of this kind. Organic solidarity is based on interdependence, and the differentiation of functions quite clearly makes the individual more dependent on others. It is thus a prominent source of organic solidarity. As such, Durkheim does not see the division of labour as a superfluous luxury, which simply operates to raise general standards of living, but rather believes that it is a necessary condition for higher levels of social organization (*DL,* 149). In fact, he goes so far as to assign it a genuinely moral character, for the "needs for order, harmony, and social solidarity are," he holds, "generally reckoned to be moral ones" (*DL*, 24).

(2.13) The level of the division of labour in a society is positively associated with the level of organic solidarity in that society.

The causes of differentiation

While the above account describes the *function* of differentiation, it does not, in line with Durkheim's distinction between functional analysis and causal analysis, give us any information about its immediate causes. Durkheim is clear on this, noting that the division of labour could not have been caused by a "mental representation" (i.e. a consideration or recognition) of the contribution which occupational differentiation makes to the "maintenance of the equilibrium of societies," this being "a side-effect too remote to be understood by everybody," and a contribution which "could only begin to become apparent when the division of labour was already very advanced" (*DL*, 179). Durkheim thus aims to develop an entirely mechanistic explanation of the division of labour, in which its functional contribution to social needs is purely incidental.

Because of this, Durkheim is forced to make an argument which closely mirrors the one provided by Spencer. Both wish to argue that functional differentiation fulfils *latent*

functions, or makes a largely unrecognized contribution to social needs. At the same time, both acknowledge that social structures must be the outcome of human action. The only plausible pathway is to argue that differentiation emerges as an unintended consequence of individual action, or as an indirect result of the pursuit of self-interest. Unless one assumes that social structures can in some way change themselves, there is simply no other way to describe the emergence of latently functional structures.

Durkheim cannot, however, argue that the division of labour (a social fact) arises from self-interest (a psychological fact), for this would violate his disavowal of psychologism. To circumvent this problem, Durkheim takes one step back in the causal chain, and argues that self-interest is itself influenced by social factors (see *RSM*, 117; Hinkle 1976, 342). One particular factor is held to be especially important in the case of the division of labour: so-called *dynamic density*. This concept – which is defined rather nebulously as "the number of individuals who have entered into relationships, and their moral and physical proximity" (*DL*, 278) (i.e. their ability to "mutually…act and react upon one another" (*DL*, 201)) – is proposed as a sociological twist on the concept of population density (or what Durkheim terms *material density*), in that it is intended to capture the influence of demographic change on intrasocietal relationships. Because of this, dynamic density can vary independently of material density, as is the case when improvements in communication and transmission "[abolish] or [lessen] the vacuums separating social segments" (*DL*, 203).

(2.14) Dynamic density $=_{df}$ the frequency of interaction between individuals in a given area.

(2.15) The level of dynamic density in a society is positively associated with:

a) the level of material density in that society;

b) the growth and multiplication of towns, or the degree of urbanization;

c) the number and speed of the means of communication and transmission.

For Durkheim, the growth of dynamic density creates an imperative to specialize, or compels the individual – acting in accordance with their own interests – to behave in a way that augments the division of labour. This thought leads to the central theoretical proposition of *The Division*: that the division of labour "varies in direct proportion to the volume and [dynamic] density of societies" (*DL*, 205). If, Durkheim argues, the division of labour continually progresses, it is only "because societies become regularly more dense and generally more voluminous" (*DL*, 205).

To justify this argument, Durkheim significantly shifts his conceptualization of the division of labour. Rather than working with a *physiological* metaphor, in which differentiated units are treated as cooperative cells within a social body, he instead deploys an *ecological* metaphor, in which differentiated units are treated as competitive species within a social ecosystem. Concomitant with the transition is a significant narrowing of scope. Rather than the more expansive conceptualization presented above, Durkheim's analysis of the causes of the division of labour is almost entirely focused on the differentiation of formal occupations: the roles within which individuals earn their means of subsistence. This leads to a number of incongruities, which we will analyse and critique in the following section.

> **(2.16) The level of the division of labour $=_{df}$ the number of distinct occupations in a society.**
>
> **(2.17) The level of dynamic density in a society is positively associated with the level of the division of labour in that society.**

The link between dynamic density and occupational diversification is justified with reference to Darwin's famous "principle of divergence," which was itself based on analogies to the division of labour in society (see Richards 2012). As described by Mayr (1992, 334) the principle holds that "the more the coinhabitants of an area differ from each other in their ecological requirements, the less they will compete with each other." Species which use the same resources will thus compete with one another to the strongest extent. In ecology, this thought underlies the principle of competitive exclusion, which posits that species with the same resource requirements cannot stably

coexist under conditions of scarcity. As the slightest competitive advantage will allow one group to dominate the required resources, the weaker competitor must diverge in its requirements (via behavioural or evolutionary change) if it is to persist (see *DL*, 205, 208).

Durkheim simply applies this thought to societies.[2] His basic contention is that an increase in dynamic density puts strain on available resources, leading to heightened competitive pressure among individuals. To dampen this pressure, individuals diverge in their subsistence activities – hence creating greater division of labour. Dynamic density is thus linked to occupational differentiation through an intermediary variable: the intensity of competitive struggle (*DL*, 205). As Durkheim writes:

> "As soon as the number of individuals between whom social relationships are established is greater, men can only maintain their position by specialising more, working harder, and stimulating their faculties to excess." (*DL*, 276)

Simply put, greater density means greater competition, and as density increases less competitive individuals are forced to develop new occupational specializations which compliment, rather than compete with, the labour performed by others (*DL*, 205, 208). As Durkheim writes, those that "manifest some kind of inferiority…will have to yield ground that they occupied up to then" (*DL*, 211). In the face of competitive pressure, they "no longer have any option but either to disappear or to transform themselves" (*DL*, 211).

This latter statement reveals one significant change which Durkheim makes to Darwin's theory. In Darwin, divergence primarily operates via the elimination of less competitive variants. Yet unlike organisms, which cannot change their species, or cells, which

[2] Durkheim was by no means the first to use these ideas in sociology. Spencer too argued that population growth places strain on the means of subsistence, leading "men severally to adopt occupations for which they are best adapted and by which they can make the most" (*PS*:3, 368). Likewise, the citations in *The Division* show that Durkheim was familiar with a number of contemporaneous attempts to deploy selectionist frameworks in social inquiry, such as those of "Leslie Stephen, Féré, Galton, Ernst Haeckel, Lombroso, Gumplowicz, Ammon, and…Vacher de Lapouge" (Hawkins 1996, 21). Though Durkheim is critical of many of these efforts (arguing, for example, that Social Darwinism too often ignores society's ability to "[temper] and [neutralize] the brutal effect of the struggle for existence…" (*DL*, 144-145)), he was undoubtedly inspired by their analogies.

cannot change their function, individuals can change their occupation (see *DL*, 269). The elimination of less competitive individuals is, as such, not the main mechanism of occupational diversification. Instead, the *threat* of elimination motivates specialization – and Durkheim holds that all individuals, regardless of their capacities, can find a suitable resource niche (as he notes, "a puny individual can find within the complex cadres of our social organisation a niche in which he can render a service" (*DL*, 213)). In this regard, Durkheim's theory actually relies on a Lamarckian mechanism. Occupational differentiation does not arise, as it would in a strictly Darwinian paradigm, from the spontaneous generation of novel professions, some of which are coincidentally able to exploit new adaptive zones. Instead, it is a process of direct adaptation by which individuals *consciously* seek out and occupy new resource niches to secure their means of subsistence (*DL*, 213).

By rightfully incorporating Lamarckian ideas, Durkheim follows Spencer in relegating natural selection to a secondary role. It appears only when extreme growth in dynamic density outstrips the capacity of occupational differentiation to dampen competitive pressures, leading to the elimination or diminishment of the society in question (by, for example, dispersal or emigration) (*DL*, 217; see also Durkheim 1992, 177-178, 192). Functional differentiation is thus not the only way to suppress competitive struggle; instead, it may be addressed through "integration, colonisation, resignation to a precarious and more contested existence and, finally, the complete elimination of the weakest through suicide or other means" (*DL*, 228). Considering their relative desirability, processes of this kind are, in Durkheim's view, only likely to appear when circumstances prevent further development of the division of labour (*DL*, 229).

III. APPLICATION OF THE THEORY

Like Spencer, Durkheim is quite clearly a comparativist. *The Division* works to compare the division of labour across societies, to establish its major covariates, and to make reasoned conclusions about its causes and consequences. This procedure is intended to generate *universal* laws of societal dynamics, the existence of which would, Durkheim believes, prove the merit of sociology as a discipline. For this reason,

Durkheim claims that he is only interested in the "constant" causes of the division of labour – i.e. those that explain its regular historical development – rather than the various "special causes" which might explain its particular form in particular societies (*DL*, 179). Thus the above propositions are not restricted in scope, but apply to all societies, regardless of time, culture, or composition.

Because of this, Durkheim constructs his variables with universality in mind, and attempts to make them applicable to, and measurable in, every society. This is true of his notion of the division of labour, which follows the decomposition paradigm, and it is also true of one of the primary correlates he discusses: social evolution. Durkheim's understanding of evolution thus follows the basic assumptions of nineteenth-century intellectual culture. As in Spencer, evolution is treated as a universal comparative construct: a scale on which all entities of a similar type can be placed. Once again, the notion of differentiation is mustered to ground this scale, or to act as the means by which one judges evolutionary progress (Hinkle 1976, 341).

Support for this idea is found throughout *The Division*. For example, Durkheim approvingly cites Le Bon's conclusion that members of a race show greater variance in cranial capacity "according to how advanced the race is on the ladder of civilisation" (*DL*, 89); Waitz's assertion that 'native' or 'primitive' peoples are characterised by "the absence of any strong psychological individuality" (*DL*, 89); and Milne-Edwards' argument that an organism's place in the "animal hierarchy" is determined by the specialization of its functions (*DL*, 3). Sources of this kind lead Durkheim to draw a strong conceptual link between evolutionary progress and internal heterogeneity, and thus between social evolution and the division of labour. For this reason, he argues that mechanical solidarity becomes looser the more that we "mount the scale of social evolution" (*DL*, 105); that the division of labour is most advanced among the "highest social types" (*DL*, 92); and that the "state of dissociation existing between legal and religious elements is one of the best indicators for discovering whether one society is more, or less, developed than another" (*DL*, 95).

Many of these claims are tautological in nature, because it is unclear what makes the 'higher' types higher, or more evolved, other than their level of differentiation. This is especially true in Durkheim's case, because he argues that evolution does not have a determinate relationship with happiness, welfare, adaptive advantage, or other such traits (e.g. *DL*, 282). Statements of this kind show the influence of Darwin's ideas, which greatly confuse Durkheim's position. In Darwin, the notion of evolutionary progress is linked to an ecological parameter, or to the requirements of a specific environment. It thus makes little sense, from a Darwinian perspective, to speak of a *universal* scale of organic evolution, let alone to tie this scale to an organism's level of functional differentiation (D'Hombres 2012, 21). Differentiation may be adaptive in certain environments, for certain species, but the same is true of de-differentiation, or reversion to a lower level of complexity.

The link between differentiation and evolution thus proves faulty, and is undercut by Durkheim's own theoretical commitments. It is, however, by no means the only covariate he discusses; indeed, like Spencer, Durkheim puts forward a range of empirical propositions which one can easily decouple from evolutionist assumptions. For example, the major argument of *The Division* is that the division of labour allows for higher levels of social compounding, in that it offsets the inevitable weakening of mechanical ties. The success of this argument rests on the postulated relationship between the division of labour and organic solidarity. Claims of this kind have no necessary relationship with normative ideas about social progress, and can simply be taken as statements about societal dynamics, or as propositions by which we can – if they prove correct – predict social phenomena.

Unfortunately, many of Durkheim's positive claims do not withstand logical scrutiny. Take, for instance, the aforementioned link between the division of labour and organic solidarity. The notion of *organic* solidarity stems from the idea of the physiological division of labour, whose economic counterpart is not the division of labour in *society*, Durkheim's topic of study, but the division of labour in *manufacture*. The difference is, as Marx (1976, 472) surmises, that in the former case there is "exchange between

spheres of production which are originally distinct from and independent of one another", while in the latter there is a decoupling of vital tasks or functions within an integrated, goal-directed system. The issue is that Durkheim freely borrows from both models without recognizing the fundamental difference between them. He oscillates between seeing occupational roles as cooperating cells and competitive species, and claims that the differentiation of occupations affords the same level of integration for societies as would the differentiation of tasks for productive firms.

This conclusion is rather dubious. In the case of the physiological division of labour, or the division of labour in manufacture, differentiated parts perform necessary and complementary labour for a higher-order entity – i.e. an organism or productive firm. The higher-order entity is the primary beneficiary of this labour, not the parts themselves (Limoges 1994, 330). In the social division of labour, or in ecological theory, the opposite is true. Specialization does not benefit a higher-order totality; rather it benefits the specialized unit, which is freed from competitive pressure. The difference between the two concepts thus lies in the applicability of the mereological model. Species do not perform complementary functions *for* a broader totality (e.g. an ecosystem) in the same way that organs do in an individual body, or workers do in a productive firm.

In Durkheim's work, the two processes are confused. The social division of labour is thought to unfold in much the same manner as the differentiation of species, but the notion of organic solidarity is modelled on physiological interdependence. Durkheim claims, for example, that societies maintained by organic solidarity are "constituted…by a system of different organs, each of which has a special role" (*DL*, 132), and that organic solidarity is based on the "unity of the living organism" (*DL*, 84). Likewise, he argues that the division of labour describes a situation in which "each one of the functions that the members [of a society] exercise is constantly dependent upon others and constitutes with them a solidly linked system" (*DL*, 173). Durkheim insists, in other words, that the division of labour binds social actors in a functionally integrated or goal-oriented system, in which cooperative, rather than competitive, relations are the norm

(D'Hombres 2016, 14). It is, however, very difficult to maintain that occupations are dependent upon one another in this fashion. Like species in an ecosystem, occupations depend on other occupations only to the extent that they rely on them to pursue their own interests, not because of their contribution to the wellbeing of an overarching whole.

To establish a link between the division of labour and organic solidarity, Durkheim needs to argue that occupational labour fulfils *social* needs. This is, however, generally not done, and it is difficult to see how it could be done in Durkheim's framework. He is unable to argue that social needs are nothing more than aggregates of individual needs, and that the performance of labour by individuals for other individuals is, *ipso facto*, the meeting of social needs, for this would not only contradict his insistence that society is a *sui generis* category with *sui generis* needs, but would also problematize the link between the division of labour and organic solidarity. Indeed, the exclusion of criminal professions from the analysis of the division of labour shows that Durkheim has something more than individual needs in mind, for criminal activity can fulfil such needs while at the same time being, in Durkheim's view, harmful for society as a whole (*DL*, 292).

Exactly what it means for something to benefit or harm society as a whole is, however, not clear, and as such it is difficult to see how occupations are oriented to a common function or act in concert to "maintain life" (*DL*, 291-292). One might make the rather vacuous claim that occupations collectively produce the fundamental need of social solidarity, but this simply shifts the problem to the sub-functional level. The question of what distinct, unique, and indispensable contributions these separate occupations make to the maintenance of solidarity, and thus of how the occupations which perform them are bound together in an interdependent system (akin to an organic body) is still left unanswered.

This is not to say that there is no link between the division of labour and social solidarity. It seems, however, that any such link would be essentially *ecological*, rather than *physiological* in nature, and that as such the interdependence in question cannot be

as strong as Durkheim presupposes. An ecosystem does not, for example, regulate or coordinate its constitutive species in the same manner as the nervous system regulates and coordinates the work of bodily organs. While Durkheim does try to apply the latter model to the division of labour – arguing that legal and political institutions perform important regulative functions (see *DL*, 83) – it seems plain that occupations are not typically coordinated in a highly centralized manner. Similarly, species can compete with other species to a much higher degree than can the various parts of an organism. Once again, the former model seems to provide the most accurate analogue for the social division of labour, which can give rise to a range of conflictual or divisive interests (Corning 1982, 366). Indeed, Durkheim's causal analysis of the division of labour necessitates this, for it is based on competition *between* occupations.

This is – to return to a point made in the previous chapter – why theories of differentiation need to be especially cautious about the units being analysed, and must avoid assimilating particular forms of structural differentiation to a single overarching pattern (Rueschemeyer 1982, 588). As discussed in our earlier comments, biological theories readily acknowledge that *cellular* differentiation and *species* differentiation do not follow the same patterns – either logically or empirically. In a similar vein, the division of labour in manufacture will likely have different causes, consequences, and general patterns than will the division of labour in society. As such, one cannot assume – as Durkheim does – that these two processes will have the same impact on social solidarity, or will engender equivalent kinds of system integration.

What, then, can we conclude about the utility of *The Division*? As a series of constructs, which one may borrow and use for further comparative study, the work has many problems. Its central concept, the division of labour, is constructed in a confusing and contradictory manner, and is never explicitly defined or operationalized. On the level of propositions, which one may further test, refine, and use for the purpose of empirical prediction, the work may speak to some genuine correlations (between, for example, population size and internal differentiation), but it does not definitively establish them, and is unable to justify its causal claims in a convincing manner. As a result, it is

difficult to see a point at which Durkheim's theories of functional differentiation advance beyond Spencer's. Instead, I take *The Division* to be an ambitious, instructive example of the problems which future theories of differentiation need to consider, or of the consequences which emerge if these problems are not addressed. My additional criticisms are provided with this point in mind.

IV. CRITICAL ASSESSMENT

The decomposition model

Our first point of criticism relates to Durkheim's use of the decomposition model, and to the question of functional novelty in the division of labour. Like Spencer, Durkheim approaches social differentiation via analogies to the physiological division of labour. As such, he argues that the division of labour implies specialization in a *static* set of functions. 'New' occupations are only seen as novel in a structural sense, not in terms of function. They emerge when individuals – under threat of competitive pressure – specialize in some particular sub-division of pre-existing functional labour. In Durkheim's words, less competitive individuals can "only continue to exist by concentrating upon one part only of the total function that they fulfilled up to that time" (*DL*, 212). This idea is particularly important, because it allows Durkheim to argue that the division of labour enhances solidarity. Each occupation specializes in a task (or part of a task) on whose completion the society depends; as such, each occupation is linked with others in a functionally interdependent system.

This approach relies on the postulate of functional unity, or on the thought that the labour being 'divided' by the division of labour ultimately benefits society as a whole. As we have seen, this is not justifiable, and contradicts Durkheim's claim that occupations develop in a manner similar to species. Just as species do not perform functions *for* ecosystems, occupations do not perform functions *for* society. If they 'function' at all, then they function to benefit other individuals, and individual wants are – as Durkheim himself notes – open-ended and malleable. As such, there is no real reason to think that occupational diversification cannot lead to a corresponding

diversification of function. New resources can be found, new wants can be stimulated, and the potential directions of specialization can expand (De Grigori 1987, 1244).

In this regard, the species analogy suggests an entirely different model of differentiation than the one proposed by Durkheim, for speciation is quite clearly not a process of functional decomposition. While species obviously descend from other species, descendant species do not specialize in the ecological 'functions' performed by ancestor species. In addition, it is widely acknowledged that the speciation process can give rise to non-homologous structures: structures present in descendant species that have no clear antecedents in ancestor species (Müller & Wagner 1991, 243). As such, models of speciation typically allow for the emergence of *evolutionary novelties*: "newly acquired structure[s] or [properties] that [permit] the performance of a new function" (Mayr 1963, 602). Such ideas are quite clearly at odds with Durkheim's decomposition-based account of the division of labour. To follow through on the speciation analogy, one would instead have to argue that new occupations can, like new species, display both structural *and* functional novelty.

This again emphasizes the difficulties associated with a *general* theory of differentiation – i.e. one which incorporates a range of distinct analytic units. Just as species do not 'function' in the same way as cells or organs, and just as species integration must be distinguished from the integration of physiological components, functional distinctions between the various 'parts' of an organism do not arise or unfold in the same manner as distinctions between species. The primary error of *The Division* is to conflate these two levels of analysis – not merely in its account of the division of labour's social function, but in the very way it conceptualizes its titular process. In arguing that the division of labour in *society* advances via functional decomposition, Durkheim applies a model which is deeply rooted in the study of ontogenetic development, and which has proved dubious even in this context, to describe a social process that he himself sees as an analogical equivalent of phylogenetic change. He thus presents a curious construction in which the Spencerian understanding of institutional *differentiation*, or of *specialization* in social functions, is overlaid onto the economic notion of occupational *diversification*.

The result is a contradictory, confusing, and empirically unsatisfying account of both processes.

Differentiation and competition

Difficulties of this kind exemplify the dangers of analogical reasoning. While interdisciplinary generalizations prevent the duplication of theoretical effort among the sciences, theorists must avoid the temptation to downplay the obvious ontological distinctions which separate different objects of study. For example, the above comments demonstrate that the process of occupational diversification is closer in character to species diversification than it is to cell-type differentiation. One can, however, push the analogy too far; indeed Durkheim often runs into trouble precisely because he fails to acknowledge the very real differences between differentiation in ecosystems and the division of labour in societies. This is particularly evident in his causal account of the division of labour, which is directly modelled on the ecological process of niche differentiation.

Niche differentiation arises from competitive strain on resources: scarcity induces the selection of species which diverge in the type of resources consumed. For Durkheim, this is true of occupational differentiation because different professions come to take on different *objectives*. "The soldier," he claims, "seeks military glory, the priest moral authority, the statesman power, the industrialist wealth, the scientist professional fame" (*DL*, 209). It is, however, quite inappropriate to link these particular aims to the broader paradigm of existential struggle, which is largely related to the question of subsistence. As Kemper (1975) has argued, Darwin's paradigm assumes that different species can co-exist in close proximity because they are not in competition for the same sustenance. This is not true of soldiers, priests, statesmen, and so forth, who are "in competition for the same supply of food, at the very least" (Kemper 1975, 201).

It is possible to counter this objection, for resource partitioning does not only occur when populations utilize *different* resources, but also when populations find different ways to capture or utilize the *same* resources, as would be the case in Durkheim's

model. The argument does, however, still point to a greater issue in his thesis, which is that it explains occupational specialization – a form of specialization in *production* – using an ecological model based on specialization in *consumption*. This distinction is not irrelevant. While an increase in population density will likely intensify competition among *consumers*, the same is not true of *producers.* Indeed, the very opposite should hold in the latter case: "increased demand for a product would, *ceteris paribus*, let even marginal producers operate with a profit; their chances of survival would improve rather than diminish" (Rueschemeyer 1982, 582).

Alternative explanations

These comments demonstrate some logical issues with the postulated link between the division of labour and dynamic density. It is, then, unfortunate that this principle is forced to bear so much explanatory weight. Indeed, dynamic density is the *only* causal variable which Durkheim links to the division of labour – at least as a "constant" cause.[3] New occupational specializations always emerge, he believes, because they function as new adaptive niches. It is argued, for instance, that if "science, art and economic activity develop, it is as the result of a necessity imposed upon men," there being "no other way [for them] to live" as competitive pressure increases (*DL*, 276). Durkheim thus holds that his ecological model, though primarily illustrated with reference to "economic life," is "applicable to all social functions without distinction" (*DL*, 212). "Work," he claims, "whether scientific, artistic, or otherwise, does not divide up in any other way or *for any other reasons*" (*DL*, 212, emphasis added).

Even if a link between density and differentiation could be justified, it is surely too much to claim that *all* occupational distinctions (and, considering Durkheim's expansive concept of the division of labour, all function-based role distinctions more generally) emerge as a result of resource competition. This conclusion is not only empirically implausible, but contradicts Durkheim's well-evident aversion to utilitarian models of social behaviour (see Müller 1994). In arguing that functional distinctions

[3] Reference is also made to population size, but Durkheim explicitly claims that this is an indirect cause, which influences the division of labour not "through itself and of necessity," but because the "number of social relationships [i.e. dynamic density] increases generally with the number of individuals" (*DL*, 205).

always emerge via competition, Durkheim's explanation of the division of labour generalizes the logic of economic activity, and its concomitant model of individual motivation, across institutional arenas which are either partially or wholly removed from the realm of market competition (such as those of art, politics, religion, or the family), giving no attention to their unique features, ends, or causal patterns.

Issues of this kind demonstrate the monological nature of Durkheimian explanation – in both its functional and causal varieties. Solidarity is treated as a *determinate* outcome of the division of labour, regardless of the particular labour being divided or the particular units in question (for a critique see Perrin 1995, 800). Likewise, this process is, *in every case*, thought to be driven by competitive struggle over the means of subsistence. Alternative causal principles – such as economic incentive, intrasocietal conflict, creative innovation, or environmental pressure – are simply excluded from the analysis, as are alternative outcomes.

Durkheim's work thus displays the same problem as Spencer's, in that it reduces a complex social phenomenon to a single causal principle. Durkheim's approach is, however, particularly vulnerable to this issue, because unlike Spencer Durkheim "excludes whole domains of causation *a priori*" (Corning 1982, 369). One sees this in *The Division*. The text does not begin from a neutral standpoint, admitting the possibility of a range of causal principles. Instead, it is designed to prove the autonomy, and hence necessity, of sociological explanation. It thus operates by virtue of a "self-imposed theoretical tunnel-vision" (Corning 1982, 371) in which social factors are consciously treated as the only permissible explanatory principles. For this reason, variables are privileged, and ignored, for wholly normative reasons, and explanations relying on non-social factors are often treated in an uncharitable manner.

Take, for instance, Durkheim's assessment of the economic argument, which holds that the division of labour progresses due to gains in efficiency, or because a greater division of labour can better cater to individual desires. In Durkheim's view, this explanation falsely assumes that the division of labour must lead to an increase in overall happiness. Yet as Rueschemeyer (1982, 586) argues, this is not actually correct; rather the

efficiency argument simply needs to assert that the "potential demand for goods, services, and unmarketed activities exceeds the supply at any given time," and that producers can recognize the link between specialization and efficiency. Put in this manner, it is hard to imagine that the economic benefits of the division of labour do not have something to do with its general prevalence. They may not be its only cause, but Durkheim has no real ground to dismiss their significance entirely, or to argue that said benefits are merely illusory functions (see *DL*, 17). Such claims are not justified with reference to empirical evidence, but instead stem from the external preoccupations of the text, or from Durkheim's commitment to a "radical sociologism" (Merton 1994, 18).

This particular commitment, broadly expressed as the idea that social phenomena must always be explained by other social phenomena, is difficult to support on either logical or empirical grounds; and it quite clearly seems to stunt, rather than augment, Durkheim's explanatory capacity. It is, for example, notable that Durkheim claims to have of yet found only *two* aspects of the social milieu which can "exert some influence on the course of social phenomena": population size and dynamic density (*RSM*, 113, 115). He thus has a rather paltry range of variables with which to explain social facts, and it is unsurprising that the resultant hypotheses often seem contrived and "intuitively unsatisfying" (Corning 1982, 371).

It is also unsurprising that Durkheim struggles to abide by his own dictates, which thereby reveal themselves to be excessively restrictive. For example, his causal explanation of the division of labour is supposedly based on the principle of *dynamic* density, one of the above two factors. Yet as Gibbs (2003, 106) argues, Durkheim never explains why the *frequency* of interaction between individuals has any relation to resource competition. In postulating a relationship between density and competition, and thus between density and the division of labour, Durkheim instead seems to be thinking of *material* density – a variable which is, as Parsons (1949, 323) has noted, "not in any analytical sense a social element at all." It is doubtful that Durkheim could repudiate this point, for he specifically introduced the notion of dynamic density as a uniquely sociological alternative to the more ecological notion of population density

(see Merton 1994, 22). In defaulting to the latter, Durkheim forsakes his own analytic principles, and accepting his argument would in fact mean *rejecting* the inadmissibility of non-social variables in sociological explanation (Corning 1982, 372).

Durkheim cannot, then, justify the claim that social factors are solely responsible for the division of labour, let alone the claim that the only relevant social factor is dynamic density. His argument is simply too one-dimensional, in that it unduly emphasizes a single causal variable and unnecessarily downplays a range of alternative catalysts (whether social, psychological, or environmental). In so doing, it fails to recognize the complex range of factors that may influence social life, and illustrates the numerous shortcomings which are bound to accompany monofactorial theories of social change (Corning 1982, 375, 373).

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While many of the above comments relate specifically to the theorization of occupational diversification, or to the largely economic idea of the division of labour, Durkheim's missteps speak to a general set of problems which have hampered theories of functional differentiation more abstractly conceived. It is thus unsurprising that many of the above criticisms have already been raised in our discussion of Spencer's ideas. In both theorists, we see a denial of functional novelty, a conflation of distinct analytic units, and an assumption that processes of differentiation can be exhaustively explained by a single causal principle. Durkheim's approach cannot, then, help us to overcome these issues – if anything it seems to add additional problems.

Durkheim seems to have recognized the faults of his early work; indeed he swiftly abandoned many of its most prominent ideas (including the concept of organic solidarity) (Pope and Johnson 1983). The central concern of *The Division* – that of the sources of integration in differentiated societies – was nonetheless retained, and motivated a number of his later publications. If Durkheim has made a lasting contribution to the theorization of functional differentiation, it is undoubtedly in regards to this point of inquiry. While Spencer was also concerned with system integration,

Durkheim's life-long engagement with the topic proved particularly influential on future theorists. His theories of the collective consciousness were, for instance, especially significant to Parsons (1968a, 314), who through them came to hold that "the sharing of common values" is a "constant feature" of all well-integrated social systems – whatever their level of differentiation – and whose thoughts on the integration of modern societies show a clear debt to Durkheim's thoughts on the growing abstractness, and hence greater inclusivity, of collective ideals. Even in the case of Luhmann, who not only rejects many of these arguments, but makes concerted attempts to supersede them, one still sees the importance of the Durkheimian heritage. In fact, such actions support Parsons' (1968a, 311) own, reverential assertion that even those who "basically disagree" with Durkheim's framework cannot help but "take it as a major point of reference." The following two chapters provide ample illustration of this particular claim.

CHAPTER THREE

Spencerian Themes in Structural-Functionalism: The Work of Talcott Parsons.

It is an oft-noted irony of Talcott Parsons' career that the famous lines with which he pronounced the obsolescence of Spencerian thought can, with relatively minor amendment, provide an apt description of his own theory's contemporary fate. Few, today, read Parsons, and his descent into irrelevance – prompted by decades of rather caustic debate – closely mirrors Spencer's fall from grace. To most contemporary students of social theory, Parsons' conceptual scheme does not, if it is considered at all, appear as a viable system of analysis, nor even as a source of insight and ingenuity, but rather as some kind of archaeological curiosity – a relic of a more naïve, and for that reason more ambitious, past. Those who remain interested in the structural-functional paradigm are, by consequence, likely to be seen as either stubborn hold outs, determined to get a return on their investment, or inexperienced youths, captivated by a theory which is often thought to prize symmetry over substantiality (e.g. Blain 1972).

That Parsons' reputation has followed the trajectory of Spencer's is more than mere coincidence, for Parsonian sociology evokes Spencerian ideas at almost every turn. This is not always the result of direct influence, but seems to stem from a common commitment to the meta-theoretical precepts of the functionalist research tradition. Both figures begin, for example, with interdisciplinarity in mind, arguing not only that societies are *systems*, but that they belong to a category or class of systems that also includes many biological systems, including organisms. Both thus argue that organisms and societies share various organizational principles, and that concepts and theories which apply to the former (such as notions of equilibrium or evolution) are applicable in studies of the latter. This approach leads directly to the mereological model of functionality, and to a model of functional differentiation based on its major assumptions.

In these regards, Parsons and Spencer operate with essentially identical analytic frameworks. There are, however, substantial differences in the way that the two figures 'fill out' their respective paradigms – particularly when it comes to the conceptualization of the social system and the designation of its unique constituent elements. For that reason, Parsons' conceptual framework requires its own exposition.

Two points must be noted as a preface to the presentation. First, an exegetical account of Parsons' work must deal with his prodigious level of output, and with ideas that changed significantly over the course of a long scholarly career. We are, however, aided by our focus on functional differentiation, which was most extensively addressed in Parsons' later writings. As such, the intention is not to narrate the development of Parsons' ideas on the topic of differentiation, but rather to present, codify, and critique them in their mature form, which I am associating with the development of the four-function paradigm after the publication of *The Social System* (1951). Second, it must be noted that Parsons' work was quite often produced in collaboration with other scholars – the most notable being Neil J. Smelser, Robert F. Bales, Edward A. Shils, and Gerald M. Platt. Though this chapter will largely refer to "Parsons'" ideas, theories, and intuitions, it would be a disservice to his various collaborators not to mention that Parsonian theory is in no small manner a communal enterprise.

I. BASIC CONCEPTS

System

The basic requirement of any systems-theoretical model is that one is able to distinguish between a system and its environment, or to observe an interrelated set of processes or structures that maintain an 'internal' state which is distinctive relative to certain 'external' states. In Spencer, for example, societies preserve their distinctiveness vis-à-vis a surrounding environment via the creation and deployment of internal forces which balance out, or compensate for, external perturbations. Though Parsons updates the technical vocabulary – drawing, for example, on the concept of homeostasis popularized by Cannon – his basic model is essentially identical to the one promoted by Spencer. Parsons (1954, 143) writes, for example, that every social system is a "system of

interdependent structures and processes" which "tends to maintain a relative stability and distinctiveness of pattern and behaviour as an entity by contrast with its – social or other – environment." Put differently, the idea is that social systems, like organisms, maintain an "element of distinctiveness in the face of variations in environmental conditions" (Parsons 1954, 143).

While these ideas show an obvious affinity to those articulated by Spencer, Parsons rarely lists him as a source of inspiration (referring, instead, to such figures as Vilfredo Pareto, Claude Bernard, and Lawrence J. Henderson (Parsons 1970, 830)). In addition, Parsons distances himself from Spencer by making explicit use of a range of theories, concepts, and research currents which post-date Spencer's work. The concept of homeostasis is one example, but Parsons also draws on a number of other developments in general systems theory and the philosophy of science. His approach to systems thinking is, for instance, specifically formulated to avoid the fallacy of misplaced concreteness described by Whitehead, and thus makes concerted efforts to guard against reification.

Parsons gives the following definition of the system concept:

> **(3.1) System $=_{df}$ a set of interdependent parts or variables, where interdependence consists in the existence of "determinate relationships among the parts or variables as contrasted with randomness of variability" (Parsons and Shils 1951, 107).**

Systems are thus defined and identified by the existence of *structure:* structure being nothing more than these "determinate relationships" – i.e. relationships (between elements) which are "stable over a time period and under a set of conditions relevant to a particular cognitive enterprise" (Parsons 1977, 103). A *social* system, for example, does not consist merely of elements, or units of interaction. Rather, a *system* of interaction only emerges when a threshold degree of stability is met, or when the interaction is *structured* or *patterned* in some particular manner.

> **(3.2) Structure $=_{df}$ "the features of the system which can, in certain strategic respects, be treated as constants over certain ranges of variation in the**

behaviour of other significant elements of the theoretical problem" (Parsons 1961a, 36).

It is notable that structure is here defined with reference to a particular cognitive purpose or problem (see also Parsons 1977, 103), which leads us back to the claim that the Parsonian version of systems theory is specifically constructed to avoid misplaced concreteness. For Parsons, the system concept is *analytical* in nature, in that it describes analytically identifiable relationships between concrete units, rather than describing a concrete unit itself. While Parsons (1970, 839) is explicit on this issue, claiming that a social system is "not a concrete entity, but a way of establishing certain relations among components of 'action' that are distinctive relative to the manifold of concrete reality," his position is, unfortunately, highly inconsistent. He often speaks of "concrete social systems" (e.g. Parsons 1961a, 38; 1951, 39; Parsons and Smelser 1956, 15), and often uses terminology – such as that of functionality, equilibrium, and boundary-maintenance – which insinuates that social systems are concrete entities (rather than analytically distinguishable relationships). These inconsistencies should be kept in mind during the following exposition.

The action system

To understand Parsons' concept of a *social* system, one must first understand his contention that social systems are subsystems within a wider system of *action*. The basic idea behind the action system concept, as explained by Münch (1982, 775), is that "every concrete action unit…is to be explained as the product of a specific, multifaceted relationship among…[four] subsystems and a specific degree of interpenetration among them."[1] A concrete instance of action can thus, for the purposes of examination and analysis, be analytically disaggregated into a series of constitutive elements or subsystems (i.e. categories) of elements – each of which is, Parsons believes, the special focus of a distinct scientific discipline (Hayes 1980, 43).

[1] While Münch's (1982, 775) original quote speaks of *three* subsystems, Parsons' model of the action system was expanded to include four subsystems after the introduction of his 'four-function' paradigm (see Parsons 1961a; cf. Parsons 1951).

The four subsystems in question are the *personality system*, comprised of the organized motivations and orientations of individual actors; the *social system*, comprised of institutionalized role expectations; the *cultural system*, comprised of the symbolic patterns by which action is interpreted and given meaning; and the *behavioural organism* (or *behavioural system*), comprised of those aspects of individual organisms which facilitate or provide resources for physical action (see Parsons 1961a; figure 3.1). Though analytically distinct, these systems are interpenetrated in any instance of social action, in that each concrete action is made up of elements from all four subsystems. As such, the subsystems of action are said to be "engaged in complicated processes of interchange with environing systems," whether fellow subsystems in the system of action or different kinds of systems in the physical environment (Parsons 1961a, 36).

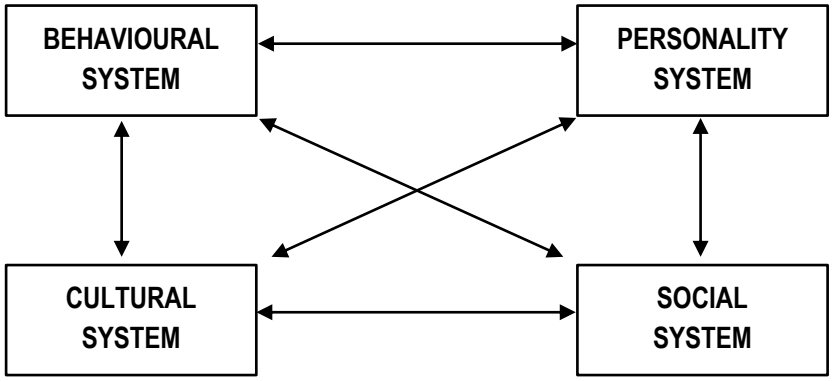

Figure 3.1 – The action system model.
Adapted from Parsons (1961a, 36).

It is, however, important to note that the various subsystems of action, as explicitly *analytic* systems (or sets of analytically distinguishable elements), do not themselves share or exchange their elements. In speaking of interchange relationships, Parsons merely posits that elements in one subsystem can influence elements in another. For example, social systems and personality systems are said to be linked by the interchange process of *socialization* (see Parsons 1951). Socialization does not, however, involve the direct 'input' of role-expectations – elements in social systems – into personality systems. Instead, it is a process of *learning* by which the cognitive orientations of the individual actor are moulded or shaped by societal expectations. Socialization cannot, then, establish a perfect congruence between institutionalized roles and individual

orientations (Parsons 1951, 44). Instead, role expectations are *personalized*: subjectively interpreted and selectively implemented. Thus while societal expectations *influence* the beliefs and behaviours of the individual, and thus 'contribute' to any concrete instance of action, social elements and personality elements always remain *analytically* distinct, in that a cognitive orientation is never wholly equivalent with an institutionalized role expectation.

Society

We are now well placed to understand how Parsons defines a social system:

> **(3.3) Social system $=_{df}$ a "system of interaction of a plurality of actors, in which the action is oriented by rules which are complexes of complementary expectations concerning roles and sanctions" (Parsons and Shils 1951, 195).**

The underlying assumption of this definition is that actors "[do] not orient themselves to a situation in an ad hoc [or random] way," but are guided by "regular and stable patterns of expectations" (Parsons 1951, 25). In other words, interaction is made stable and predictable through the expression (via sanctions) of complementary role expectations: ideas about which behaviours are appropriate in specific situations. This allows for the coordination of action. Parsons (1954, 231) thus holds that individuals 'participate' in the same social system when their interaction is mutually oriented around a shared, stable set of expectations about the "proper behaviour of persons playing certain roles." These expectations are taken for granted by the participants in the interaction, and conformity with them is legitimized via wider norms and values (in which case the role is said to be *institutionalized*) (Parsons 1940, 190).

For Parsons, it is the role expectations themselves, and not the individual actors who hold or apply them, which act as the basic structural components of social systems. As he notes, the individual actor participates in a social system only to the extent that they "[hold] a status or [perform] a role," and their individual personality is never completely coextensive with that role (Parsons 1951, 25-26). This view stems from the action system model, which insists on an analytic separation between social systems and

personality systems. Though this postulate is said to "directly [counter] the long tradition that society is 'composed' or 'made up' of 'individuals'," it is, Parsons (1977, 197) believes, necessary if one is to admit the possibility of both deviance and ingenuity.

Roles cannot, however, function alone, and as such they are not the only type of structural element present in social systems. Parsons (1961a, 36) thus holds that the total structure of a social system – or what he terms its "institutionalized pattern of normative culture" – is made up of four distinct kinds of elements, of which roles are merely the 'bottom' category. The categorization unfolds, in descending order of generality, as follows:

1. *Values,* defined as "conceptions of desirable types of social systems that regulate the making of commitments by social units" (Parsons 1969, 37). Simply put, values are normative judgements about what constitutes a "good society" (Parsons 1960, 122). Values confer legitimacy on norms, and behaviour in line with normative patterns is directed toward the realization of values.

2. *Norms,* defined as "generalized patterns of expectation which define differentiated patterns of expectation for the differentiated kinds of units within a system" (Parsons 1960, 124; 1969, 37). Norms specify the application of values in concrete social situations by defining, in a more precise manner, the obligations and expectations of participant actors.

3. *Collectivities*, defined as systems of coordinated activity characterised by both membership rules, i.e. distinctions between members and non-members, and status differentiation, i.e. different expectations of different categories of members (Parsons 1969, 37). Collectivities specify the application of values and norms with reference to "the particular goals, situations, and resources of the collectivity" (Parsons 1960, 124).

4. *Roles*, defined as "system[s] of normative expectations for the performance of a participating individual in his capacity as a member of a collectivity" (Parsons

1960, 125). Roles are thus expectations about appropriate conduct, tied to membership of a collectivity. They are always "normatively regulated" – i.e. policed by sanctions (Parsons 1961a, 42).

While these four components are analytically distinguishable and independently variable, they will always overlap in concrete cases. As Parsons (1966, 19) notes, there can be "no collectivity without member roles," "no role which is not part of a collectivity," and "no role or collectivity which is not regulated by norms and characterised by a commitment to value patterns." What we may describe, in light of our above comments, as 'concrete social systems' – empirical entities such as families or businesses – are thus compound entities in which the four basal elements of social systems overlap (or interpenetrate, in Parsons' terminology).

This is the case when discussing *societies*. For Parsons (1961a, 44), a society is a kind of concrete social system: an empirical collectivity made up of roles, values, norms, and various other sub-collectivities. Societies are, however, distinguished from all other collectivities by their "relative self-sufficiency," or by the fact that they are not functionally differentiated parts in any higher order collectivity (Parsons and Shils 1951, 196). In other words, a society must, to be defined as such, possess: a) the specific elements of a collectivity (i.e. membership rules and status distinctions); b) the general structural features of social interaction (i.e. participant roles, normative regulation, and a common, institutionalized value system); and c) relative self-sufficiency in regards to the functional exigencies characteristic of social systems.

(3.4) Society $=_{df}$ "a system of concrete interacting human individuals, which is the primary bearer of a distinctive institutionalized culture and which cannot be said to be a differentiated subsystem of a higher-order collectivity oriented to most of the functional exigencies of a social system" (Parsons 1961a, 44).

Function

This raises the question of what, exactly, Parsons means by the 'functional exigencies' of social systems. Like Spencer, Parsons defines functionality with reference to the

concept of equilibrium; indeed both figures treat equilibrium as a fundamental, indispensable concept of systems science. Thus when defining the system term, Parsons and Shils (1951, 107) note that a system "must have a tendency to self-maintenance, which is very generally expressed in the concept of equilibrium." This follows from the thought that a system must, to be seen as such, maintain a constant pattern of internal organization despite ongoing change in its surrounding environment (Parsons 1977, 101). Systems will thus, Parsons (1977, 101) believes, contain "mechanisms" which adjust their internal states in response to changes in environmental states, and will therefore have certain states which said mechanisms seek to maintain (Parsons and Shils 1951, 108).

Functionality is understood with reference to this requirement (Parsons 1977, 101). Indeed, Parsons (1961a, 36) explicitly claims that the function term is applied to processes which mediate between the exigencies imposed by the "relative constancy or 'givenness' of a structure," on the one hand, and those imposed by the "givenness of the environing situation external to a system," on the other. As such, a component unit is functional, or acts as a functional mechanism, when it contributes to the stability of system structure, thereby preserving the equilibrium, and thus the existence, of the system.

> **(3.5) Equilibrium $=_{df}$ a state in which a system is able to maintain its particular structure despite variation in its external environment (see Parsons 1961b, 338).**
>
> **(3.6) Function $=_{df}$ an action by which an element in a system positively contributes to the maintenance of that system's equilibrium.**

Applied to *social* systems, equilibrium denotes the capacity of a social system to maintain its distinctive internal structure – i.e. its particular pattern of institutionalized normative culture – in the face of external perturbations, including those which arise from both personality systems and cultural systems. As such, Parsons does not hold – despite the imputations of many critics – that the maintenance of equilibrium is a given, nor that equilibrium is always desirable (he notes, for instance, that "'disequilibrium'

may lead to structural change which, from a higher-order normative point of view, is desirable" (Parsons 1961a, 37)). Rather, the concept of social equilibrium simply describes the maintenance of present patterns, which must in all cases be the product of functional mechanisms.

(3.7) Social equilibrium $=_{df}$ a state in which a social system is able to maintain its institutionalized pattern of normative culture.

(3.8) Social function $=_{df}$ an action by which an element in a social system positively contributes to the maintenance of that system's equilibrium.

In a similar vein, one should also not assume that Parsonian equilibrium requires an essentially static society. For one, Parsons allows for the possibility of there being a "moving" or "dynamic" equilibrium, in which the system would attempt to maintain a stable rate or "determinate pattern" of change (rather than one which varies randomly "relative to [a] starting point") (Parsons and Shils 1951, 107). Yet even in the case of a static equilibrium, Parsons (1961b, 338-339) rightly notes that the maintenance of variables within specified ranges requires change in other parts of the system – most obviously in those processes which maintain the values in question.

Functional dimensions

Like Spencer (and unlike Durkheim) Parsons argues that one can provide an exhaustive list of the different tasks or functions which any system must fulfil to maintain equilibrium. The two do, however, differ in the typologies presented. While Spencer primarily spoke of three universal functions – the operative, regulative, and distributive – and also mentioned a number of unique social functions, Parsons presents a single, universal, four-fold catalogue, known as the 'four-function' or 'AGIL' paradigm.

The AGIL paradigm initially arose from a convergence between Bales' analysis of role differentiation in small group interaction and Parsons' well-known pattern-variable scheme (see Parsons, Bales and Shils 1953). It was, however, gradually detached from this foundation, and in its mature form it was typically justified with reference to two fundamental axes – i.e. sets of dichotomous variables – which Parsons used to

characterize different types of actions. The first of these axes, the *internal-external* axis, postulates that action can be oriented to either a system (internal) or its environment (external). The second, the *instrumental-consummatory* axis, postulates that action can be oriented to either the gathering (instrumental) or the utilization (consummatory) of resources (Parsons and Platt 1973, 10-12; note the similarity to Spencer's distinction between accumulation and expenditure). By cross-tabulating these two axes (see figure 3.2), Parsons posits four functional categories, arguing that adequate performance of each type of function is an existential imperative for any system of action.

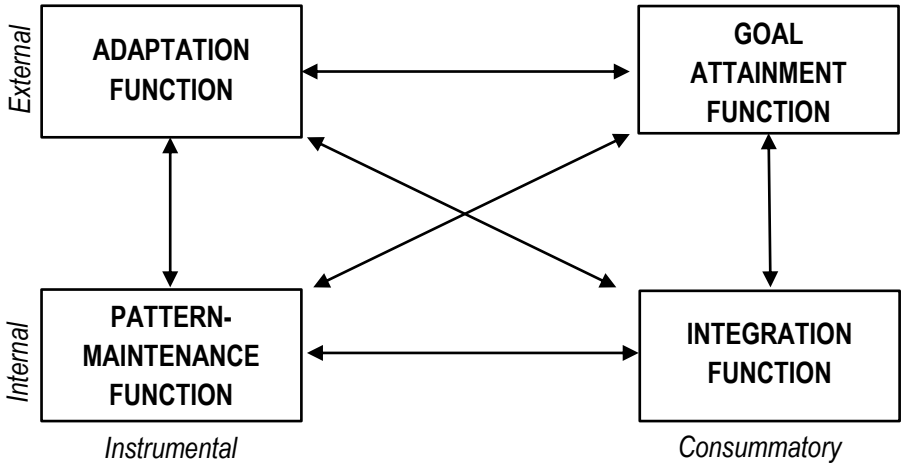

Figure 3.2 – The four function paradigm.
Adapted from Parsons and Platt (1973, 12).

The four categories obtained are:

- *Pattern Maintenance and Latent Tension Management (L)* – This function is a combination of two analytically distinguishable imperatives. Pattern-maintenance is essentially equivalent to equilibrium, for it refers to the stabilization or preservation of a system's internal structure in the face of pressures to change that structure (Parsons 1961a, 38). Tension management is an aspect of this: it refers to the need to provide sufficient motivation for units to act in accordance with structural patterns (Parsons 1961a, 38).

- *Goal Attainment (G)* – This function relates to the existence of discrepancies between the tendency towards pattern-maintenance, which is, as per the theory

of equilibrium, a necessary aspect of all action systems, and the various environmental conditions which frustrate its expression (Parsons 1961a, 38). Goal attainment thus refers to the need for mechanisms which "reduce the discrepancy between the needs of the system, with respect to input-output interchange, and the conditions in the environing systems that bear upon the fulfilment of [system] needs" (Parsons 1961a, 38).

- *Adaptation (A)* – This function relates to the scarcity of resources or facilities, which systems need to use in pursuit of particular ends. Adequate performance of the adaptive function thus requires mechanisms which provide and organize facilities that may be utilized in the performance of the goal attainment function (Parsons 1961a, 39).

- *Integration (I)* – This function addresses the fact that almost all systems are, in Parsons' (1961a, 39) estimation, "differentiated and segmented into relatively independent units." Integration thus refers to the need for mechanisms which ensure that these units can act in a complementary manner, or can be coordinated in service of system ends (Parsons 1961a, 39).

functional requisite	**derivation**	**reference problem**	**function**
Adaptation (A)	external instrumental	Scarcity of resources in relation to a plurality of goals.	Provision of facilities or resources.
Goal attainment (G)	external consummatory	Discrepancy between system needs and environing conditions	Reduction of external discrepancies.
Integration (I)	internal consummatory	Internal differentiation between composite units.	Reduction of internal discrepancies.
Pattern-maintenance (L)	internal instrumental	Instability of system structure.	Maintenance of system structure.

Table 3.1 – The four functional imperatives.
Adapted from Parsons (1961a, 38-39).

As per the above derivation, each of the four functions thus represents a combination of two values. For example, the A and G functions are both concerned with the adjustment of the system to environmentally imposed exigencies (external) – but the former is concerned with the procurement of generalized resources (instrumental) while the latter is concerned with their deployment in service of certain ends (consummatory). The same is supposedly true in the case of the L and I functions, which are both internally oriented, and which are distinguished on the basis of their instrumental and consummatory aims, respectively. It must, however, be admitted that this second axis is difficult to apply to the two internal functions, and even sympathetic scholars admit that it does not map onto the pattern-maintenance/integration distinction in a convincing manner (Münch 1994a, 42).

Summary

Though Parsons largely eschewed the 'structural-functionalist' label, the relationship between structural morphology and functional categorization animates his entire project. In this sense, the basic analytic structure of Parsonian theory follows that of our previous two theories, for it rests on similar premises.

> **(3.9) The existence of a social system is dependent upon the preservation of equilibrium within that system.**
>
> **(3.10) The maintenance of equilibrium within a social system is dependent on the fulfilment of the four functional exigencies.**
>
> **(3.11) Social structures (values, norms, collectivities, roles) are the mechanisms by which the four functional exigencies of a social system are fulfilled.**

Though these premises specifically refer to *social* systems, Parsons applies equivalent ideas to other kinds of systems – whether other subsystems in the system of action or systems at levels above or below them. He thus argues that one can, regardless of whether one's object is a *social* system, a broader *action* system, an even broader *human-condition* system, or a subsystem *within* a social system, speak of structures which function to fulfil the four AGIL exigencies (and thus to maintain equilibrium in

their containing system). This is precisely how Parsons proceeded in his later career, in which he sought to develop a comprehensive catalogue of functional structures at different analytic levels. The result was a series of assertions which typically take the form: "at level *x*, structure *y* performs function *z*" (Blain 1971, 679), where *z* is – regardless of *x* – *always* one of the four AGIL functions.

Parsons' understanding of functional differentiation follows from assertions of this kind. Put plainly, Parsons sees differentiation as the process by which structures become specialized in a particular functional dimension, rather than contributing to all four functional dimensions in equal proportion (Blain 1971, 679). His model of differentiation is not, then, limited to social systems alone, but is thought to be applicable in any AGIL system, at any level of analysis. The following material will, however, concentrate on the character of *social* differentiation, and will seek to extract the sociological content of Parsons' general approach.

II. THEORY OF DIFFERENTIATION

The process of differentiation

Parsons presents the following definition of differentiation:

> **(3.12) Differentiation $=_{df}$ a process in which a "unit, subsystem, or category of units having a single, relatively well-defined place in the society divides into units or systems (usually two) which differ in *both* structure and functional significance for the wider system" (Parsons 1966, 22).**

Parsons' approach is clearly based on the mereological model. Differentiation occurs *within* a systemic whole, between parts which come to fulfil different functions *for* that whole (Parsons 1977, 282). In accordance with the four-function model, parts fulfil different functions when they address different AGIL exigencies. Differentiation is thus, quite simply, the process by which a single, multifunctional unit divides into two or more units that differ in the *primary* functional dimension to which they are oriented, or which – to use Parsons' terminology – thereby participate in different *functional subsystems*.

Parsons uses this latter term similarly to Spencer. In line with his understanding of systems, and his treatment of them as *analytic* units, Parsons does not conceptualize functional subsystems as concrete entities. Instead, the term describes a *logical* relationship between all of the elements which "contribute to the meeting of a particular functional problem" (Johnson 1973, 208). A functional subsystem is thus an analytic category containing all of the elements which perform the same function. Said elements need not display any additional *empirical* relationships.

> **(3.13) Functional subsystem $=_{df}$ a set of social structures which are each oriented to the same functional dimension.**

Just as the subsystems are not concrete units, so too are they not, Parsons holds, *comprised* of concrete units. This follows from his claim that even the most highly specialized social units are oriented – at least to some degree – to all four AGIL functions (Parsons and Smelser 1956, 66; Smelser 1959, 12). Parsons thus argues that it is "incorrect…to identify any concrete class of organizations or their orientations exclusively with any one functionally differentiated subsystem" (Parsons and Smelser 1956, 61). A business organization may, for example, contribute primarily to the 'A' function, but it will also make minor contributions to the G, I, and L functions as well – whatever its level of specialization. Only a portion of the organization – the portion that contributes to the 'A' function – is thus said to participate in the 'A' subsystem (Parsons 1979, 701; Parsons and Smelser 1956, 61). This is why differentiation must be defined with reference to a unit's *primary* functional orientation, rather than all of its orientations.

In accordance with the universality of the AGIL paradigm, which Parsons presents as an exhaustive catalogue of exigencies, all societies are thought to contain four, and only four, functional subsystems: one for each AGIL dimension. These subsystems may be more or less *empirically* discrete, but they will always be *analytically* identifiable. As Mayhew puts it:

> "…the claim is that, whether a system has or has not developed a bounded, specialized apparatus for dealing with a given functional problem, the problem must be dealt with

somehow; it is therefore legitimate to speak analytically of, say, the integration subsystem of a social system, whether or not the system has a clearly demarcated organization for dealing specifically with integrative problems." (1982, 30)

In other words, the basic claim is that every society will contain four distinguishable networks of structures and processes, each of which works to address one of the four functional exigencies. The level of differentiation in a society simply describes the extent to which these networks – i.e. subsystems – overlap, or the extent to which social units primarily participate in a single such network. As Parsons and Smelser (1956, 16) put it: "societies differ from each other in the degree to which the collectivities of which they are composed are differentiated in terms of functional primacy." These differences are visualized in figure 3.3, a reworked version of figure 1.1. Again, the small circles represent single units (such as collectivities), and the position of the circles represents their primary functional orientation.

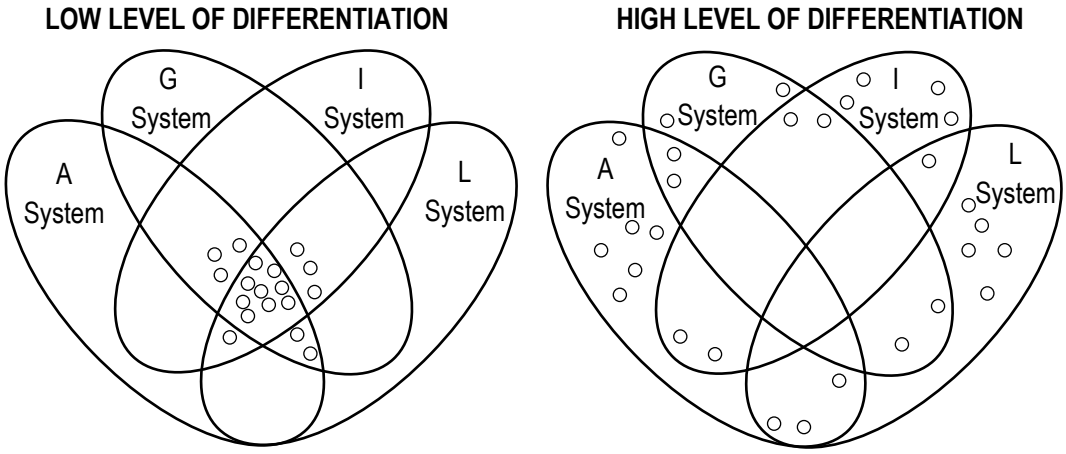

Figure 3.3 –The differentiation of social units. Adapted from Smelser (1959, 13).

(3.14) The level of differentiation $=_{df}$ the degree to which a system's units differ in their primary functional orientation.

As the diagram demonstrates, Parsons' model of differentiation is essentially equivalent to Spencer's. Both speak of a static set of functions, and both define differentiation as a process in which responsibility for these functions is *concentrated* in certain units. Both thus follow a decomposition approach, arguing, as Smelser (1959, 2) puts it, that

differentiation occurs when a single unit disaggregates into structurally distinct units which are, taken together, "*functionally equivalent* to the original unit."

Parsons' work provides numerous illustrations of this process. He argues, for instance, that the household and the productive unit were, under "classical peasant agriculture," a "single undifferentiated collectivity" in which adaptation functions and pattern-maintenance functions were performed in equal measure (Parsons and Smelser 1956, 16). Via industrialization, this structural unit gradually differentiates into two unit types: distinct economic organizations, on the one hand, and a more differentiated family unit, on the other (Parsons and Smelser 1956, 16; Parsons 1966, 22). The former specializes in adaptation functions, while the latter specializes in pattern-maintenance. Nowhere in this process do the functions themselves change – differentiation merely *concentrates* functions in distinct units.

Like Spencer, Parsons holds that further differentiation can only take place at the sub-functional level. Differentiation cannot, in other words, create a 'fifth' functional subsystem, but differences can emerge between the functions of the units *within* these subsystems. These distinctions will, however, again follow the AGIL lines, for the equilibrium of each functional subsystem is – in line with the universality of the four-function paradigm – itself dependent on the meeting of the four AGIL functions.[2] Functional subsystems thus contain 'sub-subsystems': one for each AGIL category. For example, Parsons argues that the *economy*, the 'A' subsystem of the *social* system, has its own adaptation system (often designated as A_A), which he labels the *capitalization and investment* system (see figure 3.4). Units which are primarily oriented to the economy may become specifically oriented to this particular dimension, leading to a higher level of differentiation than would be the case if all of the units participating in

[2] As discussed above, the universality of the four function paradigm leads Parsons to argue that his model of subsystem differentiation is applicable at levels *above* that of social systems as well. For example, the various subsystems of the action system are, after the creation of the AGIL paradigm, reconceptualized as *functional* subsystems, which are thought to each perform a single AGIL function in action systems (behavioural systems performing 'A', personality systems performing 'G', social systems performing 'I', and cultural systems performing 'L'). Likewise, Parsons' (1978) later work treats action systems as functional subsystems in *human condition* systems. Action systems are thought to perform 'I' functions, with the remaining three functions being performed by what Parsons calls "physio-chemical" systems (A), "organic" systems (G), and "telic" systems (L).

the economic subsystem were equally oriented to each of its 'sub-subsystems' (i.e. to A_A, A_G, A_I, or A_L).

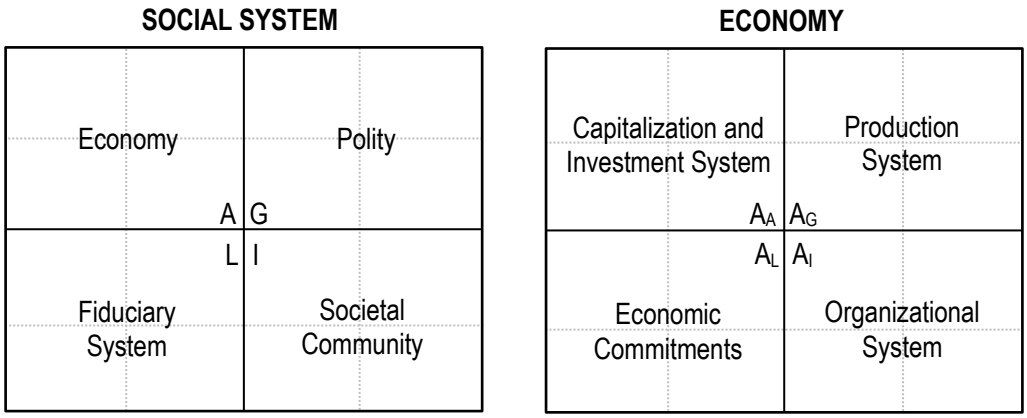

Figure 3.4 – Functional subsystems across two system levels.
Adapted from Parsons and Smelser (1959, 44).

In principle, one can speak of further subsystems below this level – i.e. of subsystems *within* the subsystems of a society's subsystems – but entities of this kind would only become relevant at higher levels of social differentiation. Such systems are, in other words, analytically distinguishable, but will only have empirical relevance if they reflect existing functional distinctions. This speaks to an important aspect of Parsonian theory. As processes of differentiation advance, and units become oriented to specific functions, the analytic boundaries of the functional subsystems are increasingly represented, recognized, or institutionalized in concrete empirical patterns. As Parsons and Smelser (1956, 83, 78) write, the "functional subsystem categories correspond more closely to organizationally differentiated sectors of the social structure as the society approaches greater structural differentiation." This is perhaps why, in the case of societies, Parsons is able to describe both the adaptation subsystem and the goal-attainment subsystem using semi-colloquial terminology – referring to them as the economy and the polity respectively.

While Parsons also developed special names for the integration and latency subsystems of social systems (referring to the *societal community* and the *fiduciary system* respectively (Parsons and Platt 1973, 426; see figure 3.4, above)), the fact that the other

two subsystems are labelled without recourse to neologisms indicates that they may, in the often unspecified 'modern societies' of which Parsons speaks, be differentiated to a greater extent than are the I and the L subsystems, and that differentiation has, in Morse's (1961, 122) words, "not proceeded far enough for these [latter] functions to be recognized in the language." If this is correct, and if we follow Parsons' (1966, 24) claim that the AGIL model specifies the "broad lines along which societal differentiation is likely to proceed," then one would expect future differentiation to further crystallize the integration and latency subsystems, presumably leading to the emergence of more socially resonant terms by which to designate them. The same is true for the various 'sub-subsystems', and any further subsystems within them.

Differentiation and integration

As did our two preceding theorists, Parsons (1966, 22) argues that problems of integration are an unavoidable consequence of differentiation, and that differentiation *requires* integration. In his words:

> "It is a condition of the existence of the system that the differentiated roles must be coordinated either negatively, in the sense of the avoidance of disruptive interference with each other, or positively, in the sense of contributing to the realization of certain shared collective goals through collaborated activity." (Parsons and Shils 1951, 197)

At issue is, again, both *cooperation* and *unification*. Mechanisms of integration need to both facilitate the conjoint action of differentiated components and to hold the centrifugal tendencies of internal diversification in check. For Parsons, the former end is met by the so-called *generalized symbolic media of interchange,* while the latter end is met by the processes of *inclusion* and *value generalization*. Each will be examined in turn.

In Parsons' thought, symbolic media are action-based equivalents to the various organic mechanisms which coordinate the differentiated parts of an organism (such as "enzymes, hormones, and neural processes" (Parsons and Platt 1973, 23)). Such mechanisms do not make a "substantive contribution" to the performance of the four functional exigencies, but are instead developed and deployed in order to *control* the

mechanisms which do – typically via the communication of information (Parsons and Platt 1973, 23). For example, Parsons distinguishes between the kind of work performed by the digestive system and the kind of work performed by the nervous system: the former performs adaptation functions for the organism, providing sources of energy for goal-attainment systems (such as the muscular system), while the latter processes information, directing and regulating the actions of components within these more directly functional systems.

Symbolic media are said to perform the latter kind of tasks for *action* systems, and they thus control and coordinate the actions of components within these systems. They do this, Parsons (1963a, 38) believes, by presenting individuals with "various 'symbolic' experiences in place of the concrete things or objects to which the symbols refer…." The prototypical example of this phenomenon is, of course, language (Parsons 1977, 204). For example, Parsons (1963a, 38) notes that a sign reading "beware the dog," can "induce caution without the passer-by's actually seeing or hearing a dog." The basic insight behind the concept of symbolic media is that this is not a unique capacity of language, but is in fact present in a broad family of similar mechanisms, such as money and power (Parsons 1977, 206). Money, for instance, has value in exchange rather than value in use, but it has value in exchange precisely because it *symbolizes* value in use (Turner 1968, 122) – it "'stand[s] for' economic value or utility" without "possessing utility in the primary consumption sense…" (Parsons 1963b, 236). Parsons (1977, 206) thus considers money as a kind of language: just as a word merely *signifies* the thing itself, rather than being the thing itself, money signifies utility, rather than itself being that utility.

One can thus treat symbolic media as specialized languages, each of which operate in specific institutional contexts. Money, for example, works "only within a relatively defined network of market relationships" and has no capacity for regulation or influence outside of this context (Parsons 1963b, 237). In line with his well-evidenced formalist tendencies, Parsons posits that there is a 1:1 ratio between the functional dimensions and the symbolic media: each functional 'box', at every system level, houses exactly

one symbolic medium. At the level of the social system, where the four AGIL systems are the economy, the polity, the societal community, and the fiduciary system, there are thus four corresponding symbolic media: money, power, influence, and value commitments.

functional dimension	societal subsystem	symbolic media
Adaptation	Economy	Money
Goal attainment	Polity	Power
Integration	Societal community	Influence
Pattern-maintenance	Fiduciary system	Value commitments

Table 3.2 – The typology of symbolic media in the social system

The theory of symbolic media remained a work in progress throughout Parsons' career, and was subject to constant revision. In addition, Parsons' various thoughts on the topic are pitched at a high level of abstraction, and show little consideration for practical matters (Baum 1976, 448-449). For this reason, the media concept is particularly difficult to define, assess, and apply, and the 'theory' of media appears more as a series of interesting analogies than a fully developed theoretical paradigm. Because of its many ambiguities, attempts to use or extend the theory typically involve a great deal of interpretive labour, and often result in a complete reworking of Parsons' original proposal (e.g. Lidz 2001). Luhmann's (1976) treatment of the concept, which we will discuss in the next chapter, is one such example of this trend.

For present purposes, let us simply consider how symbolic media work to augment cooperation between differentiated components. Parsons' basic thesis is that symbolic media arise to facilitate exchange between units which are "primarily centred in different functional subsystems of society and hence have different primary goals" (Parsons and Smelser 1956, 70). Each symbolic media is 'anchored' in a particular subsystem, in that it: a) regulates the subsystem's internal functioning, facilitating the relations between units within the system; and b) governs the relationship between its particular subsystem and the three other subsystems occupying the same system level.

This latter relationship is, in Parsonian thought, conceptualized through a scheme of inputs (or 'factors') and outputs (or 'products'), the use and exchange of which allows each subsystem to address its particular functional mandate. For example, businesses (located in the A subsystem) are thought to 'output' consumer goods and services to households (located in the L subsystem). Households use these products in service of 'L' functions – i.e. socialization and tension management (Parsons and Smelser 1956, 52-53). By performing these functions, units in the L system 'produce' appropriately socialized and adequately motivated individuals (Parsons and Smelser 1956, 50). These products can then be 'input' into the economy in the form of labour services, which the economy then uses to perform 'A' functions (i.e. to produce generalized adaptive facilities) (Parsons and Smelser 1956, 47; see figure 3.5).

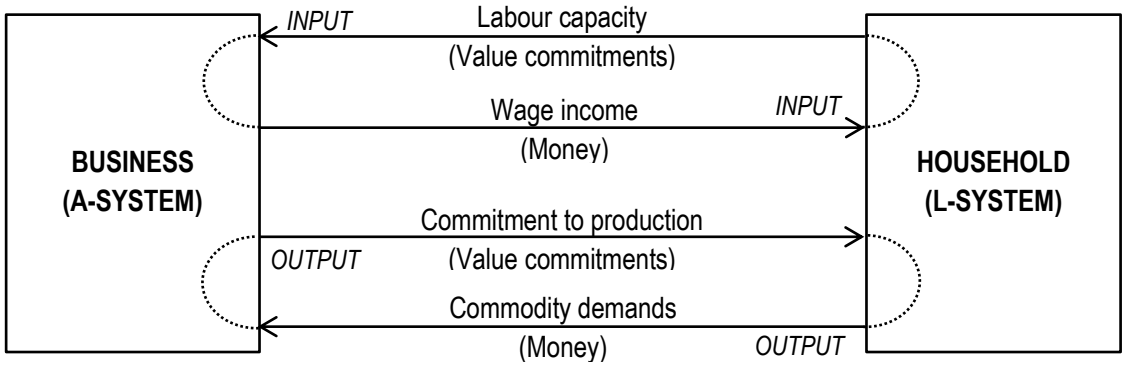

Figure 3.5 – Interchange relationships between the economy and the fiduciary system

Symbolic media facilitate and regulate these specialized exchange relationships, hence their depiction as media of *interchange.* Money, for example, allows for the input of wage income from business firms to households. Conversely, the medium of *value commitments* allows for the input of labour capacity from households into businesses, in that the individual employee commits to perform labour. The same symbolic media also regulate the exchange of outputs between the two units: commodity demands are directed towards business firms in the form of monetary payments, while a commitment to the production of goods and services facilitates the output of goods and services from firms to households. In this manner there is said to be a 'double' interchange between the two units or subsystems – as represented in figure 3.5. The same pattern is

generalized to all six interchange relationships (i.e. A-G, A-I, A-L, G-I, G-L, I-L), regardless of the particular system level being analysed. In each case there are four distinct exchanges mediated by two generalized symbolic media.

The idea that symbolic media facilitate the exchange of inputs and outputs relies on the thought that control of a particular media can be transferred from one unit to another (Parsons 1977, 206). This is the case for all symbolic media, not just for money. Voting, for example, is said to be a case in which one transfers a measure of *power* to a representative in the same manner that one transfers money to a bank (Parsons 1977, 211). Likewise, one may transfer *influence* through such means as a letter of recommendation. Parsons (1969, 375) argues that such transfers 'spend' the medium, for committing to the use of a medium in one manner means sacrificing alternative possibilities. Purchasing one product, for example, precludes the spending of that same money on another, just as committing one's influence to a certain cause precludes committing it to a contradictory one (Münch 1994a, 54). As is the case with money, 'spent' media do not dissipate, but instead *circulate* from one actor or subsystem to another.

Unfortunately, Parsons' analogies appear strained in several respects. Money can be 'spent' or it can be 'saved', whereas it is not certain that one can 'save' one's vote, or can 'accumulate' unspent power (Cartwright and Warner 1976, 645; Coleman 1970, 1079). Likewise, Parsons does not cogently demonstrate how one can trace the path of power as it circulates between actors. This problem also appears in the case of influence and value commitments, and is exacerbated by the fact that such media can, unlike money, be 'spent' without thereby being *transferred*. If actor A uses influence to alter the behaviour of actor B, B does not acquire a quantity of A's capacity to persuade. Likewise, if A appeals to power in order to encourage conformity on the part of B, B does not then obtain part of A's power – nor does A's 'stock' of power decrease (Coleman 1970).

A further issue is that qualitative media like power or influence are, in comparison to money, highly heterogeneous. It is, for example, difficult to conceptualize 'power' as a

single entity, “all forms of which are equivalent to one another” (Lessnoff 1968, 202). Power in diverse domains cannot be aggregated into a single ‘stock’ of power, and the amount of power possessed by an individual depends on subjective factors of interpretation and perception (Lessnoff 1968, 202). The same is true of influence: an individual with a high capacity for persuasion in one domain may find his opinions utterly inconsequential in another, whereas his capacity to pay is objectively assessable across all economic transactions.

The notion of symbolic media thus seems somewhat faulty. While it is useful to have a single concept to describe coordinating mechanisms, the idea that each of these mechanisms must display identical traits or patterns of use creates significant difficulties, especially when money is taken as the paradigmatic medium. The result is a series of misleading, or at the very least overwrought, analogies. For example, Parsons (1963b, 254) extends his aforementioned parallel between voting (i.e. depositing *power*) and banking (i.e. depositing *money*) by arguing that the regularity of democratic elections mirrors the regularity of banking hours. One is here reminded of Spencer’s famous analogy between double-track railways and double circulatory systems (*PS*:1, 509). Though such equivalences are undoubtedly creative, it seems fair to remain skeptical about their theoretical merits – especially considering that they are typically not justified, disciplined, or otherwise informed by clearly delineated logical principles (Gregor 1968, 451).

The concept of symbolic media is Parsons’ answer to the question of how differentiated units are coordinated. But as was recognized by both Spencer and Durkheim, this is only one facet of integration. Cooperative action must rest on a substrate of commonality, or on the existence of mechanisms which augment cohesion between differentiated elements and thus prevent the break-up of a differentiated system. Parsons clearly agrees with this position; indeed he considers the provision of such cohesion to be the primary function of the integration subsystem. In his words, the integration system seeks to maintain the “complementarity” of units which make “qualitatively differentiated contributions to the society as a system” (Parsons 1968b, 140). It thus acts

to combat or to neutralize the centrifugal forces that "divide and fragment" societies (Parsons 1968b, 140).

Accordingly, the integration subsystem is a source of what Parsons terms *inclusion*. Inclusion involves two distinct processes of change: first, processes by which structural components outside of, or peripheral to, a system "are brought into a status of fuller integration *in* the system and hence *with* its other components"; second, processes by which "elements which have become separate from others by segmentation or differentiation" are retained within the system rather than being "extruded" (Parsons 1977, 293). In this latter sense inclusion is essentially equivalent to what we have, in our accounts of the theories of Spencer and Durkheim, referred to as the *unification* of differentiated elements, and it is unsurprising that many of Parsons' examples of inclusive mechanisms resonate with those provided by the former two theorists. Spencer, for example, argues that a sense of national identity, and a corresponding love of country, is an important source of cohesion in industrial societies (see *PS*:2, pt. v). A similar idea appears in Parsons, who claims that the notion of *citizenship* dissociates national belonging from ascriptive ethnic attributes and thereby allows for the development of more inclusive societal communities (see Parsons 1971, 92).

Inclusion can, Parsons (1977, 296) argues, be advanced by a range of processes and mechanisms, including those of military conquest, political consolidation, and religious proselytization. Yet in accordance with his belief that "institutionalized value patterns" are "the most important single structural component of social systems" (Parsons 1977, 307), Parsons generally focuses on processes which create a more inclusive set of values, and which thus provide for stronger *normative* integration in social systems. Processes of this kind are termed *value generalization*, and they are considered to take place in, or to emanate from, the pattern-maintenance subsystem, whose focus "lies in the structural category of values" (Parsons 1961a, 38), and whose essential function is to maintain the stability of value patterns – in this case by expressing and preserving them at higher levels of generality.

Value generalization is, for Parsons, an especially important correlate of functional differentiation, in that high levels of functional differentiation necessitate values which are broad enough to encompass significant diversity in functional orientations, or which can allow a wide range of activities to be understood as legitimate 'implementations' of a society's dominant value pattern. Parsons (1977, 307) is clear on this point, noting that "the more differentiated the system, the higher the level of generality at which the value-pattern must be 'couched' if it is to legitimate the more specified values of all of the differentiated parts of the social system."

(3.15) The level of value generality $=_{df}$ the range of behaviours or beliefs which can be legitimized by a particular value pattern.

(3.16) The level of functional differentiation in a society is positively associated with the level of value generality in that society's dominant value pattern.

Parsons' work on religious evolution provides us with a clear example of the value generalization process, for it argues that Western religion has developed in the direction of greater value generality (and hence greater inclusivity). Christianity, for example, is said to generalize the notion of salvation, decoupling it from specific ascriptive identities (Parsons 1971, 20; see also Robertson 1982, 319). While Ancient Judaism could only include members of a specific ethnic community, the early Church was a voluntary group. As such, a more diverse array of social components could be brought beneath its banner. In Parsons' (1971, 21) words, "[t]he individual could only be a Jew as a *total* social personality, one of the 'people'," whereas "one could be *both* a Christian *and* an Athenian or Roman on the level of societal participation."

In Parsons' view, this process of generalization is furthered by the Protestant Reformation. By sacralizing the secular order, and by flattening the ecclesiastical hierarchies of the medieval Church, the Reformation rendered all "callings" or "ways of life" equal with respect to religious status (Parsons 1971, 48). It thereby legitimized a broader range of individual roles, identities, and activities. For Parsons, the secular culture of the modern West extends, rather than repudiates, this development, for it

detaches moral consensus from denominational affiliation. There thus arises what Parsons (1968b, 159; 1978, 308ff.) terms a "civil religion": a value pattern capable of combining obligation to, or identification with, "fundamental societal value-commitments" with "a broad pluralism at the strictly religious level."

For the theory of functional differentiation, what is of interest is the *range* of activities which can be legitimized beneath a single value pattern. The more abstract or generalized the value pattern, the more its boundaries can encompass greater diversity in individual attributes, behaviours and beliefs. For example, Parsons (1989, 604) argues that the pluralistic value patterns of liberal democracy promote the idea that "no human social agency…can legitimately assume authority to *prescribe* the goals of units," so long as these goals remain relatively compatible with one another. For this reason, Parsons (1977, 309) holds that liberal values can legitimize a broader range of functional activities than many alternative value patterns.

In cases of this kind, the process of value generalization is thought to play a key integrative role, allowing for "*common* commitments at the most general level" to "coexist along with *differentiation* of implementive commitments at lower levels" (Parsons 1968b, 159). If common commitments dominate implementive commitments (as is the case in so-called 'value absolutism') then more differentiated patterns of social action cannot be legitimized.[3] Likewise, if implementive commitments are fundamentally incompatible or otherwise in tension with common commitments, so that the former cannot find expression in the latter, then the unity of the overarching system in which these commitments are expressed is threatened. For this reason, the

[3] Value absolutism is, for Parsons (1977, 311-312), characteristic of both communism and religious fundamentalism, as these movements each attempt to institutionalize less inclusive values and thus to halt or reverse structural differentiation (Lechner 1990). For example, Parsons (1968b, 157) argues that Stalinism repudiates a "very large sector of common Western liberal socio-political values" (such as freedom of speech), and instead operates with a rigid, monolithic value pattern that displays "increasing unconcern for the exigencies of broadly differentiated implementation." In other words, authoritarian communism is said to force components to conform to a highly prescriptive set of values, creating inefficiencies in subsystems to which these values are unsuited. For example, ideological opposition to the so-called three 'Ms' of Western industrialization – money, markets, and mobility – meant that the Soviet economy was forced to accept gross inefficiencies in productivity, innovation, resource allocation, variability of consumer goods, and other such markers of performance in the adaptation subsystem (Grossman 1962; Parsons 1964, 350).

stabilization of a more differentiated social structure is heavily dependent on the development and promotion of sufficiently general value patterns.

The concept of value generalization is clearly anticipated in the work of our previous two theorists, who both argued that shared value patterns form an essential counterweight to progressive differentiation, and that these patterns must become broader, or more general and indeterminate, in correspondence to the diversity of differentiated components. One sees this clearly in Durkheim's thoughts about the increasing abstractness of the collective consciousness, but Spencer too spoke of inclusive values as integrative mechanisms, as his comments on nationalism demonstrate. In this regard, the concept of value generalization provides a useful, concise way of describing the kinds of patterns described by these two theorists. The overall utility of the concept will, however, depend on one's ability to find operational indicators by which the generality of values can be measured, a procedure which is likely to remain fraught with ambiguity, subjectivity, and ideological conflict. This is, however, a challenge to the creativity of the methodologist rather than a negative evaluation of the concept as such.

The causes of differentiation

In Parsons' work, the differentiation concept is largely a tool to *describe* social change, rather than to *explain* it – a trait which is especially curious considering that Parsons deploys it in the context of an explicitly *evolutionary* theory of social development. Theoretically speaking, one would expect an evolutionary account to address the various mechanisms by which variants of social organization are created and stabilized. But nowhere in Parsons most detailed treatment of this topic (the 1966 volume *Societies: Evolutionary and Comparative Perspectives*) are we presented with any kind of causal proposition. Instead, this work uses the differentiation concept to ground a classificatory scale by which the evolutionary progress of different societies – both historical and contemporary – can be judged. Indeed, Parsons (1966, 111) explicitly claims that he is not attempting to provide a causal narrative of evolutionary change,

instead arguing that the sequential ordering of structural types is a "first order of business" which must precede any explanatory account.

Parsons justifies this position with reference to Darwin's ideas: an unusual move in at least two respects. First, the theory of natural selection quite clearly contains a number of predictive, testable hypotheses about the causes of organic evolution (Haines 1987, 33). Second, Parsons (1966, 2) conceives of evolution as a fundamentally *directional* process, which proceeds from "simple to progressively more complex forms." Indeed, he explicitly argues that an "evolutionary perspective" requires both a "criterion of evolutionary direction" and an "evolutionary scheme of stages" (Parsons 1966, 26). These two elements are quite foreign to Darwin's thought.

For these reasons, Parsons' theory of evolution is in fact far more Spencerian than it is Darwinian. Like Spencer, Parsons speaks of a number of distinct evolutionary stages (those being, in ascending order of complexity, primitive societies, intermediate societies, and modern societies). He also follows Spencer in treating functional differentiation as a major criterion of evolutionary direction, or as a key principle by which these types can be ordered. There is, however, an important difference between the two on this latter point. While differentiation is, for Spencer, *equivalent* with evolution, Parsons argues (via the AGIL paradigm) that differentiation is only one of *four* distinct processes which determine the level of social evolution. Evolution is not, in other words, judged solely by the progression of structural differentiation (which corresponds to the 'G' dimension) but by both *adaptive upgrading* (corresponding to the 'A' dimension) and the two processes of integration discussed above: *inclusion* (corresponding to 'I') and *value generalization* (corresponding to 'L').

functional dimension	evolution dimension
Adaptation	Adaptive upgrading
Goal attainment	Structural differentiation
Integration	Inclusion
Pattern-maintenance	Value generalization

Table 3.3 – The four dimensions of social evolution

Though Parsons diverges from Spencer on this point, the differences should not be overstated. While the two disagree on the exact processes that should be designated as processes of *evolutionary* change, their analyses of the processes with which differentiation is empirically associated are in fact quite similar. Parsons, for instance, argues that each of the above four evolutionary processes resonate with, or otherwise reinforce, one another. Similar ideas are present in Spencer's work, in which equivalent processes, or examples of these processes, are readily found. For example, Parsons' model of evolution suggests a correspondence between differentiation and adaptive upgrading (the process by which a system increases its "generalized adaptive capacity," or generates resources which increase its ability to adapt to environmental variation) (Parsons 1977, 297). Adaptive upgrading supports higher levels of differentiation, providing resources which facilitate specialization, and differentiation promotes adaptive upgrading, allowing for improvements in productivity, in efficiency, and thus in general output. This exact point is made by Spencer (see p. 32, above); indeed it justifies his sense that differentiation and evolution are essentially synonymous.

(3.17) Adaptive capacity $=_{df}$ the "capacity of an action system…to maintain and generate resources which can serve to improve the system's level of adaptation to the environments in which it is situated" (Parsons 1977, 297).

(3.18) The level of functional differentiation in a society is positively associated with the level of adaptive capacity in that society.

Thus while Parsons does not simply recapitulate Spencer's ideas, and while the two disagree on a range of semantic points, their theories of evolution are extremely similar. Like Spencer, Parsons argues that the evolution term applies only to a *specific* type of change: one which leads to higher levels of differentiation, adaptive upgrading, inclusion, or value generalization. This means that Parsons, like Spencer, does not argue that societies possess an inherent tendency to evolve; rather evolutionary change is thought to be a contingent outcome of more general processes of change.

At the same time, Parsons holds that differentiation will typically be favoured as a path of development – and in this he again follows Spencer. As we have noted, Spencer

(1855, §122) argues that any system – whether organic or social – is typically beset by a heterogeneous range of environmental forces. While simple systems have few tools at their disposal to address or neutralize these forces, complex systems are thought to possess a host of specialized components, each corresponding to, and thus specialized in dealing with, particular environmental demands. This is why Spencer links differentiation with adaptive advantages: the more complex system can survive, he believes, in a more diverse array of environmental conditions. In Parsons' work, the selfsame thesis applies. As Parsons (1977, 231) argues, there are "always plural conditions [of system maintenance] which vary more or less independently of each other, but which often have complementary significance for the [system]." These heterogeneous pressures are thought to create specialization imperatives, for a system with greater *internal* variety is, Parsons (1977, 231) believes, able to cope with a higher level of *external* variety than a system of comparatively lower complexity (see also Baum 1976, 449).

That Parsons repeats many of Spencer's arguments is quite curious considering his interest in, and explicit appeals to, modern biological theory. As Peel (1969, 175) points out, the link between differentiation and adaptive capacity relies on a concept of adaptation quite unfamiliar to contemporary biology. While biologists typically understand adaptation as the fitness of a species *relative* to a particular environment, Parsons (1964, 340) treats adaptation as a *general* quality – defining it as "the capacity to cope with broad ranges of environmental factors," and especially with "uncertainty and unpredictable variations." The problem with this approach is, as Granovetter argues, that:

> "…accurate measurement of adaptive capacity requires us to know with some confidence what a society's likely future environmental exigencies are. No society is well prepared for all possible problems, and one which is best prepared for those which are least likely can hardly be scored high on adaptive capacity." (1979, 501)

In other words, Parsons' approach requires one to consider all *possible* environments in which an entity could exist, and to assess their respective possibility. This means that

any judgement of adaptive capacity will be excessively speculative, and will likely lead to unenlightening conclusions.

For this reason, modern evolutionary theory does not consider certain species as more or less adapted in a general sense, but as adapted in different ways to different environments (Peel 1969, 175). This means that there is, at least in biology, no necessary link between differentiation and adaptation, or between complexity of structure and evolutionary progress (see Mayr 1959, 297). An organism's 'adaptedness' – i.e. its fitness – can only be judged with reference to the demands of a specific environment, and such demands could, as mentioned earlier, easily encourage *lower* levels of structural differentiation. Indeed, evolutionary theorists commonly acknowledge that higher levels of fitness can emerge from a reduction in internal complexity, whether in terms of *horizontal* simplification – i.e. "the "loss of parts…within a hierarchical level" – or *vertical* simplification – i.e. "the loss of hierarchical levels themselves" (O'Malley, Wideman and Ruiz-Trillo 2016, 608).

It is worth considering why Parsons' theory, despite being 'evolutionary' in nature, contradicts the key dogmas of modern evolutionary biology. One possible explanation is that Parsons, like Durkheim, deploys inconsistent analogies, treating societies as equivalent to both species *and* organisms. For example, at one point Parsons (1977, 6) explicitly claims that "the sociological concept of society…is directly parallel to the concept of species as it is used by evolutionary biologists, especially Mayr." Yet on other occasions he claims that societies are akin to individual organisms – noting, for instance, that there are processes of social change, such as population growth or structural differentiation, which are "closely analogous to the process of growth in the organism" (Parsons 1973, 72).

These inconsistent analogies lead to inconsistent images of social change. Social change is described, in line with the species analogy, as a process of *evolution*, but is then, in line with the organism analogy, treated as a process of *development* (Wortmann 2012, 377). The result is a theory of social 'evolution' which is far more indebted to the classificatory systems of descriptive embryology than it is to the explanatory models of

evolutionary biology (Blute 2010, 7). This explains why Parsons (1966, 26) concludes that the role of the so-called "evolutionary" theorist is to "distinguish between broad levels of advancement," despite this aim being largely alien to the study of phylogenetic variation.

This conflation is clearly evident in Parsons' attempts to explain *why* evolution occurs. Despite conceptualizing social evolution as a process of directional advancement, Parsons (1964) explicitly argues that it results from mechanisms which are analogous to natural selection. He thus notes that a theory of social evolution can, in light of Emerson's thesis that genes and symbols are *functionally* equivalent in their respective systems, substitute "cultural innovations" for "Darwinian variations in genetic constitution" (Parsons 1964, 341). There are two clear problems with this. First, as mentioned above, Darwin's account of evolution is utterly at odds with Parsons' directional, stage-based approach – indeed Darwin (1909, 136) explicitly states that natural selection "does not necessarily include progressive development."[4] Second, genes and symbols do not develop in the same manner. In Darwinian theory, genetic mutation is always seen as a random, undirected process. This is not the case for cultural change: symbolic innovations can quite clearly emerge as direct responses to felt needs.

This latter point has led most theories of cultural evolution to incorporate elements of Lamarckian thinking, and Parsons' own theory – despite its supposedly Darwinian foundation – does not break with the trend. In line with Lamarckian ideas, Parsons argues that evolutionary advances emerge via direct adaptation to environmentally imposed exigencies. He thus proposes a model of change which is essentially equivalent to Spencer's idea of direct equilibration. Evolution is said to be a response to dysfunctional pressures, strains, or other such sources of disequilibrium (Parsons 1964, 345), which are presumably made manifest through the appearance of social problems. Structural innovations are then developed and selected to 'solve' these problems, or to

[4] The contradiction between the two theories is made even more evident if one considers the fact that Parsons' concept of 'adaptive capacity' implies that evolving entities become *less* determined by the environment as they evolve. This means that the primary mechanism by which evolution occurs in Darwinian theory – natural selection – must necessarily recede in Parsons' analyses (Savage 1981, 221).

re-establish equilibrium in the system.[5] For example, Parsons (1964, 343) argues that population growth will likely "[raise] more difficult problems of internal order," resulting in pressure to centralize both "responsibility for the symbolic systems" and "authority in collective processes…." In the absence of such developments, these problems of order will likely lead to widespread societal dysfunction.

These arguments are not explicitly stated in Parsons' writings on social evolution, but are instead found in his various statements on the functionalist model of social change. In these writings, Parsons (1973, 77) argues, echoing Spencer, that change is a fundamentally adaptive process, arising in response to the influence of "disturbances of sufficient magnitude to overcome…stabilizing or equilibrating forces or mechanisms." Processes of differentiation, for instance, are said to presuppose a "need or demand factor" – a "source of disturbance" sufficient to provoke structural change (Parsons 1973, 83; cf. Smelser 1959).

These disturbances can arise from both endogamous and exogenous sources. That is, they can stem from internal strain *within* the society – a "tendency to disequilibrium in the input-output balance between two or more units of the system" (Parsons 1961a, 71) – or external influences *on* the society, including disturbances arising from personality systems (such as in cases of deviance) or cultural systems (such as via the development of new empirical knowledge). Regardless of their source, disturbances indicate a discrepancy between the goal states of a social system and its capacity to realize those states, creating pressure for differentiation or other forms of structural change. As Parsons (1961c, 230) puts it, environmental irritations which cannot be countenanced by

[5] In this respect, I disagree with Haines' (1987) claim that Parsons' model of evolution follows Emerson's theory of group selection. While Haines (1987, 22) correctly argues that evolutionary progress depends, in Parsonian theory, on the development of "structural innovations which confer survival advantages on societies," her claim that innovations are 'selected' when they give societies a greater chance of success in "intersocietal competition" skirts the fact that Parsons rarely cites competitive struggle *between* societies as a salient evolutionary factor. Instead, Parsons is primarily interested in the conflict between societies and their environments, or in the attempt to maintain societal boundaries against environmental perturbations. Such perturbations can certainly stem from other societies, but Parsons does not regularly discuss examples of this kind. It is notable, for example, that a detailed engagement with the topic of war is not found within his oeuvre.

equilibrating mechanisms "[impinge] on the goal-attaining subsystem of a social system," frustrating its capacity to attain certain goals or fulfil its expectations.

> **(3.19) The failure of a system to meet its functional exigencies is a necessary condition for the differentiation of functions within that system.**

Underperformance is not, however, a *sufficient* condition for the emergence of a more differentiated structure, for structural change is, as Parsons (1961a, 75) puts it, only "one possible outcome of strain." Strain may also be resolved through "mechanisms of control," the "isolation of disturbing forces," or the "radical dissolution of the system" (Parsons 1961a, 75). Even if differentiation is selected as a solution, the progression to a higher level of differentiation – which is here treated as a system goal, and thus related to the goal-attainment subsystem – will necessarily depend on the three other functional dimensions and their respective evolutionary processes. Processes of adaptive upgrading (A-subsystem) must provide the necessary facilities for the functioning of differentiated units. Processes of inclusion (I-subsystem) must ensure that differentiated units are retained as elements of the system in question, rather than breaking from it. Finally, processes of value generalization (L-subsystem) must create a more abstract, and thus more inclusive, set of values, allowing for the legitimation of a more differentiated structural pattern.

Though Parsons establishes such processes as necessary conditions for the emergence of differentiation, he tells us little about the specific disturbances which frustrate the achievement of system goals and thus catalyse differentiation in the first place. In this respect, Parsons' theory of differentiation is more akin to Spencer's than to Durkheim's. While Durkheim sought to privilege certain variables on theoretical grounds, and drew strong links between differentiation and specific causal correlates, Parsons places no significant restrictions on the kinds of factors which may prompt structural differentiation. This follows from his conviction that there is no *a priori* hierarchy of factors to which the analysis of social change can refer (Parsons 1961a, 72), and from his corresponding sense that societies are exposed to a multitude of different environmental influences. As such, his theory of change is content to operate at a high

level of abstraction, noting only that differentiation must be preceded by structural strain.

It is of course possible that the proximal causes of differentiation are highly unique to each empirical instance, in which case more specific causal propositions could not be found at the general level. But if this is true then one must question the purpose of referring to these instances as cases of functional differentiation. Functional differentiation is a general concept, and the purpose of such concepts is to draw out points of commonality within otherwise heterogeneous events. If the only causal regularity operating in cases of functional differentiation is that such cases are preceded by dissatisfaction or strain, and if we can find no further commonalities about the nature or the level of these pressures – or even about the accompanying conditions which enhance the statistical probability of differentiation being 'selected' above other potential sources of ease – then one must question whether the application of the differentiation label to distinct empirical processes actually enhances our ability to explain or predict them. This point is developed in the following section.

III. APPLICATION OF THE THEORY

Like our previous two theorists, Parsons uses the differentiation concept as a comparative tool. This is true regardless of whether he is speaking of differentiation as a *process* or differentiation as an *attribute.* In both cases, the differentiation term functions as an abstract concept by which one can discern points of commonality in distinct empirical phenomena, or avoid a "raw empiricism" in which such phenomena would be utterly incommensurate (Parsons 1951, 20). For example, in considering two distinct processes as instances of functional differentiation, we highlight that the processes each have the same effect on the general functional organization of the system in which they occur. In considering two systems as each having a 'level' of functional differentiation, we highlight that each have a set of components which fulfil the system's functions in a more or less overlapping manner. In both cases, the application of a general concept opens up the possibility that empirical phenomena can be *compared* on the basis of the qualities which the concept denotes (Parsons 1951, 20).

An example of this is provided by Smelser's (1959) *Social Change in the Industrial Revolution*, a prominent attempt to apply the structural-functional model of differentiation to a specific empirical instance. In this work, Smelser contends that the Industrial Revolution is a process of functional differentiation; indeed he uses this event to produce and exemplify a formal, seven-stage model of the steps by which differentiation processes unfold (see Smelser 1967, 21-23). Thus though Smelser primarily concentrates on the Industrial Revolution, his work is clearly oriented to the requirements and ambitions of comparative research, in that he wishes to facilitate comparison between the Industrial Revolution and other cases of differentiation. As Smelser (1967, 35) notes, a specific historical case study, whose purpose is simply to interpret or describe a particular historical event, has no need of a more generalized language with which to frame its insights (which is in part why the concept of functional differentiation has received a rather lukewarm reception among historians (Ziemann 2007)). General concepts are instead oriented to the needs of the comparativist, who seeks to highlight points of commonality in distinct historical events, and who thereby attempts to uncover general, transferable insights about the regularities of social change (Smelser 1967, 34-35).

Many of Parsons' conceptual decisions can only be understood in light of the comparativist paradigm. As Smelser (1967, 35) argues, a fundamental requirement of comparative concepts is that they are "general enough to encompass phenomena in highly diverse social settings." This explains why Parsons does not define differentiation with reference to emic distinctions, but solely with reference to the four AGIL categories. Unlike the former, which are bound to specific societies, the AGIL categories are designed to be applicable to *all* social systems, and to all systems above or below them in the broader system of action. System to system comparison is thereby facilitated (see Parsons 1951, 20). Like Smelser, Parsons (1977, 283) explicitly contrasts this approach to a more relativistic or "historistic" position, for which the "meaningfulness…of a structural unit or process [can] be defined only within *one* very specific system." Via the AGIL paradigm, one can compare units *across* different systems, for the needs of these systems, and thus the kinds of functions being performed

within them, are thought of as equivalent. Two distinct units, in two distinct systems, can thus each be said to perform ‘adaptation’ functions, or to have the same general ‘meaning’ vis-à-vis the functionality of the broader system.

In this respect, the AGIL paradigm is clearly reminiscent of Spencer’s distinction between operative, regulative, and accumulative functions, a typology which has a similar purpose and breadth of scope. Indeed in many ways the AGIL model actually eclipses Spencer’s catalogue in its universality and rigidity. Spencer operates with a static list of primary exigencies, common to both organic and social entities, but he also allows for an infinite degree of functional pluralization at the sub-functional level. In this, he follows the lead of Milne-Edwards (1856, 11-12), who spoke of nutrition, relation, and reproduction as the three universal functions of organic life, but who also argued that each of these functions can be further divided into *any number* of functionally distinct subtasks (nutrition, for example, is subdivisible into digestion, circulation, respiration, exhalation, secretion, and so on). This is not the case in Parsons, who argues that the AGIL pattern repeats itself *ad infinitum* at all system levels, such that each of the four AGIL functions can only be subdivided into four AGIL sub-functions (e.g. $A_{A,}$ $A_{G,}$ $A_{I,}$ $A_{L,}$ etc.)

The four AGIL dimensions are thus the *sole* point of reference for the analysis of differentiation in Parsons’ work. If, for example, one was to compare two manufacturing firms, and to judge their level of differentiation, the relevant metric is not, for Parsons, the differentiation of functional roles vis-à-vis the stated aims, ambitions, or products of the organization, but rather vis-à-vis the AGIL functions (as might be expressed, for example, in a distinction between management staff (G-function) and labour staff (A-function)). The specialization of tasks within the productive process, as is the case in Smith’s famous example of a pin factory, would thus *not* generally count as an instance of functional differentiation under Parsons’ perspective, because these disparate roles would typically still perform the same ‘type’ of function for the organization as a social system. In Parsons’ approach, a unit is only

differentiated from another when the two become oriented to different dimensions in the AGIL scheme, which defines what counts as a *distinct* functional contribution.

Confusion on this point is evident because Parsons does not always apply the differentiation concept in a consistent manner, especially when discussing empirical examples. As a descriptive concept, functional differentiation supposedly involves processes in which a single unit divides into two or more units which diverge in functional significance vis-à-vis the needs of a containing system. As Parsons (1977, 286) writes, "the criteria of high vs. low levels of differentiatedness must be differentiation with respect to kinds of functional importance or 'contribution' to the functioning of the specific system, or class of systems, of reference." The differentiation concept is, however, often used to describe cases in which no evident functional localization has occurred. For example, Parsons (1977, 295) explicitly describes the Reformation as a process of differentiation. This would, as per the above definition, mean that Roman Catholicism and Protestantism are *functionally* distinct, or that each specializes in a distinct AGIL need of the system in which they are situated. This conclusion is difficult to justify.[6]

Other applications of the differentiation concept display similar inconsistencies. For example, Parsons (1977, 284) also claims that the differentiation concept is of great utility in the evolutionary study of social change; indeed he argues that human history should not be seen as a "population of essentially unique 'cultures'," but should instead, with the aid of the differentiation concept, be seen as "an immensely ramified 'inverted branching tree' of forms at many levels of system reference." Here, as in the above example of the Reformation, differentiation is thought of as a process of *diversification*, akin to the process of speciation. Thus Parsons (1977, 284) argues that "differences among subsystems" have, like differences between organic species, "arisen through

[6] Smelser (1959, 2) makes a similar error in arguing that the distinction between kinship and courtship (which arises when personal acquaintance outside of the family circle becomes legitimized as a basis for marriage) emerges via the process of functional differentiation. To qualify as such, one needs to be able to distinguish the two social institutions using the four-function paradigm. It is, however, difficult to see how kinship and courtship could be placed in separate functional dimensions. At best, they may each address different sub-functions within the pattern-maintenance system, but clear criteria for assigning each institution to separate functional boxes (e.g. to L_A, L_G, L_I, or L_L) are not presented.

processes of differentiation from what in some sense have been 'more primitive' forms." The task of the analyst is to trace the "genetic dimension of relatedness" between distinct social types, which requires an inquiry as to their "differentiation in what respects from what common origin" (Parsons 1977, 283).

By a strict interpretation of Parsons' concepts, the emergence of a new society from an existing society could only be seen as a process of differentiation if the new society specialized in a smaller subset of AGIL functions than the society from which it emerged – i.e. its ancestor society. This would require one to view societies as subordinate components in a wider social system, for which they perform complementary functions. Parsons himself seems to recognize this; indeed he introduces a specific analytic concept – the notion of a *system of societies* – to speak to this particular end. A system of societies is a social system comprised of discrete societies which for various reasons cannot be considered to form a single suprasociety (Parsons 1977, 289-290). As a social system, a system of societies is governed by the four AGIL exigencies. Its component parts – distinct societies – fulfil these functions, and differentiate from one another when they come to fulfil different functions.

The 'system of societies' concept forms the centrepiece of one of Parsons' most ambitious applications of the differentiation paradigm, the 1971 work *The System of Modern Societies*. In this work, Parsons (1971) argues that the development of modern societies in 17th century Europe can be read as a process of functional differentiation. Societies in the so-called "Northwest corner" – England, Holland, and France – are said to have acted as the "lead sector" of the European system, championing a series of institutional developments in law, governmental organization, economic innovation, and secular culture. As such, Parsons argues that they specialized in the goal-attainment function of the wider European system. By contrast, the "Southern-tier" – i.e. the "two 'great powers' of Austria and Spain, in addition to post-renaissance Italy" – is said to have "[constituted] the more ascriptive, pattern-maintenance and integrative base of the system," while the Northeast sector is described as the locus of the adaptive function (Parsons 1977, 290; Parsons 1971).

Creative as they may be, the merit of such analyses is rather dubious. One major problem is that Parsons is again here conflating the process of speciation with the process of development. As his above comments show, Parsons sees the emergence of societies as a process which is essentially equivalent to speciation, and he draws a number of analogies on this basis. Speciation is, however, quite clearly *not* a process of functional differentiation, at least as Parsons defines it. As we discussed in the last chapter, species do not act as functionally differentiated 'parts' which perform functional roles *for* a containing system. It would, for example, make little sense to say that ecosystems were governed by AGIL requirements, and that certain species tended to specialize in one of these four functions, or that new species 'branch off' from ancestral species based on a divergence of function vis-à-vis the existential requirements of the ecosystem. This is, however, exactly the kind of argument that Parsons makes in his analysis of social history, which argues that the development of societies is not a random or contingent process, as one would expect from the speciation analogy, but instead follows the path laid out by the four-function paradigm.

Parsons thus commits the same error as Durkheim, in that he conflates models from two distinct levels of biological organization. In the case of the 'system of societies' concept, it is the organism metaphor which seems more improper. Structurally speaking, a 'system of societies' more closely resembles an ecosystem than it does an organism, in that it allows for both symbiotic *and* competitive relations, does not have a clear boundary separating its internal environment from an external environment, and does not have specific needs or interests which components work to fulfil. As such, Parsons' attempt to conceptualize the modern world as an integrated functional system, differentiated on AGIL lines, strikes one as wholly inappropriate from the very beginning. That Parsons was able to apply the four-function paradigm to this case seems less attributable to the paradigm's empirical resonance and more a consequence of its endemic ambiguity – a problem which we will discuss in detail in the next section.

For now, our interest remains on the matter of what Parsons hoped to *achieve* with analyses of this kind. In *The System of Modern Societies*, Parsons seeks to demonstrate

that the European system is a functional system, with AGIL functions and components to fulfil them. The utility of this description relies on the existence of a body of theory which applies to AGIL systems in general, or which speaks to general regularities that should be evident in *any* functional system. Thus in speaking of the world system as a system of societies, the hope is that one can use theories developed at a different analytic level, or in the context of a different AGIL system, to explain and predict patterns of behaviour in international relations. For example, if the idea of a system of societies is legitimate – i.e. if the applicability of the AGIL paradigm to the material in question is attributable to genuine, empirically resonant distinctions and not to the infinite flexibility of the paradigm or to mere descriptive conceit – then one would expect that the relationship between differentiation and adaptive capacity, which is thought to hold across all social systems, will also be evident in systems of societies. If this relationship cannot be demonstrated, then either the system of societies is not an AGIL system or the relationship in question is not common to all such systems.

This speaks to the ultimate purpose of the differentiation concept, which is no different in Parsons' approach than it was in those of our previous two theorists. For Parsons (1951, 20), the development of theory is geared towards the production and extension of "dynamic knowledge" – i.e. the discovery of empirical uniformities which "permit deductive transitions from one aspect or state of a system to another." In treating differentiation as a comparative construct, and in comparing states of differentiation across a diverse range of entities, the point is not merely to demonstrate that each *shows* states of differentiation, or can be ranked or ordered on this basis, but to uncover the factors which regularly *accompany* these states, and which may then be causally associated with them. Thus in comparing the level of functional differentiation across any two entities, one's aim is not just to say that entity *x* is more differentiated than entity *y*, but to develop propositions that relate these quantities with other generalized variables, such that one can then explain *why* this variance occurs or what its consequences will be. In using the same model of differentiation at different system levels, the hope is that propositions discovered at one can be transferred to another, or can be used for explanation and prediction across widely different contexts.

The validity of Parsons' approach to the conceptualization of functional differentiation is heavily dependent on the discovery of such generalizations, for in their absence it is difficult to demonstrate that the AGIL paradigm is an appropriate way to assess the differentiation of functions across different contexts. As discussed in chapter one, the concern with any abstract catalogue is that it must inevitably favour certain kinds of differentiation over others. The AGIL paradigm, for example, will consider an organization which is highly differentiated in one dimension, or that has a plurality of specialized roles *internal* to a specific functional subsystem, as relatively undifferentiated compared to an organization which may have a comparatively or quantitatively simpler structure but whose internal division of labour more closely 'matches' the distinctions expected by the four-function paradigm. An alternative typology of functions, such as Spencer's threefold distinction, might provide for an entirely different evaluation.

This inevitably raises the question of why we should select Parsons' distinctions over Spencer's, or of how we evaluate the merits of these two approaches. One approach is to consider the theoretical foundations which justify the various paradigms, speaking therefore of their *substantive* or *theoretical* validity. Considerations of this kind can, however, only take one so far. Parsons derives his four AGIL exigencies from higher-order theoretical principles, but this is also true of Spencer, whose catalogue of exigencies is linked to a more foundational theory of force. One would, then, likely wish to consider evidence of *empirical* or *predictive* validity – i.e. evidence of empirical relationships between each of their differentiation constructs and other salient qualities. In Parsons' case, for instance, one would consider whether a differentiation variable constructed on the basis of AGIL distinctions is empirically related to other variables of theoretical or practical interest (which may include various emic measures of differentiation). If links of this kind cannot be found, then it would be fair to say that Parsons' approach offers little utility or predictive merit, and that a differentiation variable based on his assumptions either does not resonate with genuine empirical phenomena or else accurately represents a quality which simply has no theoretical relevance.

In Parsons' case, substantive validity is always prioritized over predictive validity, and the latter is rarely a consideration in concept construction. Indeed, his theory shows little interest in empirical relationships at all. In line with his philosophy of analytical realism, Parsons argues that theories should primarily attempt to develop abstract conceptual systems whose internal logic can accurately model the interaction of analytically separable elements within concrete units (Turner 1982, 39). As such, he is primarily interested in developing and promoting a logically interrelated conceptual scheme, rather than a set of testable empirical hypotheses.[7] This explains why Parsons' 'theory' of evolution is a set of descriptive labels for different stages of change, rather than an account of the factors which cause said stages to emerge, or which explain why some historical sequences conform to the model while others do not (a statement which can also be applied to Smelser's seven-stage model of the differentiation process) (Bernstein 1976, 30; Münch 1994a, 91; Peel 1969).

It should, however, be clear that concepts, categories, or other such analytic distinctions (whether of the stages of social evolution, the functions that systems must fulfil, or the 'levels' of functional differentiation in said systems) can only prove their worth in the context of an explanatory theory – i.e. a theory which establishes relationships between the postulated distinctions and other attributes of theoretical relevance. For this reason, conceptual development cannot be divorced from the discovery and verification of empirical relationships, for the validity of most scientific concepts – especially those explicitly designed as comparative devices – is in no small part determined by their suitability as *predictive* tools. If concepts are not proposed or refined in light of this goal (as is unfortunately all too common in Parsons' work) then their merit remains entirely conjectural.

[7] This has led many to argue that Parsons' work does not actually expound a system of scientific theory, but is rather 'proto-theoretical' in nature. Homans (1964), for instance, argues that the absence of deductive hypotheses, empirical propositions, and other such elements in Parsons' work means that he offers us little more than an elaborate scheme of concepts and definitions (see also Turk 1967). This much is admitted by Parsons (1970, 878) himself: though he disagrees on matters of semantics, he readily admits that his work does not form a "mature system of theory in Homans' sense."

Thus while Parsons does, for example, clearly present a more complex, multifactorial concept of evolution than Spencer, and while this concept, in using differentiation as only one of four directional criteria, successfully establishes evolution as something distinct from differentiation, the merit of this complexity is wholly hypothetical unless one can demonstrate that the concept in question can be implicated in causal or nomological relationships (Bernstein 1976, 30). Without this, it is not clear what is gained by comparing levels of evolution in the first place, nor what correlates justify the use of the 'evolution' term to describe the attribute being measured.

The same point holds for Parsons' concept of functional differentiation. Given that both Parsons and Spencer conceptualize the *process* of differentiation in a similar way, and given that both supply a theoretical justification of their particular approach, tied to broader scientific or sociological principles, determining whether Parsons' concept has any advantage over Spencer's necessitates an examination of empirical relationships. This means that one must confront questions to which Parsons himself gave little attention. One must ask, for example, whether Parsons' concepts can be operationalized in a manner which reflects their original intentions, whether the four function taxonomy can be applied in a consistent fashion, and what relationships can be used to support the contention that the AGIL model should be generalized across the entire domain of action. Whether Parsonian theory can be appropriately understood as a genuine theoretical advance is highly dependent on its response to these kinds of questions. As such, they are a point of focus in the following section.

IV. CRITICAL ASSESSMENT

As this chapter has demonstrated, the basic assumptions which underlie Parsons' theory of functional differentiation do not diverge greatly from those evident in the work of Spencer. As such, many of the criticisms raised in our discussion of the latter figure can also apply to the former, often with little modification. For example, Parsons, like Spencer, gives little attention to the empirical import of his key terms – an oversight which is perhaps less excusable in Parsons' case considering the development of sociological methodology in the time separating his work from Spencer's. Already in

Durkheim we find clearly articulated propositions, developed quantitative metrics, and other such elements of formal theorizing. Parsons, by contrast, struggles to translate his abstract conceptual network into a series of operational indicators, and is largely disinterested in matters of measurement and verification. The resultant problems are most clearly displayed in two areas: the four-function taxonomy and the theory of equilibrium. Let us examine each in turn.

The AGIL paradigm

The AGIL paradigm provides a particularly prominent example of the issues caused by Parsons' approach to conceptualization, for the utility of the four function model is significantly hampered by the imprecise and inconsistent manner in which each of the functions is defined. The basic issue, for our present purposes, is that Parsons does not explicate these functions with reference to concrete observables, preferring to deploy the terms in an essentially ad hoc manner. As such, it is never clear how one is to identify the functional orientation of a particular unit. Rather than relying on an explicit set of classification procedures, Parsons seems to base his decisions on intuition alone, and it is thus unsurprising that his conclusions are inconsistent and often difficult to follow (Blain 1971).

For this reason, applications of the four-function paradigm often lack verisimilitude. In the absence of cogent criteria which can discipline the classificatory procedure and create consensus as to when and in what direction a unit has differentiated, a Parsonian analysis of differentiation often turns into a formalistic box-ticking exercise in which one is compelled to find a unit which 'fits' each category regardless of the empirical situation – a procedure which is readily accommodated by the inclusive ambiguity of Parsons' terminology. Like the advice of proverbial wisdom or the counsels of the daily horoscope, the definitions of the four functions are often so abstract, and thus so vague, as to be infinitely adaptable: applicable to almost *any* empirical action (Black 1961, 280; Boulding 1975, 114). Because of this, the boundaries of the function systems can easily flex to accommodate the analyst's goals.

Take, for example, the adaptation function, defined as the provision of generalized facilities for the performance of goals. As Lessnoff (1968, 208) notes, a narrow interpretation of this function, including only actions which "directly manipulate the environment to produce facilities," would construct an adaptation system which only includes the actions of manual workers or other such roles. Yet if, by contrast, one took the definition to encompass *all* actions which contribute to the provision of facilities, then it is hard to see what actions the system would *not* encompass (Lessnoff 1968, 208). This problem becomes even more acute when one examines so-called 'sub-subsystems', such as the integration component of the adaptation system (A_I). How does one meaningfully distinguish components which integrate the economy *internally*, i.e. in the A_I subsystem, from those which do so *externally*, i.e. those that belong to the more general 'I' subsystem? It simply seems far more plausible to view these 'sub-subsystems' as zones of overlap between the four functional domains, rather than as separate systems in their own right (Lessnoff 1968, 210-211).

Issues of definition and application aside, one must still face the question of why the four AGIL categories in particular should form the basis of an interdisciplinary, multi-level systems science. As we have noted, an evaluation of the AGIL paradigm must consider both substantive and predictive validity. Considering the above issues, an assessment of the latter is certainly not forthcoming. One must then ask whether the paradigm is logically derived, or has any theoretical support. On this issue, it is concerning that Parsons changed the justification of the AGIL paradigm several times. Initially grounded in the pattern-variable scheme, the paradigm was eventually – as explained above – linked to a cross-tabulation of two axes or distinctions: the internal/external and the instrumental/consummatory. The evident lack of fit between this latter distinction and the pattern-maintenance/integration distinction did, however, lead to persistent revisions, and the derivation itself was never stabilized for an extended period of time.[8] Indeed, none of Parsons' various post facto justifications of the AGIL

[8] At one point, the two axes were even collapsed into one fundamental variable – so that an 'instrumental' orientation came to be understood as "one primarily concerned with the relations of the group to the situation *external* to it" while a 'consummatory' or 'expressive' orientation was said to be "concerned primarily with the harmony or solidarity of the group, the relations *internally* of the members to each

scheme have been met with widespread acceptance, and their proliferation gives one the unavoidable impression that the need to preserve and promote the paradigm as is was elevated above the need to give it cogent and consistent grounding in more elemental principles.

This impression is also afforded by what Blain (1970, 162) has aptly termed the "chaotic career" of the pattern-maintenance function, which Parsons variously termed "latency," "pattern maintenance," "tension management," and "latent pattern maintenance and tension management." As the variety of formulations attest, Parsons often treated the L-dimension as a residual container into which a number of discrete functions were placed – not because of any obvious internal coherence, but because of a reluctance to expand the list of functional categories beyond four (Blain 1970, 162). This is yet another case where the ambiguity of Parsons' language is a problem. Any challenge to the idea that the four-function scheme is categorically exhaustive is easily accommodated, for Parsons can simply extend each function's boundaries by definitional fiat.

The theory of equilibrium

The theory of equilibrium is likewise marred by a range of logical and practical issues. Nowhere in his major works does Parsons identify the variables by which one can observe and measure social equilibrium – in part because equilibrium is considered to exist, by definition, in all ongoing systems (Russet 1966, 143). As such, his proposal that deviations or disturbances from various goal states are corrected by re-equilibrating processes remains little more than a heuristic metaphor, devoid of significant explanatory utility.

As Martel (1959, 60) notes, equilibrium concepts are useful where one can: a) specify the key variables which systems seek to maintain; b) delineate the mechanisms which maintain these variables within certain parameters; and c) determine the conditions under which these mechanisms may operate successfully. In an analysis of

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other and their 'emotional' states of tension or lack of it in their roles in the group" (Parsons 1964, 59-60, emphasis added).

thermoregulation, for instance, one has a clear variable by which to observe stability: internal temperature. One can then speak to mechanisms which maintain temperature in a specified range (shivering, for example) and to the various conditions which influence the effectiveness or operation of the mechanism (such as, in the case of shivering, the level of magnesium in the blood). In Parsons' work, this kind of information is not provided. Though we are told that equilibrium in social systems depends on the fulfilment of the four AGIL functions, these factors are never tied to clear empirical observables. Thus it is unclear, for instance, how one measures the 'level' of adaptation in a particular system (or if one can in fact do this), let alone at what values one would expect to see societal dysfunction. In the absence of such information, any discussion of mechanisms is likely to be excessively abstract and wholly hypothetical.

Problems of this kind incline us to agree with Sorokin's (1941, 674, 677) assertion that theories of societal equilibrium, in so far as they "use an argument of *pure prestige and analogy*," rather than clearly demonstrating the application of equilibrium principles, are far more likely to be a liability than an asset in sociological explanation. While such applications can undoubtedly provide us with stimulating analogies, and may elegantly convey some important aspects of macrosocial change, the social sciences do not currently possess the necessary tools to determine and apply equilibrium concepts in a genuinely explanatory manner, or in ways that can definitively establish the tendency of social systems to maintain stable states (Sorokin 1941, 690). One must also question whether the equilibrium concept, insofar as it establishes a semantic link to mechanics, is not a misleading descriptor in the case of historical systems which are marked by irreversible patterns of development (Sorokin 1941, 690).

These issues are of interest to us because Parsons, like Spencer, holds that functional differentiation is always geared towards the re-establishment of societal equilibrium. This is stated explicitly: differentiation is, Parsons (1961c, 219) claims, an "important category of structural change," and "structural change occurs when disturbances in or around a system are sufficient to overcome the forces of equilibrium." Likewise, Smelser (1967, 19) argues that differentiation will always appear "under certain

conditions of social disequilibrium." If the concept of equilibrium cannot be specified with reference to clear operational indicators, then the causal narrative of functional differentiation being advanced by both figures is entirely speculative and scientifically meaningless.

The role of individual action

Another issue with the equilibrium concept, insofar as it is used in Parsons' accounts of social change – is that one must again confront the issue of how the action of *individuals* becomes comported towards the needs of *society.* How do social actors perceive the loss of equilibrium? How do they construct, develop, or propagate new structural patterns by which equilibrium is re-established, or through which higher states of differentiation are achieved?

Parsons typically addresses this issue by arguing that *social* disequilibrium has some connection with *individual* dissatisfaction. For example, the first step in Smelser's (1959, 15) seven-stage model of differentiation is "dissatisfaction with the goal-achievements of the social system or subsystem in question…." Likewise, Parsons (1973, 76) himself argues that "the first prerequisite of change is disengagement from the preceding pattern…," during which "…some order of relative deprivation becomes attached to following the old way." The concept of dissatisfaction, or the frustration of needs, is thus a crucial catalytic factor in cases of structural differentiation. Mapped onto the boat diagram presented in chapter one, the idea can be represented as follows:

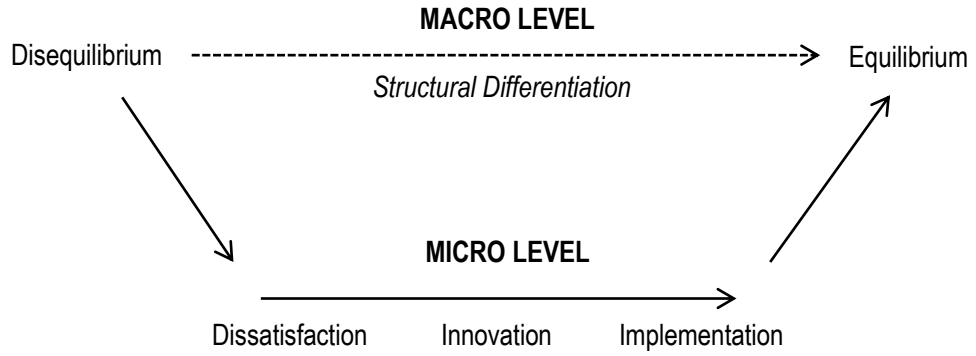

Figure 3.6 – The place of action in the advancement of structural differentiation

Expressed discursively, Parsons' thought is that the loss of equilibrium makes itself felt in the personal dissatisfaction of the individuals participating in a social system (typically with reference to their role-performance). Dissatisfaction spurs innovation, in which new, more structurally differentiated organizational patterns are developed. Implementation involves the translation of these new patterns into socially legitimized routines, the following of which is enforced and encouraged through sanctions.

One issue with this approach is that it assumes that structural differentiation is always functional, or always emerges as a 'solution' to under-performance or disequilibrium. But what grounds this assumption? Why is differentiation able to solve functional problems, or to neutralize disequilibrating tendencies? Parsons' argument relies on the thought that specialization will always convey functional advantages, and thus on the thought that differentiation is linked with efficiency, productive power, adaptive capacity, or similar determinates of performance. This is, however, not necessarily the case. Just as organisms may, as discussed above, increase their fitness via structural simplification, social systems may derive functional benefits from a reduction in internal complexity. A highly bureaucratic organization may, for example, respond to under-performance by streamlining its operations – perhaps by collapsing organizational levels or combining distinct roles (Rueschemeyer 1974, 281).

In such cases, differentiation is a *source* of dysfunction, rather than a solution to it. This suggests that differentiation is not necessarily associated with functional advantages – a position which Smelser himself came to hold in his later works (e.g. Smelser 1985; Smelser 1990). If this is so, what is needed is a model that can explain *when* differentiation is functional and when it is not, or why differentiated states are propagated in certain cases but not in others. One also needs to admit the possibility that the process of differentiation can be driven by reasons other than that of functional need (or of the preservation of equilibrium): an issue which we have already discussed in our assessment of Spencer's theories, but which is no less relevant here.

A final problem with the link between equilibrium, dissatisfaction, and functional differentiation, which we have again touched on in earlier discussions, is that it is never

quite clear why the loss of equilibrium in *social* systems, or the failure to meet system goals, causes dissatisfaction among *individual* actors. Smelser (1967, 71), for instance, provides two examples of the kinds of dissatisfaction which may lead to structural differentiation: "dissatisfaction with the level of profits or with inefficiencies in a marketing system" and "dissatisfaction with a family's inability to earn a living wage in a particular occupational endeavour." The argument is that these are the goals of the systems in question (i.e. 'marketing systems' or 'families'), and that individuals participating in them will experience a negative emotional reaction when these goals are not met. Yet even if one assumes that lay actors are aware of the systems in question (which may be doubtful considering their supposedly analytic character), and even if these actors are thought to have some sense of when the system is under-performing on any of the four functional dimensions (which also seems dubious considering that Parsons himself struggles to articulate clear threshold markers), one still has to explain *why* the individual is concerned with system goals in the first place, as well as *how* this concern is developed – especially in regards to systems of a more abstract and impersonal character.

In this regard, the equilibrium model seems to add a host of unnecessary complications to the analysis of social change, and it is difficult to see what advantages we gain from the assumption that higher levels of differentiation should be explained in light of some abstract state of societal equilibrium, rather than with respect to the wants, desires, and goals of individual actors. It is perhaps for this reason that – as Homans (1964) famously noted – functionalist analyses of social change often forgo reference to systems and system goals when they come to the task of concrete causal explanation. For example, Smelser's (1959, 80) analysis of the Industrial Revolution argues that there was, in early 1760s Lancashire, "excited speculation about instantaneous fortunes for the man lucky enough to stumble on the right invention," and that said excitement spurned innovation, and eventually differentiation, in the cotton industry. As Homans (1964, 816) notes, this explanation is essentially psychological, rather than sociological, in that it "refer[s] to the behaviour of men and not the conditions of equilibrium of

societies or other social groups as such."[9] The men in question were, by Smelser's own account, motivated by self-interest, rather than by concern with the "productive achievements of the industry" or the AGIL needs of the broader society (Homans 1964, 817).

One can of course assert, as did Spencer, that the psychological needs of individuals can correspond with the functional needs of social systems, or that individuals can become emotionally invested in the wellbeing or survival of abstract social entities. Smelser's (1959, 67-68) early work often takes this approach: for example he claims that the value system of seventeenth and eighteenth-century Nonconformism "emphasize[d] the 'performance-centred' extremes of economic values," such that the inefficacy of economic systems became a legitimate source of individual dissatisfaction. The issue is – as it was in Spencer – that these connections are not always spelt out. Smelser's early analysis thus remains dependent on psychological factors that bear no tangible relation to the concept of societal equilibrium or the AGIL paradigm, suggesting that differentiation can proceed entirely independently from system dysfunction as conceived of by that paradigm.

Differentiation and group conflict

One reason for the above issue is that social actors will often operate with different evaluations of system performance. Under Parsons' approach, personal dissatisfaction with the performance of social systems arises when these systems fail to meet any of the four AGIL exigencies. One must consider, however, why actors are expected to interpret the performance of systems using the same set of standards as Parsons. It seems quite plausible that a social system which is entirely functional from the point of view of the AGIL paradigm could be considered as dysfunctional from the point of view of certain social actors, who are likely to evaluate system performance using an entirely different set of criteria. There is no reason to suppose that such evaluations

[9] In a later reflection on this issue, Smelser (1969, 162n5) claims that Homans' criticism was essentially correct, conceding that the model of structural differentiation offered in his early work was not "derived theoretically from the functional exigencies in the theory of action" and "invoked a number of psychological assumptions and variables in its historical application."

could not encourage structural differentiation, regardless of whether they are 'accurate' from the perspective of the four-function paradigm.

This criticism is accepted by Smelser (1985, 119) himself, who, in a later reflection on his early work, notes that the model of structural differentiation presented in *Social Change in the Industrial Revolution* incorrectly presumed that societies are structured by a single dominant value pattern; that this pattern would remain constant through episodes of change; and that there would therefore be a high degree of consensus over questions of system functionality. This led, Smelser (1985, 120) believes, to a number of issues: not only did the model fail to specify just which members of the population are, or need to be, dissatisfied with system performance, it also failed to consider that competing groups might be satisfied with the current arrangements and predisposed to protect them.

To address such issues, Smelser (1985, 122) argues that a realistic model of functional differentiation must account for the existence of different value bases, and thus for conflict over evaluations of system performance. For example, Rueschemeyer (1977, 5) notes that a judgement of *efficiency* "hinges on a given set of ranked goals and on a given evaluation of alternative means to reach these goals," meaning that these evaluations can differ depending on the "preference structures and cost-benefit calculi" of different constituencies. This suggests that the emergence and institutionalization of a more differentiated structural arrangement does not simply depend on whether it can fulfil the four functional exigencies in a more efficacious manner, but on whether the new arrangement is effective in "accommodating the demands or pretensions of concerned groups" (Smelser 1985, 123). Under this perspective, structural differentiation is not so much a matter of problem solving in relation to the needs of the social system, but has more to do with "political victory, compromise, or defeat worked out in the context of group conflict" (Smelser 1985, 122).

The decomposition model

While these modifications appear sound and logical, they represent a complete overhaul of Parsons' perspective, in which differentiation processes are always tied to the four functional exigencies (Parsons and Smelser 1956, 38). If, however, Smelser (1985, 122) is correct to assert that under-performance in the AGIL dimensions is "only *one* basis for expressing dissatisfaction and initiating change," then the four function model is likely to lack utility in explaining and predicting the emergence of more differentiated states. It is, of course, true that Parsons only defines differentiation with reference to the AGIL functions, but in light of Smelser's claims, and our above criticisms of the four-function paradigm, it is difficult to justify this reduction of scope. Instead, it seems fair to assume, as Smelser (1985) does, that a model of differentiation that accounts for the criteria by which social actors themselves conceive of functionality would be comparatively stronger than one which needs to in some manner 'project' theoretical distinctions into the minds of individuals, especially considering the rather arbitrary manner in which these particular distinctions are derived.

In taking this position, Smelser's later work suggests that differentiation theory should abandon the postulate of functional unity, and should not then define functional specialization with reference to abstract catalogues of system needs. This has also been recommended by Rueschemeyer (1977, 3, 6), who argues that differentiation theorists should instead speak of "problems identified and defined by the needs, interests, and expectations of different constituencies," some of which may gain a "disproportionate influence" over the course of social change. An analysis of this kind would not focus on the decomposition of functional subsystems from an initial, amalgamated cluster, or on the specialization of social units (i.e. roles, organizations, and so on) vis-à-vis a static list of social exigencies, but on the ways that such units deal with the contingently constructed problems of particular groups and actors in a more or less differentiated fashion. While this move would certainly reduce the comparative power of the differentiation concept, in that it embraces the idea that functions, and thus functionality, are essentially relative notions, the alternative seems, for Rueschemeyer

(1977, 203) at least, to be too far removed from the empirical realities of concrete social action to be of any real analytic utility.

What is seemingly required, then, is a model in which differentiation can be conceptualized in a more open-ended manner. In other words, one needs an approach which is not based on a *decomposition* paradigm, but which follows what has been termed an *emergence* paradigm: one in which new functions can emerge and current functions can change. It is thus appropriate that we now turn to the work of Luhmann, which is typically thought to provide a quintessential example of the latter approach (Stichweh 2013a).

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What can we conclude about the merits of Parsons' theory? On the topic of functional differentiation, his ideas are highly reminiscent of Spencer's, and tend to repeat their major shortcomings. When Parsons does break with the tradition, his various conceptual innovations – the most prominent being the four-function paradigm – seem to obscure, rather than illuminate, the concrete processes at hand. In this regard, our assessment of Parsons' accomplishments must be rather negative. While Parsons undoubtedly expended considerable energy on the conceptualization and analysis of functional differentiation, it is simply difficult to see a point at which his account of this phenomenon advances beyond those found in the classical thinkers, at least on most major measures of theoretical progress. It does not, for instance, show development in conceptual clarity, nor in predictive capacity, and it seems to lack even descriptive verisimilitude.

This lack of progress is attributable, at least in part, to Parsons' model of theory construction. In developing his theory, Parsons was clearly more concerned with category consonance – or the degree to which his various concepts and distinctions could be interrelated – rather than with the explanatory potential of the resulting framework (Turk 1967, 44). As such, he showed little interest in translating his concepts into operational indicators, or in verifying his propositions against empirical data. His

theory was thus insulated from practical concerns, and had no external check on its speculative elaboration. It grew not by the systematic deduction of hypotheses, nor by the combination of well-verified empirical generalizations, but through a vertiginous process of abstraction, association, and analogy akin to Hesse's famous *Glasperlenspiel*. What results is a tangled web of broad, unspecified, and provisionally connected constructs, and a theory which, though unparalleled in internal complexity, has few empirical handles by which to grasp its concrete implications, let alone to demonstrate its explanatory potential (Turk 1967, 45-46).

This is not, of course, to claim that Parsons' work is irrelevant, or wholly devoid of merit. One is, however, inclined to agree with Luhmann's (1982) claim that what will remain of Parsonian theory is not a set of substantive claims, nor even a set of analytic concepts, but the ambitions which underlie them. One is thus free to reject many of Parsons' concrete efforts. But as Luhmann (1982, 59) notes, "the question [remains] whether his project was not possible after all." This question animates much of Luhmann's own output, for as we will see, many of his theoretical innovations are explicitly designed to circumvent the logical, conceptual, and practical problems of Parsons' general approach (see Luhmann 1982). It remains to be seen whether Luhmann's model successfully surmounts these obstacles, and whether the question he asks of Parsons – which is in many ways the guiding question of our own investigation – can in fact be answered in the affirmative.

CHAPTER FOUR

A New Paradigm for Functional Differentiation? Niklas Luhmann's Autopoietic Revolution.

In the introduction to this thesis we noted a number of different research traditions in which notions of differentiation have been used, the most prominent of which are the *functionalist* tradition, our own topic of inquiry, and a more *historicist* tradition, involving figures like Dilthey and Weber. While this thesis is focused solely on the former tradition, some scholars have suggested that the work of Niklas Luhmann is a point at which these traditions converge. For example, Rasch (2000, 23) describes Luhmann's theory of functional differentiation as a unique combination of Weberian and Parsonian images, in that it tempers Weber's evocative metaphor of incompatible and warring gods with Parsons' more technical model of subsystem specialization. Luhmann, however, has disputed this assertion, and though he acknowledges some trivial semantic parallels between his depiction of modern societies and the theory of modernity proposed by Weber, he also claims that he sees almost "no relation" between the two on substantive theoretical matters (Sciulli 1994, 44). What, then, underlies the common claim that Luhmann draws from the Weberian tradition?

The primary macro-structural entities referenced in Weber's work on differentiation are the so-called 'value spheres' (*Wertsphären*), each of which is characterised by their own 'intrinsic logic' or 'inherent laws' (*Eigengesetzlichkeit*). A development on Dilthey's (2002, 187) concept of 'cultural systems' – defined as "uniform and homogenous productive system[s]…formed by the activities of specific individuals" and directed towards the fulfilment of a "cultural function" – value spheres are differentiated sets of rules or norms that evoke specific patterns of action in particular contexts (Bruun 2008, 102).[1] Weber's basic thought is that individuals internalize the 'goal' or 'purpose' of a particular value sphere as a personal calling, and are then guided only by the operative norms of that sphere. The "political man" for example, internalizes the values of the political sphere, and acts only by the "rational rules of the state order": "'without regard to the person,' *sine ira et studio…*" (Weber 1948, 331).

[1] Dilthey's (2002, 187) list of cultural systems includes "education, economic life, the law, political activity, religion, sociability, art, philosophy, and science," whereas Weber (1948) distinguishes between the spheres of religion, politics, economics, intellect, aesthetics, and eroticism.

The value spheres differentiate when the norms that segregate them sharpen and intensify, such that each sphere comes to demand increasingly divergent modes of conduct. For example, Weber (1948, 331) argues that the behaviour demanded by the economic sphere – a "functional organization oriented to money prices which originate in the interest-struggles of men in the *market*"– tends to come into conflict with the ethic of brotherliness which is encouraged in the religious sphere. As such, Weberian thought links differentiation to an increase in intra-societal conflict: through differentiation, the value spheres gradually come to encourage wholly distinct and utterly irreconcilable ends (Weber 1948, 147).

Weber's account of differentiation is often described as a theory of *functional* differentiation, for the value spheres are said to fulfil different functions (e.g. Weber 1948, 342, 331). Weber's model of functionality is, however, quite different from that used in the functionalist tradition, for it avoids the mereological model. In the functionalist tradition, differentiated entities are complementary components that work together in service of a single goal. This is not the case in Weber. As is well known, Weber's methodological individualism made him particularly wary of holistic or systemic models of society (see Stone 2010; Swedburg 2005, 254). As a result, his work operates without a strong concept of *social* needs. Instead, value spheres are thought to fulfil functions for *individuals*, and are thus 'functional' in much the same manner as competing products in the marketplace. For example, Weber (1948, 342) argues that art and religion *compete* over the individual need for "this-worldly salvation." In that sense the two value spheres are not actually functionally differentiated at all; rather they offer competing means for fulfilling the *same* end and are thus functionally *equivalent.*

The same is true of Dilthey. While he argues that each cultural system fulfils a single function (the juridical system, for example, "actualizes the enforceable conditions for the perfection of life-relationships"), these functions benefit *individuals*, not societies (Dilthey 2002, 188). As such, the cultural systems are not functional 'parts' or 'subsystems' in an overarching suprasystem; rather each exist as ways for individuals to combine their labour in service of personal needs. The differentiation of cultural systems is thus analogous to the division of labour in *society* (i.e. a division of labour *between* productive firms) rather than the division of labour in *manufacture* (or a division of labour *within* these firms) – this latter process instead corresponding to the functionalist model of societal differentiation.

Where does Luhmann sit with regards to this distinction? Some features of his work are clearly drawn from the functionalist heritage. Unlike Weber, Luhmann considers societies to be distinct, concrete entities, and takes these entities as the referential 'address' of the function term, such that functionally differentiated units are thought to make different functional contributions to their containing societies, rather than to individuals or other sub-societal components. At the same time, one can see strong elements of Weberian thought in Luhmann's work. Weber's (1948, 328) sense that value spheres have their own "inner and lawful autonomy" is, for example, carried forward in Luhmann's assertion that functionally differentiated systems are operationally autonomous. Likewise, the notion that each sphere is demarcated by a specific set of action principles resonates with Luhmann's claim that each functional system is governed by a unique rationality and a system-specific binary code (Bruun 2008). Finally, the two figures share a normative belief in the importance of 'sphere sovereignty'. Weber (1948, 146), for instance, argues that one must protect the pursuit of scientific truth from the pernicious influence of political bias or religious dogmatism. In Luhmann, this thought is applied to *all* functional systems. Dictatorial relations in which one function system controls another, or in which the operation of the systems are subordinated to an overarching logic, are strongly and routinely criticized.

Luhmann thus follows Weber in rejecting the thought, common to our three previous theorists, that differentiated systems are, or should be, integrated by virtue of shared values. Like Weber, he is pessimistic about the possibilities of intra-societal cooperation, and sensitive to the dysfunctions that differentiation can cause. His modernity is Weber's modernity: a polytheistic world of autonomous, incompatible, and inwardly directed system rationalities. Such ideas are not necessarily foreign to the functionalist tradition of differentiation theory – Spencer (1880, 386), after all, spoke only of a "tolerable harmony" between differentiated components – but they do speak to Luhmann's desire to break with some of the tradition's key commitments. Discordance is, however, created by Luhmann's insistence that the differentiated entities of which he speaks address different functional problems of societies, as well as by his almost obsessive use of systemic models. His work thus offers an unusual combination of elements, drawn from distinct research traditions. This gives Luhmann's theory its particular novelty, but also creates numerous points of friction.

Before we begin our examination, it must be noted that Luhmann's work is particularly difficult to describe and assess, especially for a positivistically minded observer. While his theory has comparativist elements, it also shows a far more historicist orientation than any of the previous three theories we have covered. Like Weber, Luhmann is primarily interested in elucidating the unique patterns of development in European societies, and in interpreting the meaning of these developments for human affairs. This motivation colours his approach to validity and verification. To the irritation of many readers, Luhmann appears remarkably indifferent to empirically minded standards of scientific explanation (Herting and Stein 2007, 15; Verschraegen 2011; Luhmann 1986a, 129). His theory keeps questions of prediction and proof at a comfortable distance; indulges heavily in abstract, philosophical, and meta-theoretical discussions; and remains insulated from considerations of practical utility. It is also notably dismissive of "variable analysis," one of the hallmarks of the comparativist approach (Luhmann 2012, 14, hereafter cited as *TS*:1).

Luhmann's theory is thus not presented as a set of predictive generalizations, but rather as a peculiar kind of heuristic tool, a 'self-description' of society which communicates *about* society from *within* society and thus remains entangled in a state of epistemological uncertainty (Luhmann 1986a, 132-133). It is, in other words, less a theory than a theoretical labyrinth (Luhmann 1995a, lii, hereafter cited as *SS*), whose explication is a fraught and often frustrating endeavour. One struggles to find a sensible beginning and must instead jump in.

I. BASIC CONCEPTS

System

As we have seen, Parsons (1977, 230) argues that all types of action systems, including social systems, are subclasses of a broader set of systems, designated as "living systems." The defining quality of these systems is that they actively maintain their own distinctiveness vis-à-vis a surrounding environment. In Luhmann's work, a similar thesis applies, for his concept of social systems is based on a theory of biological organization which was initially intended to define and describe the characteristic qualities of living entities. This is the theory of *autopoiesis*, initially proposed by Humberto Maturana and Francisco Varela. Maturana and Varela view autopoiesis as an extension of the concept of homeostasis. A homeostatic system is one which actively

sustains a particular *variable* within specified ranges. An autopoietic system is one which actively sustains its *organization* – i.e. the particular relations between its elements or processes – in the face of environmental perturbations (Maturana and Varela 1972, 79).

The maintenance of organization in autopoietic systems is a process of self-reproduction. Indeed, for a system to be autopoietic, it must be able to recursively reproduce its constitutive elements via the interaction of these elements. This is captured in Varela's definition, which involves the following criteria:

> **(4.1) Autopoietic system $=_{df}$ a system which: (a) has a semi-permeable boundary; (b) produces this boundary from within the system; and (c) encompasses reactions that regenerate the components of the system (Varela 2000, cited in Luisi 2003, 51).**

An autopoietic system thus produces its own components, which go on to produce further components in a circular manner (Mingers 1995, 11). For example, a biological cell, the prototypical example of an autopoietic system, is said to be "a network of chemical reactions which produce molecules… [that] through their interactions generate and participate recursively in the same network of reactions which produced them…" (Varela, Maturana and Uribe 1974, 188).

Autopoietic systems are therefore marked by *operational closure*: no operations enter the system and no operations leave it, rather all elements and processes of the system are produced by and within the system. This does not mean that such systems are, as Luhmann puts it, "causally isolated, without contact, or self-contained" (*TS*:1, 14). Rather, autopoietic systems presuppose the existence of other systems and depend on them to survive. Cells, for example, need to *import* energy and *export* waste. The concept of autopoiesis does not deny this; rather it asserts that this process is regulated by the internal organization of the cell, such that the environment cannot directly input elemental components into systems. Autopoiesis thus implies a degree of autonomy between system and environment. Events cannot causally determine the state of an autopoietic system or produce operations therein; instead they "stimulat[e] it to self-determination" (*TS*:1, 56). As such, environmental factors function as *irritations* or *perturbations* to which systems may *selectively* respond, and changes induced by the environment are always perceived, constructed, and processed via the system's own

particular structure (*TS*:1, 49). Whether a certain substance is poisonous, for example, depends on the structure of the organism which ingests it rather than being an intrinsic quality of the substance itself (Mingers 1995, 31).

Despite the novelty of Luhmann's conceptualization, one can see certain continuities with Parsons' approach. In Parsons' (1961b, 338) understanding, all living systems, including social systems, seek to maintain equilibrium, or to preserve their particular structural patterns in the face of pressure to change those patterns. This is essentially how Luhmann understands the autopoietic model of system dynamics. In both understandings, systems work to maintain their internal organization and thus to persist as something distinct from a surrounding environment. Moreover, both Luhmann and Parsons hold that systems have specific types of internal operations which cannot be shared with other systems in their environment. Under the autopoietic model, all elements of a system must be produced by that system; said elements do not then 'cross' system boundaries, and the environment does not then 'input' elements directly into the system (Mingers 1995, 33). This idea is also present in Parsons' approach. Indeed, it seems plausible to describe the various AGIL systems (at any level of analysis) as operationally closed systems, for elements of one AGIL system cannot become elements of another.[2]

These similarities should not, however, obscure an important difference between the two figures. For Parsons, systems are analytic abstractions, created for theoretical purposes. This is not the case for Luhmann, who sees systems as concrete, empirical entities (*SS*, 245). As he writes, "[t]he concept of system…always stands for a real state of affairs. Thus by 'system' we never mean a purely analytical system, a mere conceptual construction, a bare model" (*SS*, 442). This change is partly motivated by the notion of autopoiesis. According to the autopoietic model, the boundary separating a system from its environment is a component of the system, meaning that it must – as per the notion of autopoiesis – be created by the system itself (Luisi 2003, 5). The boundary cannot then be an arbitrary demarcation created by a theoretical observer.

[2] As we have discussed above, Parsons (1951) maintains a strong analytic distinction between the elements of social systems (institutionalized role expectations) and the elements of personality systems (cognitive orientations), holding that these two systems – though they influence one another, and are interpenetrated in any concrete instance of action – can never 'exchange' or 'share' elements (see pp. 84-85, above). A similar thought is present in Luhmann's work, which maintains that 'social' systems (made up of communications) and 'psychic' systems (made up of thoughts) are always operationally distinct (see pp. 144-145, below; *SS*, 182)

This idea has significant bearing on Luhmann's approach to functional differentiation. Unlike Parsons, Luhmann does not focus on mapping out the place of units within various analytic typologies. Instead, he takes a more inductive approach, searching for genuine empirical distinctions between actually existing systems. Thus Luhmann claims, for example, that though one may start with a "basic schema of differentiation," one should not contend that "further system formations are possible only within the rough divisions thus established" (*SS,* 19) – as in the case of the AGIL paradigm. As such, Luhmann's catalogue of system types (presented in figure 4.1) is not exhaustive, and remains open to empirical developments.

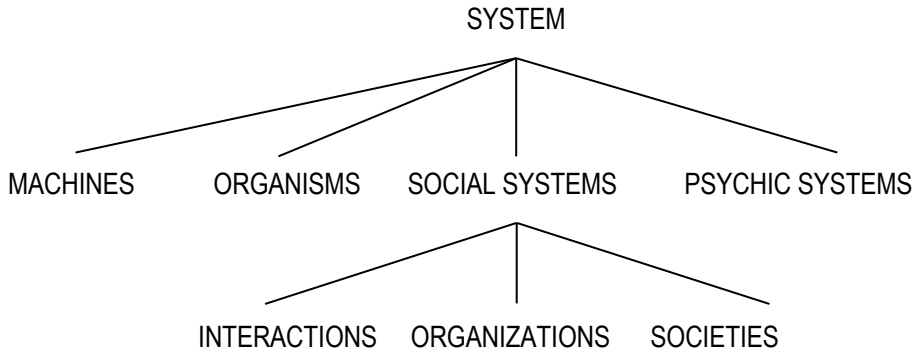

Figure 4.1 – System levels in Luhmannian theory. Reproduced from *SS*, 2.

Social systems

The adoption of the autopoiesis concept means that Luhmann is forced to reject a number of common approaches to the definition of social systems. Maturana and Varela, for example, reject the idea that social systems are autopoietic systems because they maintain that social systems are made up of interacting *individuals*, which are obviously not produced by social systems in and of themselves, but rather by the physical, biological process of sexual reproduction (Varela 1980). While Luhmann accepts that human beings are not autopoietically reproduced, he circumvents the objection by arguing that society is not in fact made up of human beings. Instead, the autopoiesis of social systems is said to involve the recursive reproduction of *communicative events*, which are, in Luhmann's (1986b, 174) view, the elementary or indecomposable units of all social systems, or the elements which social systems recursively and autopoietically reproduce.

Social systems can thus be defined as follows:

> **(4.2) Social systems $=_{df}$ networks of communications which are recursively produced by other communications.**

In arguing that social systems are made up of communications, Luhmann distinguishes his approach from two major alternatives: the view that societies are comprised of *individuals*, and the view that societies are comprised of *actions*. The former is, as explained above, barred by the notion of autopoiesis. Luhmann (1986b, 177-178) does not, however, see action theory as a viable alternative, because action is, in his view, "not necessarily and inherently social," whereas communication is. This is not simply stated as an assumption, but is built into Luhmann's very definition of communication:

> **(4.3) Communication $=_{df}$ an event which synthesizes three different selections: selection of *information*, selection of the *utterance* of this information, and a selective *understanding* of this utterance and its information (Luhmann 1992a, 252).**

Information and utterance are the *what* and the *how* of communication, respectively, or the meaning being conveyed and the means used to convey it. Luhmann does, however, believe that communication also includes a third element, understanding, which incorporates a second party (*TS*:1, 42; Stichweh 2000, 10). Understanding involves an observer who sees information within an utterance, regardless of whether this interpretation is accurate. An involuntary tic, for example, will be perceived by a knowledgeable observer as an utterance without an informational component, and thus would *not* be a communicative event (*SS*, 143). The observer may, however, misread the tic, judging it to indicate hostility, frustration, intimacy, irony, or any other such information. In this case, a communicative operation has occurred. Though this may be a *mis*understanding, an observer understands the utterance to be conveying information. The three elements of communication are thus present.

This tripartite model of communication is designed as an alternative to approaches in which communication is thought to involve the 'transmission' of a message *between* psychic systems, for this latter model violates Luhmann's claim that psychic systems are autopoietic networks of conscious thoughts (see *SS*, 139). As an autopoietic system, a psychic system cannot output information which is then input into another psychic system; rather, information (a thought, for example) needs to be translated into an

utterance which must be 'decoded' by its receiver – i.e. translated back into information. Indeed, it is only because communication works as such that *mis*communication is possible, as may be the case when sender and receiver imbue the same utterance with different meanings.

Luhmann thus holds that communication cannot be conceptualized as an input or output of psychic systems, and thus as an 'element' or 'product' of such systems. Instead, he argues that communications are the basal elements of *social* systems, and that these systems produce communications in an autopoietic fashion – i.e. by creating them out of *other communications* (*TS*:1, 42). Luhmann justifies this claim by arguing that understanding, the element which "completes" the communicative act (*TS*:1, 42), is itself a "transition to further communication," (*TS*:1, 43) in that it creates an "open situation of acceptance or rejection" (Luhmann 1986b, 176), and in that this acceptance or rejection is already itself another communication (*TS*:1, 43). A request, for example, may be accepted or rejected, or one can ask for clarification about what is meant (addressing the information) or even ask why the request was conveyed in the manner it was (addressing the utterance). This follow up communication may end the communicative process, or it may prompt a response on the part of the original party, creating another communication. The idea, then, is that each single communicative 'unit' within a particular network refers to past communications and invites future communications (Mingers 1995, 144). This process is represented in figure 4.2.

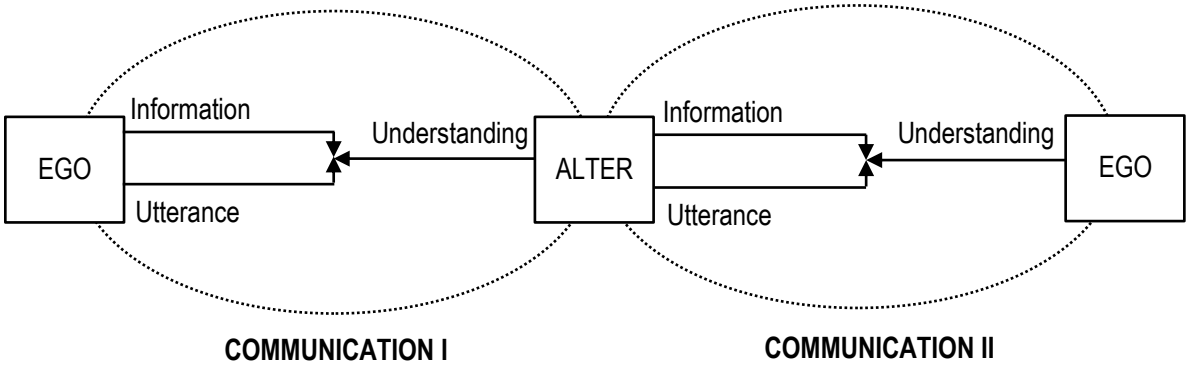

Figure 4.2 – The ongoing process of communication. Adapted from Mingers (1995, 144).

A necessary aspect of this thesis is that the three selections in a communicative act – information, utterance, and understanding – are not performed by psychic systems, but rather by communications themselves. Understanding, for example, is thought to be

"*implied* by future communications," such that the meaning of a communication, and thus its existence as a communication, is "*retrospectively defined through the later communications*" and not simply by the receiver perceiving or thinking of an utterance as such (Seidl 2004, 8). Thus, while it can be argued that individuals supply the 'material' basis of communication – producing, for example, vocalized sounds or marks on a page – it is thought that they do not produce communication itself. In Luhmann's model, only future communications can 'convert' these various sounds, gestures, marks, and so on into communications. In other words, communications are only counted as such because of their relationship to other communications (Seidl 2004, 9).

Society

Like Parsons, Luhmann argues that *societies* (or *societal systems*) are a particular type of social system. He does not, however, define this type with reference to functional self-sufficiency, but rather with reference to two additional types of social systems: *interaction systems* and *organization systems*. Interaction systems are constituted by recursive communication between communicating parties who are treated as "present" by these communications (Luhmann 2013a, 133-134, hereafter cited as *TS*:2). The paradigmatic example of an interaction system is a face-to-face conversation between two individuals. The requirement of presence (which is an attribution of the system, rather than a matter of mere physical proximity) creates strong temporal restrictions on interaction systems, which, if they are not short-lived, brief encounters, typically endure in a distinctly 'episodic' manner (as in a family, for example) (*TS*:2, 134).

While interaction systems are universally present in all societies, organization systems are, for Luhmann, unique, evolutionary accomplishments of *modern* society (*TS*:2, 141ff.). Organization systems are social systems oriented towards decision making; indeed they are explicitly described as autopoietic systems that "produce decisions through decisions" and that "'[consist]' of nothing else than the communication of [these] decisions" (*TS*:2, 143, 145). In addition, organization systems also possess membership rules – i.e. criteria which define who is bound by the organization's decisions. This particular quality affords organizations a unique ability in comparison to both interaction systems and societal systems: the capacity to communicate with like systems in their environment without thereby merging into a single suprasystem (*TS*:2, 145, 151).

Membership is the distinguishing criterion of organization systems, just as *presence* is the distinguishing criterion of interactions. For Luhmann, the distinguishing criterion of societal systems is *comprehensiveness,* for societal systems are defined as social systems which encompass the totality of social elements – i.e. communications. Thus societal systems include and encompass communications within both organizations and interactions, which must *always* be nested within societal systems and cannot exist outside of them.

> **(4.4) Society $=_{df}$ an "all-encompassing social system that includes everything that is social and therefore does not admit a social environment" (*SS*, 408).**

For Luhmann, communicative events cannot take place outside of society, for societies encompass, by definition, *all* instances of communication. As such, the boundaries of a societal system are not defined with reference to geographic territory, political authority, membership criteria, cultural identity, or other such observables, but are instead conceptualized with a distinction between communicative events, which constitute society, and non-communicative events, which exist in the environment of society (*SS*, 410).

Societal systems cannot, then, have a social environment, for this environment would involve communication and would thus be part of society. As such, societies must be communicatively isolated. If one society was to establish communicative links with another, then both would cease to exist *as* comprehensive societal systems (*TS*:1, 83), and would instead be circumscribed by a new, more encompassing societal entity (Luhmann 1982, 131). For this reason, Luhmann's conceptual apparatus disallows a 'system of societies', *a la* Parsons. For Luhmann (1997a, 72), national or regional boundaries do not mark off separate societies, but are simply "political conventions…relevant for the segmentary differentiation of the political subsystem of the global society." As such, the contemporary world order is not thought of as a system of interconnected but otherwise discrete societies, but as a single 'world society', encompassing all communication. This society is, in Luhmann's view, the only societal system that presently exists (*SS*, 410).

Function

Luhmann's model of functional analysis is in many ways oppositionally defined against those of his predecessors, and makes a number of unique conceptual moves. For example, despite deploying a systemic model of society, and despite using the interdisciplinary language of autopoiesis, Luhmann seeks to distance sociological functionalism from its biological counterpart. He thus attempts to avoid defining functions with reference to societal 'needs', or to the conditions for societal existence (*TS*:1, 36; Luhmann 1970, 10; *TS*:2, 89).

For Luhmann, the essential problem with this approach is that it is never clear what continued existence means in the case of social systems. Unlike organisms, social systems do not have relatively clear cut markers of death, and can undergo far-reaching structural changes without giving up their identity (Luhmann, 1970, 18-19). For this reason, attempts to postulate unambiguous criteria by which one can specify the 'birth' or 'death' of a specific social system are likely to remain mired in endemic debate, and precise criteria of system 'health', or of what counts as a positive functional contribution, are unlikely to emerge (Luhmann 1970, 12).

How, then, is one to ground the function term? Luhmann's solution to this problem varied over the course of his career, and he experimented with a number of different definitions. In an early work, Luhmann (1970, 20) states that functional analyses are ultimately concerned with the stabilization of behavioural expectations – a position that reflects the influence of Parsons. In *Social Systems* (1984), after the adoption of the autopoietic framework, this model is described as "not incorrect, but inadequate" (*SS*, 54), and is replaced by a concern with the "preservation of closure and the incessant reproduction of elements" (*SS*, 54, 55). This work does, however, also state that the function concept implies something "beyond the mere continuation of self-referential reproduction"; indeed it argues that functional analysis should be oriented to "the problem of reducing complexity instead of to the problem of maintaining continuances" (*SS*, 55, 57).

This same idea is present in *Die Gesellschaft der Gesellschaft* (1997b), which contains Luhmann's most mature statement of his position. Here, Luhmann reiterates the claim that functions should not be defined, as was the case in "older sociological theory," as "conditions for the continued existence of the societal system" (*TS:*2, 89), adding that

"it would not make an essential difference if we were to replace 'continued existence' by 'autopoiesis'" (*TS*:2, 89). Yet just two lines later Luhmann does exactly that, arguing that his approach to functionalism is based around "a sort of cognitive experiment" in which one tests "how the societal system would have to change its structures to *maintain its autopoiesis* if certain functions were no longer to be fulfilled" (*TS*:2, 89, emphasis added). This accords with many of his statements in *Social Systems* – which argues, for instance, that structures should be analysed "from the viewpoint of the necessity for autopoietic self-reproduction" (*SS*, 281) – as well as with his comment, made in *Art as a Social System*, that all functions that "occur in society" can be "traced to problems of meaningful communication" (Luhmann 2000a, 139).

Luhmann does, however, clearly have something more than autopoiesis in mind. Indeed his explicit definition of the function term makes no mention of autopoiesis, defining functions as follows:

> **(4.5) Social functions $=_{df}$ "referential problems that have to be handled in one way or another if [a] society is to maintain a certain level of evolution and also fulfil other functions" (*TS*:2, 89).**

What is meant by the "level of evolution" in a society? One can only assume that Luhmann is referring to the maintenance of social *structures*, which he defines, in *Social Systems*, as sets of generalized behavioural expectations (*SS*, 96). A system can, however, change its structures while still maintaining its autopoiesis – indeed the above statements recognize that a change of structure is often *necessary* to maintain autopoiesis. One cannot then treat both evolution *and* autopoiesis as the reference problems in a functional analysis, as these two goals are often contradictory.

While Luhmann's remarks ultimately remain cryptic and inconsistent, two points are clear. First, Luhmann argues that one cannot deduce a catalogue of functions from higher-order theoretical principles, *a la* Parsons or Spencer (*TS*:2, 89). The maintenance of autopoiesis, for example, cannot be analytically disaggregated into a set of piecemeal goals which each society needs to reach. Instead, Luhmann argues that one must proceed inductively, considering the particular, "historically variable" structures of societal systems, in the context of which problems are ultimately defined *as* problems (*TS*:2, 89; *SS*, 54-57). Luhmann does not then specify a universal set of exigencies, as in

Parsons or Spencer, but speaks of an open-ended range of referential problems, some of which may be unique to particular societies.

Second, Luhmann is also clear that the 'problems' in question must be problems of *societal systems* themselves, rather than problems of elements *within* said systems. He claims, for instance, that functionally differentiated subsystems do not fulfil functions for themselves, but for the wider "system as a whole" (*TS*:2, 88), and that the functions of these subsystems "relate to a problem of society, not to the self-reference or self-preservation of the functional system" (*TS*:2, 88). Indeed, he explicitly argues that the *function* label should only describe relationships in which subsystems *of* society address problems *for* society. Functional relationships between subsystems are instead designated by the term *performances*, while the self-maintenance of a system is referred to as *reflection* (*TS*:2, 88, 96; see figure 4.3). In this regard Luhmann remains well within the functionalist tradition. Though he allows for the historical variability of functional problems, these problems are still seen as problems of *systems*, and still seen as something addressed by elements or components of these systems.

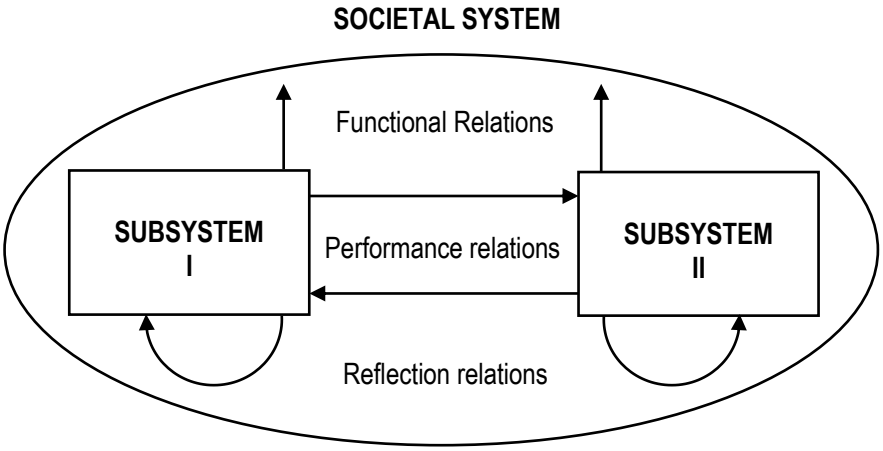

Figure 4.3 – Three types of systemic relationships.
Adapted from *TS:2*, 88, 96.

Despite these similarities, Luhmann (1970, 13) is adamant that his model of functional analysis differs greatly from prior approaches, in large part because these approaches are thought to rely on an epistemological model – that of "causal scientific positivism" (*kausalwissenschaftlicher Positivismus*) – which he explicitly rejects. For Luhmann, this model is essentially oriented around the production and verification of monofactorial causal statements, of the kind '*x* causes *y*'. The functionalist simply adds an additional

element to such statements, arguing that *y* is a system need or condition of its existence (Luhmann 1970, 13).

For Luhmann (1970, 16), such statements are problematic in a range of regards, the most prominent of which is their reliance on *ceteris paribus* clauses. Considering that any one effect is preceded by an infinite number of potential causes, any '*x* causes *y*' statement must, as Zolo (1986, 22) puts it, "guarantee implicitly that no phenomenon which could influence the events being considered is taking place…" – an assumption that Luhmann (1970) finds to be highly implausible in the case of large, complex systems. As such, Luhmann (1970) holds that bivariate causal propositions must necessarily simplify complex causal relationships, and that such statements, while easy to grasp, have little explanatory power and are tinged with subjectivity. They rely, in Luhmann's parlance, on 'selections', in that an observer must 'select' a particular cause as salient, elevating that cause above an infinite range of interconnected causal principles. For Luhmann, any such selection will necessarily reflect the interests, values, and preferences of the observer – i.e. the one doing the 'selecting' (Luhmann 2002, cited in Wan 2011, 113).

Forms of functional analysis that propose lawlike relationships between specific causes and specific (functional) effects are, as such, thought to be misleading (Luhmann 1970), or to rely on "partial, imperfect" and "problematic intellectual contrivances" (McCann 1996, 460). As such, Luhmann argues that one should instead examine how various causes can be functionally equivalent with regards to a particular system problem (Luhmann 1970, 14; Bednarz 1984, 348). Under this latter method, which Luhmann dubs "equivalence-functionalism" (*Äquivalenzfunktionalismus*), the application of the 'function' term to a particular action or process indicates that it is a "possible but not necessary response to a problem," or is "one contingent solution amongst several possibilities" (Michaels 2006, 358; Luhmann 1970, 14).

It is, however, again questionable whether this approach is actually all that novel, or solves Luhmann's issues with prior models. As Zolo (1986, 121) notes, any statement of functional equivalence requires one to deploy the very framework which Luhmann seeks to avoid, for it is simply "…not possible to thematize a (disjunctive) relationship of equivalence within the class of (functionally equivalent) causes $C_1, C_2, \ldots C_n$ except as a function of the causal connection which links each of them to the effect *E*" (see also

Wan 2011, 115-116; Wagner 2012, 41; Schwinn 1995, 198). Statements that establish two elements as functional equivalents can, in other words, only do so by positing a probable relation between the causes they engender and a specific functional effect.

As a result, equivalence functionalism does not greatly deviate from the models of functional analysis developed in the work of our previous three theorists. Each of these theorists treat functional analysis as a comparative method, and each document the heterogeneous range of mechanisms which different societies use to 'solve' universal problems of social existence. Moreover, each deploy a model of functional differentiation in which differentiated units are, to use Smelser's (1959, 2) formulation, *functionally equivalent* to an original, undifferentiated entity. Assessments of functional equivalence are thus crucial to their concepts and methods.

Summary

While Luhmann's conceptual scheme does show a range of similarities to those of our previous three theorists, in that it posits that certain structural elements perform functions for a wider systemic entity, the significance of his various conceptual novelties should not be understated. For the theory of differentiation, two such innovations seem particularly salient: the move to the autopoietic paradigm (and the subsequent development of a communication-based social ontology), and the move to an open-ended catalogue of functional problems.

Together, these two positions lead to an especially novel theory of functional differentiation. Because Luhmann argues that societies are comprised of communications, rather than individuals or actions, differentiation is no longer understood as a process in which actors come to make specialized contributions to the existential needs of a human social group, but as a process which creates functional distinctions between *types* of communication based on *problems* of communication. And because these problems are not then grounded in a universal set of biological or physical givens, the development of functionally differentiated mechanisms is no longer envisaged as a process of decomposition in which these mechanisms monopolize responsibility for some particular aspect of a pre-existing, invariant functional process. Instead, the differentiation concept speaks to the *emergence* of distinct communication systems, each of which address a specific, historically particular problem of a more

encompassing communication system. The following section delineates these ideas in greater detail.

II. THEORY OF DIFFERENTIATION

The process of differentiation

One of Luhmann's most common assertions is that the theory of autopoietic systems replaces the distinction between *part* and *whole* with the distinction between *system* and *environment* (*SS*, 5-6). As such, his model of differentiation is not based on the idea that systems are composed of interrelated parts, but on the thought that differentiated systems contain a number of "operationally employable system/environment differences" (*SS*, 7). Differentiation thus does not involve an increase in distinct *parts*, but an increase in distinct *subsystems*. It is, quite simply, "the repetition within systems of the difference between system and environment" (*SS*, 6-7), or the process by which subsystems are formed.

> **(4.6) Differentiation $=_{df}$ a process in which a new system/environment distinction is created within an existing system.**

As the definition indicates, Luhmann does not restrict the differentiation term to *functional* differentiation specifically. Instead, he speaks of three other 'forms' of differentiation: *segmentary* differentiation, *centre-periphery* differentiation, and *stratificatory* differentiation. These forms are derived by observing subsystem relationships through two basic distinctions: equality/inequality and similarity/dissimilarity. The distinctions are not, however, cross-tabulated to form an exhaustive catalogue, as in Parsons. Though Luhmann admits that there are practical constraints on the possible variety of differentiation forms, his list of forms is not considered definitive. Indeed, it was itself expanded from its initial presentation, which did not include the 'centre-periphery' form (see Luhmann 1977).

The four types may be described as follows:

1. *Segmentary* differentiation refers to the creation of subsystems which are similar, and equal in status, to other subsystems (*TS*:2, 12; Luhmann 1990a, 423).

2. *Centre-Periphery* differentiation creates a dissimilar subsystem which "transcends the principle of segmentation" (*TS*:2, 13). In this instance, "*one* case of inequality is permitted": inequality between a central subsystem and a series of segmentarily differentiated periphery subsystems (Luhmann 1990a, 423).

3. *Stratificatory* differentiation creates subsystems which are dissimilar and unequal in rank (*TS*:2, 13).

4. *Functional* differentiation creates subsystems which are "alike in their dissimilarity" (*TS*:2, 13): alike in their fulfilment of *a* function, but dissimilar in their fulfilment of *different* functions. Inequality exists between the subsystems, but there is no universally recognized hierarchy (*TS*:2, 13). Each subsystem overweighs its own importance in comparison to others.

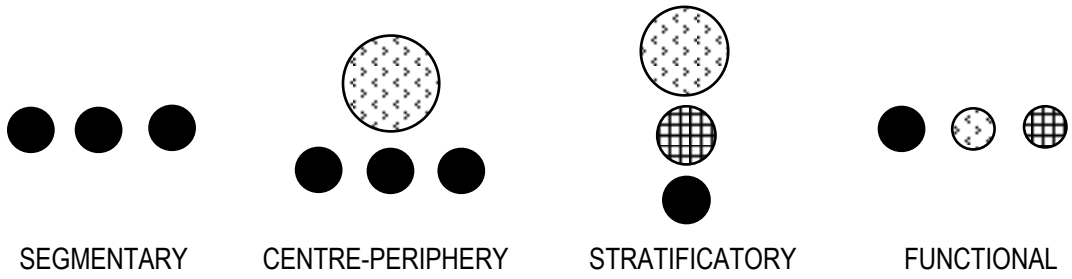

Figure 4.4 – The four differentiation forms.

The idea that there are different types of differentiation is by no means novel. North (1926, 5), for example, distinguished between differentiation in rank, function, culture, and interest, and other theorists have proposed alternative typologies. What Luhmann adds to this is the idea that each society has a single, dominant form of differentiation to which other forms are subordinate. Thus functional differentiation not only refers to the *process* by which functional subsystems form, but also to a *state* in which the principal subsystems of society are built and organized around different functional reference problems. For Luhmann, functional differentiation is the *primary* form of differentiation in such a society because other forms of differentiation can only appear *within* the functionally differentiated subsystems.

For example, Luhmann considers the current world society to be a functionally differentiated society. Although cases of segmentary differentiation are evident, as in the segmentation of the world into distinct countries, national boundaries are largely internal to the *political* subsystem, and have little relevance to other subsystems (such

as the artistic or scientific systems). Likewise, stratification is evident in the economic subsystem (in the form of wealth inequality), but these differences in rank do not necessarily transfer to other functional subsystems, as they would in a caste or estate based society (in which *stratificatory differentiation* would be the primary form). Functional differentiation is thus thought to have primacy over these other forms.

(4.7) Functional differentiation $=_{df}$ a form of differentiation in which the subsystem created is a functional subsystem.

(4.8) Functionally differentiated society $=_{df}$ a society whose primary subsystems are functional subsystems.

The concept of a *functional subsystem* is essential to Luhmann's approach; indeed functional differentiation is nothing more than the process by which such subsystems are created. It is, however, often unclear just what kind of entity the term denotes. Though Luhmann describes the dynamics of these subsystems in detail, his accounts provide relatively few empirical handles by which to grasp their nature in concrete terms. One issue is that functional subsystems do not, unlike the societies in which they are located, attain their unity on the basis of a "typology of operation" – i.e. by containing all that is communication and excluding all that is not (Luhmann 1988a, 19). Instead, they must participate in social communication while at the same time finding their "own mode of forming basic elements for which there are no equivalents in the partial system environment" (Luhmann 1988a, 19). For Luhmann (2000b, 15), functional subsystems thus form around different *kinds* of communication, including all communications of a particular kind and excluding all others.

Luhmann (2004, 93) cites two main mechanisms by which functionally distinct types of communication are established: functional specification and binary coding. *Functional specification* occurs when communications become oriented towards a specific problem of society (Luhmann 2004, 93). *Binary Coding*, by contrast, involves the orientation of communication around a particular bivalent distinction.[3] Binary codes are important

[3] Debate exists about whether functional subsystems *must* utilize binary codes, as Luhmann's own position is ambiguous. In *Ecological Communication,* he asserts that only "the most important function systems structure their communication through a binary code" (Luhmann 1989a, 36). In *The Reality of the Mass Media,* he claims that function systems "typically" differentiate themselves by coding, and that a "special code" is a "precondition for the differentiation of a particular function system" (Luhmann 2000b, 16, 23). In *Theory of Society*, he argues that functional subsystems "require" a binary code to "form their autopoiesis" (*TS*:2, 90), and that "it is only [codes] that [allow] [subsystems] to differentiate out" (*TS*:2, 92). Our analysis adopts this latter position, which is more common in Luhmann's later work.

because functional specification alone is, for Luhmann, "insufficient" to delineate the boundaries of a functional system (*TS*:2, 90). Codes are required to "distinguish the operations belonging to the system with sufficient practical clarity," or to "mark off the system's own autopoiesis externally" (*TS*:2, 90; Luhmann 1989a, 36).

Binary codes define what counts as relevant information for a particular functional system, and thus what communications occur *inside* of that particular system (Luhmann 2004, 94). This means that a communication must invoke a system's particular code to be an operation in that system. The economy, for example, "ties all operations to payments," or to the code of payment/non-payment; operations within the economy must therefore be "transacted through the payment of money" (Luhmann 1988a, 20n17; 1989a, 51). Science, by contrast, operates with the code of true/false, and scientific communication must use or refer to this distinction. Information that cannot be assigned either of these values cannot become a subject of scientific communication.

Together, functional specification and binary coding define system boundaries. For example, the legal subsystem operates with the code legal/illegal. Communication which makes reference to this code can thus become part of the legal system, regardless of whether it occurs in the context of "a dispute among neighbours, a traffic accident, a police action, or any other event" (Luhmann 1989b, 141). At the same time, Luhmann (1989b, 142) is clear that "not every reference to the law is an operation internal to the legal system." To be considered as such, the communication must be directed towards the law's function: processing "normative expectations that are capable of maintaining themselves in situations of conflict" (Luhmann 1989b, 40). The code must, in other words, be invoked during the administration of justice, or in an effort to assert or alter the law (or similar) (Luhmann 1989b, 142; 1988a, 19). Communications which fulfil both of the above criteria – i.e. which activate the legal system's code with respect to the legal system's function – are of the same type, each being *legal communications*. The legal subsystem encompasses all such communications, and is thought to reproduce them in an autopoietic manner (i.e. out of other legal communications).

> **(4.9) Functional subsystem $=_{df}$ a subsystem of a societal system, comprised of all communications which: a) are oriented around the same function; and b) refer to the same binary code.**

Luhmann's notion of functional subsystems thus shows some similarity to Parsons' notion of AGIL subsystems, despite ontological differences. For Parsons, a functional subsystem contains all of the structural elements which contribute to a particular system function. Similarly, Luhmann argues that a functional subsystem contains all those *communications* which address the same societal problem and share an associated code.[4] Thus while Luhmann does not wish to use the language of parts and wholes, his approach does not seem to differ greatly from those that do, for he still argues that subsystems are collections of elements that are located within, and function for, a containing suprasystem.

There is ample textual support for this claim. In accordance with Luhmann's definition of the function term, *functional* subsystems must be concerned with a "problem of society," rather than their own "self-reference or self-preservation" (*TS*:2, 88). Thus we are told, for example, that the "unity" of a functional subsystem is established by the function it "fulfils for the *system as a whole*" (*TS*:2, 88, emphasis added); that each subsystem assumes "many of the reproductive requirements needed in the *overall system*" (*SS*, 192, emphasis added); and that functional differentiation involves an increase in risk, as a differentiated society no longer has "multiple safeguards" for the performance of "the most important societal functions" (*TS*:2, 98).

While statements of this kind imply a mereological ontology, and while Luhmann does not then diverge from previous theorists to the extent that his stated positions suggest, there are some key points of distinction in his approach. For example, while the AGIL systems are postulated as analytic entities, or as abstract sets demarcated by a theoretical observer, Luhmann believes that functional subsystems are concrete, empirically existing units. As discussed above, this follows from the idea that the subsystems are autopoietic, i.e. *self*-producing, entities, which reproduce their own elements – communications of a specific, functionally distinct type – from the interaction of these elements, and which are thus themselves responsible for maintaining the distinctiveness of their internal communications against other kinds of communications in their

[4] For this reason, functional subsystems are not organizations. Luhmann is clear on this, arguing that "no single functional system can obtain its own unity as organization," and that "no organization in the domain of a functional system can take on all the operations of the functional system and carry them out as its own" (*TS*:2, 150). It is, quite simply, unlikely that any one organization could contain *all* communication which uses a particular code or makes reference to an associated function. Educational communication could not, for instance, be confined to a single school. Even in a small scale society, some degree of education would likely take place in interactions outside of this organization (*TS*:2, 150).

environment. This means that differentiation creates concrete, empirical boundaries, rather than merely sharpening distinctions between pre-existing analytic categories.

The other key difference in Luhmann's approach is the rejection of the decomposition model. Because he does not believe that one can deduce a determinate catalogue of societal problems, Luhmann does not conceptualize functional differentiation as a process by which a static list of social needs comes to be addressed by more specialized types of communication. The idea that differentiation involves the decomposition of multifunctional entities, or must always be a process of functional *division*, is thus explicitly denied. As Luhmann writes, the differentiation of functional mechanisms "never means…a detachment or separation from the original complex, but merely the establishment of functionally specific differences within the system, to whose problems the functional mechanisms relate" (*SS*, 53).

Luhmann thus argues that functional differentiation is not, as in the decomposition paradigm, specifically tied to processes of disaggregation. Instead, it is a catch-all term denoting *any* process by which functionally distinct forms of communication arise. This means that functional-subsystems need not form by 'splitting off' from an existing complex, or by specializing in existing problems, but can emerge via the synthetic combination of existing elements into a new, functionally distinct entity.[5] Luhmann thus rejects one of the key elements of the decomposition approach: the thought that differentiated units are, taken together, functionally equivalent to the unit from which they differentiated. Instead, he allows for the possibility that new societal problems can arise, and that distinct types of communication can emerge to address them (*TS*:2, 58). For this reason, his model is said to adopt an *emergence* perspective, which is not focused on the separation or division of subsystems, but on the novelty of systems and the "multiple synthetic and integrative effects which are preconditions of system formation" (Stichweh 2013a, 56).

As such, Luhmann believes that any inventory of functional systems can only be provisional. He does not present an exhaustive list, and scholars disagree on the exact

[5] For example, Stichweh (2013a, 57) describes 'sport' as a function system which arises via the convergence of three different cultural traditions: *athletics* – i.e. competitive sports engaged in by professionals for the purpose of public spectacle – *gymnastics* – i.e. non-competitive physical cultivation – and *sports* – i.e. the various "pastimes of early modern European nobility." For Stichweh (2013a, 57; 2013b), "the synthesis of these three traditions was a very complicated process…from which, finally, one function system in world society arose which reconstituted all these historical divisions and then added in ever new disciplines of sport…."

number of function systems evident in his work. One can speak of a 'core' list of eight systems based on the various monographs which Luhmann published or began work on – those being on the economy (1988b), science (1990b), law (1993), art (1995b), the mass media (1996), politics (2000c), religion (2000d) and education (2002) – but he also made reference to a number of other systems, including those of health, family/intimate relationships, and morality. Sympathetic scholars also continue to debate whether candidates proposed in the secondary literature – such as sports, tourism, culture, social work, and sartorial communication – qualify for function system status (see Roth and Schütz 2015). In each case, what is at issue is the discovery of: a) the functional problem to which the system is supposedly oriented; and b) the binary code around which its operations are supposedly structured. This was the procedure followed by Luhmann in his various monographs, the results of which are summarized in table 4.1.

system	code	function
Economy	payment/non-payment owning/non-owning	To "ensure supply under conditions of scarcity" (*TS*:2, 96).
Politics	government/opposition governing/governed	To ensure collectively binding decisions (Luhmann 2000c, 84).
Science	true/false	To "produce a clear differentiation of true and false propositions (Luhmann 1977, 38).
Law	legal/illegal	To form and reproduce "congruently… generalized behavioural expectations" (Luhmann 1988a, 27).
Art	fitting/non-fitting	To "[demonstrate] the compelling forces of order in the realm of the possible" (Luhmann 2000a, 148).
Religion	immanent/transcendent	To "guarantee the determinability of all meaning against the accompanying experience of constantly referring to the indeterminable" (Luhmann 2013b, 69).
Mass Media	information/non-information	To direct the self-observation of the societal system (Luhmann 2000b, 97).
Education	transmittable/non-transmittable	To transform human beings into persons (Luhmann 2002).

Table 4.1 – Some Examples of Functional Systems

In rejecting the decomposition model, Luhmann's approach to functional differentiation seems akin, analogously speaking, to the concept of product differentiation, or the

division of labour in *society*. It stresses the individuality of the differentiated entities; focuses on the processes by which they are distinguished, and analyses their functionality with reference to an open-ended catalogue of problems. These qualities are also shared by the more historicist notions of differentiation developed by Dilthey and Weber. At the same time, Luhmann quite clearly retains the functionalist notion, inspired by the division of labour in *manufacture*, that differentiated entities exist within, and function *for*, a wider containing system. Likewise, he also argues that functional subsystems are specialized with reference to specific social problems and have no capacity to deal with any others or to substitute for one another (*TS:*2, 90, 93). Functional subsystems cannot, then, compete over the same function, as can the entities postulated by Dilthey and Weber, or as can different products or firms. Instead, each system "monopolizes its function for itself and counts on an environment being not responsible or incompetent in this regard" (*TS*:2, 89). In this respect, Luhmann's approach, much like Durkheim's, presents a curious combination of two distinct analogies. It remains to be seen whether the result proves defensible.

Differentiation and integration

Luhmann's approach to the topic of integration also presents an unusual combination of functionalist and historicist ideas, for it rejects one of the key elements of the former tradition: the mereological model. Luhmann thus repeatedly disavows a "unity perspective" (*TS:*2, 6) – i.e. the idea that integration involves the *unification* of a broader whole – and is generally critical of prior approaches in the functionalist tradition. For example, speaking of Parsons' work, Luhmann notes that:

> "The concept of integration is…mostly left undefined, and, as critics have pointed out, ambiguous. Inadequately considered premises for consensus often feed into the empirical conditions for integration. As a result, the term continues to be used to express perspectives of unity or even expectations of solidarity and to urge appropriate attitudes – in the old European style!" (*TS*:2, 5-6).

For Luhmann, approaches of this kind are 'old European' because they conceptualize integration in line with the organizational patterns of pre-modern societies, based largely on centre-periphery or stratified forms of differentiation, rather than those of modern, functionally differentiated societies. As such, they typically argue that there is a central authority to which differentiated units are oriented or obedient, or some central

point of uniformity which assures their common purpose (*TS:*2, 6). In Luhmann's (1989a, 106, 114; 1992b, 1434) view, theories of this kind fail to grasp the radically decentralized nature of functionally differentiated societies, which operate without an apex or centre, and which lack a "superordinate standpoint of representation" that coordinates the various subsystems or adjudicates their competing claims to significance.

These claims show a clear Weberian influence, in that they reject the idea – common to the functionalist tradition – that subsystems are integrated by common attachment to a dominant value pattern. Indeed, Luhmann is opposed to *all* theories of social order which rely on normative agreement, including those of "natural law, the social contract, or consensual morality" (*TS*:1, 190, 8). As such, he denies that functionally differentiated societies are integrated by *ideational* mechanisms. The various binary codes are not, for example, thought to be subordinate to a 'supercode' which renders them compatible; instead they remain wholly distinct and non-overlapping. As Luhmann (1989a, 43) notes, "a positive valuation in one code, for example, 'true' does not automatically entail a positive valuation in the other codes, for example, as legally or economically significant" (see also *TS*:2, 103). In this we see clear shades of Weber (1948, 148), who argues, in his famous comments on the nature of modernity, that beauty, truth, and goodness need no longer coincide.

These thoughts lead Luhmann to challenge the assumption that integration has a "more or less regular relationship" with functional differentiation (*TS*:2, 5). Instead, he argues that functionally differentiated societies are, in comparison to those structured by alternative differentiation forms, actually marked by a *lack* of integration. Each function system is only concerned with its particular function, and operates with complete, autopoietic autonomy. As such, there is no guarantee that structural developments in these systems will remain compatible (Luhmann 1997a, 71) or will "mutually support and confirm one another" (*TS*:1, 343). For this reason, Luhmann is sensitive to the dysfunctional consequences of functional differentiation, and does not, like Parsons or Spencer, suggest that differentiation necessarily confers adaptive benefits. In fact, Luhmann (1989a, 111) argues that a functionally differentiated society cannot respond to problems as a cohesive, coordinated unity, and thus "cannot adapt itself to environmental changes" as well as comparatively simpler entities.

Despite these various comments, Luhmann is clear that *some* degree of integration is required in functionally differentiated societies. For example, he notes that:

> "If we were to describe modern society as merely a multitude of autonomous functional systems that do not need to take one another into consideration but only to obey the reproductive constraints of their own autopoiesis, the picture would be very one-sided. It would be difficult to understand how this society is not on the verge of exploding or collapsing." (*TS*:2, 108)

Integration is here described as a *social* problem – i.e. one which relates to the existence, welfare, or functioning of *society*. In this respect, Luhmann follows the approach of his fellow functionalists, rather than figures like Weber or Dilthey. These latter theorists do not typically view integration from the perspective of *society*, but from the perspective of *individuals*, who are thought to move between distinct cultural spheres, and who must reconcile or cope with any conflicts between them (see Dilthey 1991, 101; also Beck 1992, 136-137, on "biographic solutions" to "systemic contradictions").

Unlike these theorists, Luhmann does not reject the idea that integration is a problem for *systems*; rather he simply denies that functionally differentiated societies are integrated in a centralized manner, or that integrative mechanisms address relations between *sub*system and *supra*system. Instead, Luhmann argues that social integration is guided by *performance* relations – i.e. relationships *between* subsystems (*TS:* 2, 97). The integration of a functionally differentiated society does not, in Luhmann's view, involve subsystems being obedient to, dependent on, or identified with a wider society; rather it rests on the "shifting…historically variable adjustment of subsystems to one another" (*TS*:2, 6), or on their mutual interdependence (Luhmann 1989a, 110).

In arguing that functionally differentiated societies are largely integrated by *organizational* sources of cohesion, Luhmann's approach shows some overlap with those of our previous three theorists – indeed in some cases quite similar arguments are in play. Spencer, for instance, rejected the idea that differentiated parts must be subordinate to the demands of a central authority, which is why he specifically described modern societies as organizational equivalents of colonial organisms, rather than vertebrates (see Elwick 2003; Stark 1961). In Spencer's view, centralized, hierarchical forms of integration quite clearly contradict the basic logic of functional

differentiation. While a differentiated part needs to exist as a *part* – i.e. as a component in a system – it must also have some autonomy or distinctiveness from that system, otherwise it makes little sense to speak of it as a *differentiated* part.

Like Spencer, Luhmann argues that functional differentiation can be hampered by excessive integration. As such, he defines integration in an explicitly neutral manner:

> **(4.10) Integration $=_{df}$ a "reduction in the degrees of freedom of subsystems due to the external boundaries of the societal system and the internal environment of this system they define" (*TS*:2, 6).**

If integration is seen in this way, then the challenge for functionally differentiated societies is not to create integration as such, but to create a balance between integration and differentiation. In a state of insufficient integration – i.e. complete freedom – the functional subsystems would operate without *any* consideration of other subsystems, leading to severe dysfunctions. Conversely, in a state of excessive integration, the subsystems would have no internal autonomy, and would thus not be functionally differentiated entities – i.e. entities which have *sole* responsibility for the performance of particular functions, and which reproduce their *own* elements towards this end.

In accordance with this latter point, it is especially important that a differentiated society can integrate its subsystems without compromising their autopoiesis, for if subsystems lose their autopoiesis they cease to exist as distinct subsystems. For this reason, Luhmann rejects the idea that subsystems are integrated by interchange media, as was the case in Parsons' approach.[6] In Parsons' conceptualization, the media are circulating mechanisms which facilitate the transfer of inputs (factors) and outputs (products) *between* subsystems. This clearly contradicts the autopoietic model. Because the elements of an autopoietic system must be produced *by that system*, elements cannot

[6] Despite these issues, Luhmann does not jettison the media concept entirely. He does, however, substantially alter its meaning and theoretical position. For Luhmann (1976, 515; *TS*:1, 192), symbolic media are media of *communication*, rather than *interchange*, and they work to secure acceptance of communication, rather than to facilitate the integration of differentiated subsystems. The eight media proposed (truth, values, love, property, money, art, power, and law (*TS*:1, 201)) are still linked to functional subsystems – which are said to be "organized around culturally developed generalized media" (e.g. science around *truth*, family around *love*, economy around *money*, etc.) – but unlike Parsons, Luhmann (1976, 515; *TS*:1, 233) does not posit a 1:1 ratio between subsystem and medium. For example, the economic system is afforded two media: property and money. Meanwhile, systems such as religion, education, or health function without any specialized media at all (*TS*:1, 202, 246). As such, media do not play a pivotal role in subsystem integration, for some systems can clearly achieve adequate levels of integration without them.

'cross' system boundaries, and cannot be shared by, or exchanged between, different subsystems.

For example, the economic system is, in Luhmann's work, made up of payments: the system attains its unity on the basis of this unique operational type and thus encompasses *all* communications which take the form of a payment. Payments cannot then be 'input' into other subsystems, or participate as operations within them, for they can never exist 'outside' the economy. For other subsystems, payments are simply environmental occurrences, and while payments can *influence* these systems they cannot directly determine their autopoiesis. Payments may, for example, entice or stimulate scientific research, but they cannot themselves "produce truth" ("[s]cience," Luhmann notes, "honours payments with 'acknowledgements,' not with cogent arguments" (*TS*:2, 99)). The same holds for operations in other subsystems. Politics, for instance, is said to have "no capacity of its own to devise the success of the economy…" (*TS*:2, 99), because political communication cannot act *within* the economy, but can only try to influence or stimulate the self-reproduction of payments (*TS*:2, 99).

For Luhmann, communications in one subsystem will only irritate or perturb another if they have consequences for the latter's function and can acquire informational value in line with its specific binary code. Scientific discoveries, for example, will only be relevant to the health system if they have potential bearing on the provision of medical care and relate to, or are communicable in terms of, the health/illness distinction. Coding thus allows subsystems to ignore much of what goes on in their intrasocietal environment, but also to establish points of connection where pertinent. For example, the health code allows the health system to perceive functionally relevant scientific communication and to 'translate' that communication into health communication. In this manner, the health system can make use of medical science to perform healthcare functions, which it must of course do if it is not to function in an entirely compromised state.

When a system comes to depend on another in this manner – i.e. when its autopoiesis becomes linked with preconditions it can neither "produce itself nor guarantee" – the system is said to be *structurally coupled* (*TS*:1, 54). This concept, taken from Maturana and Varela, is central to Luhmann's account of integration, and is thought to explain

how the functional subsystems are "linked together and held in society" (*TS*:2, 109). Structural couplings are structural adaptations *within* systems which presuppose specific environmental events (Luhmann 1992b, 1432). Through couplings, systems come to rely on these events to secure their autopoiesis or perform their functions. As such, couplings are not autonomous entities in their own right, and cannot "determine what happens in the system" (*TS*:1, 55), nor "contribute operations" to it (Luhmann 1992b, 1432). Instead, they simply "bundle and intensify certain causalities" (*TS*:1, 56), attuning a system to particular environmental occurrences while excluding others from immediate relevance (Luhmann 1992b, 1433).

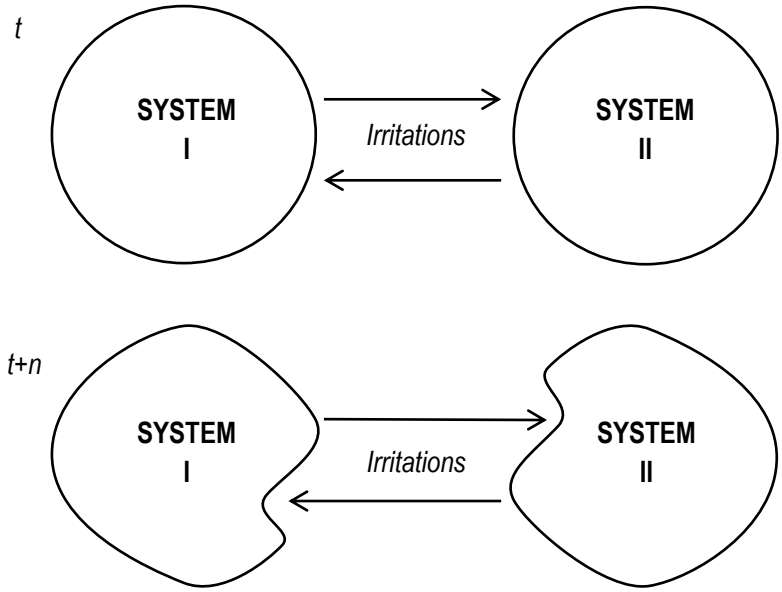

Figure 4.5 – The development of structural couplings.

Luhmann provides many examples of structural couplings. The political system and the economy are coupled by "taxes and charges," which, though payments, and thus part of the economy, furnish the necessary conditions for political governance (*TS*:2, 111). Likewise the economy relies on many legal constructs, such as property rights, to regulate and define the scope of transactions (Luhmann 1992b, 1435). In both of these cases, subsystems do not *exchange* operations; rather the operations of one system simply *presuppose* those of another, and depend on them to function and persist. One also sees this in the coupling of science and education (via the university system), science and politics (via expert advice), education and the economy (via references and certificates), economy and art (via the art trade), and law and politics (via constitutions) (see *TS:*2, 112-114; Luhmann 1992b, 1437).

By increasing the interdependence of subsystems, couplings provide for the integration of functionally differentiated societies. They do, however, also leave these societies in a relatively precarious position, for coupled subsystems are dependent on events which they cannot directly control. While the underperformance of a subsystem may provoke perturbations and invitations to change, each subsystem is afforded complete autonomy over its internal structure. As such, a subsystem must correct its own failings, and if it is unable to do so then systems with which it is coupled will likely face catastrophic side effects. Luhmann thus holds that functionally differentiated societies are, if anything, 'ruled' by those systems with the *highest* rate of failure, "because the failure of specific functional conditions can nowhere be compensated and imposes serious adjustments elsewhere" (*TS*:2, 104).

This speaks to the idea that functional differentiation is, for Luhmann (1989a, 108, 114), a highly unlikely form of societal organization; indeed he explicitly describes the development of functionally differentiated society as an "*extreme improbability*" (*TS*:2, 65). The rise of functional differentiation is thus a problem to be explained. At issue are two related questions. First, one must ask why individual functional systems differentiated out of society, or established their autopoiesis. Second, one must explain why societies switched to functional differentiation as a primary mode of subsystem building – especially considering that the conditions of this arrangement are, in Luhmann's (1977, 35) view, "more difficult to accomplish" than those underlying segmentary or stratified forms of organization. The following section considers both issues.

The causes of differentiation

Much like our previous three theorists, and in accordance with the interdisciplinary commitment of the functionalist tradition, Luhmann sees differentiation as the outcome of *evolutionary* processes (*TS*:1, 301); indeed he asserts that evolutionary theory alone can "explain how the structures of the social system develop and reproduce" (*TS*:1, 251). Luhmann's approach to evolutionary theory is, however, explicitly opposed to the progressivist models of earlier thinkers, and consciously distinguishes between properly *evolutionary* accounts, which follow the modern, biological use of the word, and what he instead terms *development* theories, in which different epochs are distinguished and compared against an overarching criterion of progress (*TS:*1, 256-257).

Elements of epochal thinking are, however, still present in Luhmann's descriptions of long-term historical change, which are organized around the concept of differentiation forms. Though Luhmann does not hold that the various forms are steps in a determinate sequence or stages of progressive development, the form concept leads him to argue that evolution has *limited* and *preferred* pathways. For example, Luhmann (1977, 32-33) argues that societies cannot "dream up arbitrarily new forms of differentiation," for there are, he believes, only a small number of possible solutions to the specific structural problems of social existence. Likewise, Luhmann holds that the forms cannot appear in "arbitrary sequences" (*TS*:2, 14), it being unlikely that a society would abruptly transition from segmentary to functional differentiation without stratificatory differentiation as an intermediary step (*TS*:2, 14). In this respect, Luhmann's theory of evolution has a distinctly structuralist tinge. Evolution is understood, as Winthrop-Young (2003, 240) puts it, as a "discontinuous process in the course of which society can assume only a very limited number of stable states."[7]

The theory of differentiation forms outlines the various *possibilities* of change. One would thus expect the theory of evolution to explain *why* one of these possibilities is 'selected' above others, or to delineate the forces which push societies towards one of the four structural options. Luhmann is, however, far more forthright about the various stages that underlie the emergence of these forms than he is on the causal relations which govern their appearance. For example, in an early paper he claims that functional differentiation begins "very early as a differentiation of roles" and "gains momentum only if at least two different roles organize their complementary expectations around a specific function" (Luhmann 1977, 35). Little is, however, said about why roles differentiate in the first place, or about how functional communication becomes generalized to the point of forming a socially recognized subsystem.

Rather than singling out causal variables, Luhmann's theory of evolution provides a general framework for understanding the steps by which a process of evolutionary change occurs. This framework is heavily indebted to the universal theory of selection

[7] Luhmann's approach is thus highly reminiscent of the model of organic evolution championed by Francis Galton (Winthrop-Young 2003, 240). Galton conveys his model with the aid of a metaphoric polyhedron: an object which cannot stand upon its edges but can "only repose in certain widely separated places" (Galton 1884, cited in Gould 2002, 344). If tilted, the polyhedron merely falls back into its current position – unless the force is sufficient to 'tip' the shape onto a new, adjacent facet – i.e. a new point of structural stability. This metaphor aptly describes Luhmann's position, in which each differentiation form would constitute a particular 'facet'.

developed by Donald T. Campbell, which describes evolution as the outcome of two related processes: *blind variation* and *selective retention.* The former involves the production of variation "without prior knowledge of which [variants], if any, will furnish a selectworthy encounter," while the latter involves the preservation of a particular subset of the variation thus produced (Campbell 1960, 381; 1977). In Luhmann's hands, this model is refigured to involve three distinct processes – variation, selection, and restabilization (*TS*:1, 258). Evolutionary change occurs when a particular variant emerges, is preferenced over others, and is finally preserved or propagated – i.e. converted into a stable structure.

For Luhmann, variation, selection, and restabilization each work on different 'units' in the social system. Variation involves *communications*, and occurs when "linguistically successful meaning proposals are called into question in the communication process or flatly rejected" (*TS*:1, 276). Selection involves *structures* which use, confirm, or condense the variation event (*TS*:1, 286). Finally, restabilization involves *systems*, for it refers to "sequences of building structural changes into a system whose operations are structurally determined…" (*TS*:1, 294). In Luhmann's view, this threefold schema mirrors the distinction between genes, phenotypes, and populations in contemporary biological theory. Structural differentiation, like species differentiation, sits at the last level, and occurs, Luhmann believes, as an attempt to "reduce problems of structural compatibility" (*TS*:1, 294). Restabilization is thus thought to "make use of system differentiation" so as to "keep the burden of structural incompatibilities as light as possible and to distribute them among various systems" (*TS*:1, 294).

A causal theory of functional differentiation cannot, however, only operate at this last level, for the formation of functional systems depends, Luhmann believes, first on variation via the "observation of communication as (provoking) negation," and second on the "setting in motion of functional differentiation by binary codings" (*TS*:1, 338). Likewise, Luhmann (1986c, 117) also argues that "the differentiation of social systems requires the specification of expectations which maintain the autopoietic process of reproduction." To explain the causes of functional differentiation, one must therefore engage with all three evolutionary processes. One must explain how the communicative variants which promote or undergird functional differentiation – such as functionally specific binary codes – emerge in the first place, and must further consider how they come to be selected and stabilized as system structures.

The variation, selection, and restabilization framework does not provide us with these explanations, but it does specify requirements of their general form. For example, in positing that variation and selection are distinct, independent moments, Luhmann's framework rejects theories in which variation is driven by selective requirements. Thus while Luhmann does not deny that "solutions to problems can be purposively sought," (*TS*:1, 307) and while he admits that theories of socio-cultural evolution must consider the "Lamarckian" possibility of "structural change through the interaction of memory and learning" (*TS*:1, 305), he is highly skeptical that functional differentiation is an outcome of direct adaptation, and explicitly states that "far reaching evolutionary advances" (structural arrangements "markedly superior to functional equivalents") "do not come about because they are suitable for solving certain problems" (*TS*:1, 307).

Indeed, in Luhmann's view the problem solving capacities of structural advances only appear *after* those advances emerge. As he writes:

> "Only when there is magic does one see what it can be used for. Only when municipal offices are established to get rid of kings does filling them have to be politicized and do conditions have to be created that will later be celebrated as 'democracy.'" (*TS:*1, 307)

Social evolution thus relies on what Luhmann terms *preadaptive* advances, a concept inspired by, and largely equivalent to, the biological concept of *exaptations*. Both concepts describe traits which arise for non-adaptive reasons, or for alternative functions to those they currently perform, and which are then functionalized or co-opted for new ends (see Gould and Vrba 1982; cf. *TS*:1, ch.3§8).

The concept of preadaptive advances allows Luhmann to avoid some prominent criticisms of classical functionalism, for it implies a clear distinction between function and cause. It is, however, also introduced to address a conceptual difficulty created by the autopoiesis paradigm: namely that the concept of autopoiesis denies the possibility of 'relative' states. An autopoietic system "either continues its autopoiesis or it does not," there being no "in-between" or "third" states (Luhmann 1986b, 183). For this reason, Luhmann contends that "the theory of operationally closed, autopoietic systems finds itself…in flagrant contradiction to the usual way of thinking in evolutionary theory" (*TS*:1, 266). Autopoietic systems – including the functional subsystems – cannot gradually form from allopoietic (i.e. non-autopoietic) systems, or progressively establish autonomy. Instead, they must simply begin.

Luhmann thus holds that preadaptive advances are "prior developments" or "preconditions" which "[enable] and [favour] closure" (*TS*:1, 267). The rudimentary elements of an autopoietic system are, he believes, built up for alternative functional ends (or for completely afunctional reasons) before environmental opportunities arise for the co-option of these traits and the emergence of the system. As in the biological account of exaptation, this transition in functionality occurs with relatively minor structural modifications. For example, Luhmann claims that:

> "The first coins were minted, not for purposes of exchange, but as clearing units in a household economy context…But once there was a sufficiently large quantity of such coins, and a barter economy was well enough developed to stagnate, owing to the difficulty of finding suitable items to exchange, a money economy was able to differentiate itself – however small the extent and complexity of transactions may initially have been." (*TS*:1, 268)

One is, however, still left without any answer to crucial questions. Why are certain traits 'selected' for functional modification? Through what causal mechanism are they 'co-opted' for alternative ends? Without a detailed specification of the selection mechanisms involved, Luhmann's causal account of differentiation is missing a crucial explanatory component.

To have utility in the explanation of change, a theory of evolution must delineate the criteria by which certain variations are selected above others (Hussey 1999, 567). The theory of natural selection is explanatory because it posits that variations will be selected if they are causally linked with fitness. The concept of exaptations does not challenge this basic mechanism, rather it posits that potential exaptations sit aside "conventional sources of genetic variation" in the pool of "raw material" available for natural selection (Gould and Vrba 1982, 13). Exaptations thus emerge when selection alters the structural characteristics of an organism such that a previously afunctional or differently functional trait can contribute to that organism's reproductive success, after which the trait may be subject to "secondary adaptations" that refine its aptitude for performance in its new role (Gould and Vrba 1982, 11).

While this explanation may suffice for the biological concept of exaptations, Luhmann does not believe that natural selection can explain how preadaptive advances in *social* structure can be converted into functional traits. This is not, primarily, because he is concerned about the applicability of the natural selection concept in sociology, but in

fact arises from skepticism over the utility of the selection concept *in and of itself*, or from its supposed incompatibility with an "elaborated systems-theoretical conceptuality" (*TS*:1, 287).[8] As Luhmann notes, the theory of autopoiesis demands that "systems can change their structures only through their own operations," despite reacting to the environment "in the form of disruption, disturbance, disappointment, deficiency, and so on" (*TS*:1, 287). The idea that a system's environment can determine its internal states or structures is, then, anathema to the theory of autopoiesis, which speaks not of natural *selection* but instead of natural *drift* (Maturana and Mpodozis 2000; Rozzie et al. 1998). Under this alternative model, evolutionary outcomes are thought to emerge from a dynamic interaction between system and environment, in which the internal organization of the evolving system has a key role in determining the direction of organic change (Camus 2000, 217; Etxeberria 2004, 356).

Luhmann's own ideas are clearly indebted to this conceptual shift, for he argues that selection mechanisms are found within *systems*, rather than their environments (*TS*:1, 292). A number of such mechanisms are discussed, but none are afforded the universality of natural selection – in part because Luhmann adopts a pluralistic concept of selection which links different types of selection criteria to different forms of differentiation and thus makes evolution "[dependent]…on the societal formations it has itself created" (*TS*:1, 287). It is claimed, for example, that selection "chooses meanings promising for developing structures, which are suitable for repeated use, [and] which can form and condense expectations" (*TS*:1, 273). Such statements do not, however, explain why certain meaning variants are more promising than others; for this we have to turn to the analysis of specific differentiation forms. For example, Luhmann argues that religious meanings played a crucial selective role in early segmentary and stratified societies, noting that "through religion, society put itself under pressure to adapt and develop sanctified selection criteria for intercepting and sorting out wild variations" (*TS*:1, 289). In functionally differentiated societies, selection is instead thought to be handled via the functionally differentiated communication media (see p. 163n6, above).

[8] To legitimize this skepticism, Luhmann makes a number of questionable references to prominent evolutionary biologists. For example, he claims that "[e]volution theory beyond Spencer and Darwin has already had serious reservations about the assumption that the best adapted (or perhaps the least badly adapted) systems are chosen by 'natural selection' for survival" (*TS*:1, 269). This claim is accompanied by a reference to Gould's "Darwinism and the Expansion of Evolutionary Theory," which explicitly claims that it does not dispute the concept of natural selection, but rather the notions of gradualism and pan-adaptationism (Gould 1982, 382). Similar distortions have been documented in Luhmann's use of Dobzhansky's work (see Winthrop-Young 2003, 333ff.).

Science, for instance, will consider whether the variant is *true*, the economy will consider whether it can be financed (through *money*), and politics will consider whether sufficient *power* is available to "assert it against any resistance" (*TS*:1, 289).

This does, however, still leave us without an explanation of how a society switches to a different form of differentiation; indeed it complicates it because one must then explain why the selection mechanisms common to one form of differentiation 'select' variants which lead to an entirely different form of differentiation (and thus an entirely different form of selection as well). Unfortunately, Luhmann remains conspicuously reticent on this subject, and persistently skirts associated questions – often on rather dubious grounds. For example, while causal thinking is clearly a key element of evolutionary theories in biology, Luhmann states that a theory of societal evolution "renounces causal explanations," and cannot undertake to "explain the course of history or merely of certain events" (*TS*:1, 345, 344). Instead, evolutionary theories are thought to "provide a theoretical schema for historical studies, which, under favourable circumstances, may point to causally relevant origins" (*TS*:1, 344).

Luhmann's approach to social evolution is thus content to be descriptive rather than explanatory. Like Smelser's stage-based model of structural differentiation, it provides a general framework of steps or elements in the process of change while offering only minor suggestions as to what brings them about. As did Smelser, Luhmann leaves questions of causality to the historian, claiming that "causal explanations" are, in sociology, "so difficult that they are inadvisable at the level of general theoretical propositions" (*TS*:1, 344) and that the particular causes of functional differentiation can "be clarified only by detailed historical studies" (*TS*:1, 341). It is, however, quite unclear why causal accounts are allowed at the particular level but dismissed at the general. If Luhmann holds that causal propositions are antithetical to the systems-theoretical way of thinking, then surely the level of abstraction displayed by a causal statement is irrelevant. One can only assume that Luhmann's prohibition of causal claims proves too strict to be workable on a practical level, and that concessions are made to causal thinking in light of the weak explanatory capacity of his evolutionary approach.

Indeed, it is notable that many of Luhmann's more concrete discussions of macrosocial change avoid the evolutionary framework entirely – raising significant questions about

its overall merit (Winthrop-Young 2003; Koschorke 1999; Schimank 1985, 426). For example, the detailed section on the 'outdifferentiation' of functional systems in *Die Gesellschaft der Gesellschaft* – which is notably placed *after* the explication of Luhmann's evolutionary theory – makes almost no mention of evolutionary concepts (save for scattered references to the idea of preadaptive advances (e.g. *TS*:2, 66)). Instead, the development of functional systems is described with a series of rather straightforward causal claims. Luhmann argues, for instance, that the "attempt to improve the internal coordination of functional systems, to give them a monopoly of the given communication medium and to waive coordination between them" was a "reaction" to coordination difficulties in stratified societies (*TS*:2, 67). Likewise, the law is said to have been "activated for many of the problems produced by [incipient differentiation]" (*TS*:2, 69), the printing press is said to have "stepped up the development of a supplementary technology [reading ability]" (*TS*:2, 78), and the separation of gainful employment and family living is thought to have "affected the nobility's way of life and self-conception" (*TS*:2, 79).

A fully developed causal account of functional differentiation cannot, however, be pieced together from these minor statements, which are explicitly offered as conjecture. Most of Luhmann's claims are, furthermore, oriented to so-called 'final' causes, or to the problems which were supposedly 'solved' by the emergence or progression of functional differentiation. Luhmann himself notes this, arguing that the present state of knowledge is insufficient to provide a satisfactory causal narrative of functional differentiation, and that the best one can currently offer is an analysis of the "structural problems of segmentary societies" (*TS*:2, 39). For Luhmann, such analyses allow one to "identify the points of departure for reversing the order, whatever the concrete causes might be" (*TS*:2, 39). The 'efficient' causes by which functional differentiation is actually established are thus consciously neglected – perhaps because this would involve dealing with questions of individual motivation which Luhmann, following the logic of the autopoiesis paradigm, places outside of sociology's scope.

It does, however, seem that the formation of functional subsystems, and the transition to a functionally differentiated society, relies on a critical mass of individuals recognizing, utilizing, and accepting communications structured by functionally specialized binary codes. Likewise, it seems evident that codes cannot be endogenous creations of social systems themselves, but must be developed and 'introduced' into social systems by

individual psychic systems. This again speaks to the challenges of the autopoiesis paradigm, the need to accommodate which is a continual source of difficulty in Luhmann's attempts to theorize social change. It is thus worth questioning whether the notion of autopoiesis adds any significant value to his account of functional differentiation, or whether, on the contrary, it provokes more problems than it solves. Ultimately, this is the question on which the merit of Luhmann's contribution rests, and through which his highly constrained theory of change must be justified. It will thus be the primary subject of our critical evaluation in the final section of this chapter.

III. APPLICATION OF THE THEORY

As a theorist, Luhmann is primarily engaged in meta-theoretical inquiry. He aims to develop a comprehensive 'theory' of society (*TS*:1, ch.1§1), not in the sense of a system of propositions describing empirical relationships between social phenomena, but in the sense of a general ontology of the social. For Luhmann, sociology has, though achieving much in terms of empirical knowledge, "omitted to describe society as a whole" (*TS*:1, 4), in part because of epistemological obstacles which "prevent precise conceptual definition" of the society term (*TS*:1, 6). His theory is intended to address this problem, and thus attempts to delineate the essential, ontological characteristics of societies in general. The concept of differentiation is tied to this attempt, insofar as differentiated subsystems are, for Luhmann, evident in all societies.

This conceptualization is not an end in itself, but facilitates a higher goal: "explaining the phenomena of social reality" (*TS*:1, 11). It is, however, difficult to discern just what Luhmann means by explanation in this instance, for as is often the case he is clearer about what he opposes than what he supports. In this case, Luhmann explicitly rejects the deductive-nomological model of scientific inquiry and its methodological correlates (see Zolo 1986). He is not interested in uncovering laws or regularities which govern empirical social processes, and is dismissive of attempts to conceptualize the social world as a set of interacting variables. In fact, Luhmann (1986a, 132) claims that his "abstract procedures" are "rather fruitless from a deductive point of view…," and instead have only "heuristic value," in that they "stimulate and define the search for other possibilities." Just what is meant by this, and to what purpose the uncovering of 'possibilities' is tied, remains unspecified. As such, we must ascertain the utility of

Luhmann's concepts – including his concept of differentiation – from the way that they are used, rather than from a postulated set of purposes.

Unlike our previous theorists, Luhmann seems largely disinterested in comparing degrees of functional differentiation across societies, for two key reasons. First, he believes that there is only one 'functionally differentiated' society, modern world society, and that no other such societies exist or have existed with which to compare it. Second, Luhmann's decision to adopt a contingent, culturally relative understanding of societal problems means that any attempt to compare the degree of functional differentiation in different societies would likely be uninformative. As we have repeatedly stressed, a comparative analysis which derives its units of comparison from within particular societies (or which defines them with reference to emic distinctions) faces the difficulty of "comparing incomparables" (Goldschmidt 1966, 32). If functionality is defined with reference to the unique, contingent problems of a particular culture, then what counts as functional differentiation will differ in each instance, and functional differentiations will be largely incommensurable in terms of their meaning and societal influence.

Thus instead of comparing societies on their degree of functional differentiation, Luhmann compares societies on the basis of their dominant *form* of differentiation. Differentiation is, in other words, treated as a nominal variable. While one may dispute this assertion in light of Luhmann's explicit aversion to variable analysis, he does not seem to reject the treatment of differentiation as a variable *per se*, but rather opposes those theories in which differentiation is treated as a singular, continuous attribute. For Luhmann, such theories ignore the multifaceted nature of the differentiation concept, and lead to simplistic, misleading discussions about whether certain societies are 'more' or 'less' differentiated than others (*TS*:2, 14). One must, he believes, instead examine how different societies are structured by distinct forms of differentiation, which do not always progress in unison but may in fact trend in opposite directions. One sees this in the case of functional differentiation, whose development relies, Luhmann (1984, 64) believes, on the simplification or elimination of rank distinctions, and hence on *de*-differentiation with regards to differentiation's *stratificatory* form.

While this point is entirely logical, it is unclear just who Luhmann's criticisms are directed towards. While he accuses previous theorists of having used the differentiation

concept in a "large and unqualified sense," he also claims that "the sociological classics conceive of differentiation very much as the division of labour" (Luhmann 1984, 64), rightly indicating that differentiation is, in these texts, synonymous only with *functional* differentiation. The thesis advocated by our previous three theorists is that societies tend towards higher degrees of functional specialization, not that differentiation in all of its many meanings has increased over time. This idea is in no way challenged by Luhmann's approach. In fact, though Luhmann sees differentiation as a nominal variable, he still tends to treat *functional* differentiation as a variable quantity, because other forms of differentiation are often defined with reference to their comparative *lack* of functional specialization.

In describing segmentary societies, for example, Luhmann focuses on the fact that segmentary differentiation creates subsystems which are "basically similar" to one another (*TS*:2, 27). This equality is, however, defined with reference to *functionality*, in that the similarity of segmentarily differentiated units lies in their functional equivalence (Otto 2000; Winthrop-Young 2003, 345). Segmentary societies are thus described, by Luhmann, in much the same way as Spencer described 'simple', functionally homogenous groups. Just as Spencer claimed that such societies could be internally divided without injury to the parts, Luhmann argues that segmentary societies can "abandon comprehensive groupings and shrink to a smaller format without losing their ability to survive…," for "the remnants still have the possibility of making an almost unconditional new start" (*TS*:2, 29).

Functional differentiation thus remains a comparative concept in Luhmann's work, and the four-fold taxonomy of differentiation types implies different degrees of functional differentiation. The pertinent question, then, is what utility this taxonomy offers. In accordance with Bateson's (1979) famous claim that information is "any difference that makes a difference" (a phrase which Luhmann is fond of referencing), one must consider whether the difference between the various forms of differentiation makes a difference to other social phenomena. It is this kind of information which gives the concept of functional differentiation a genuinely explanatory component. Luhmann is, as noted above, suspicious of this approach to sociological explanation, but he often seems unable to avoid it. He claims, for example, that the "dominant form of differentiation…also regulates how the unity of society can be seen in society…" (*TS*:2, 16), and that "world conceptions covariate with increasing system differentiation"

(Luhmann 1977, 32). What are these statements if not bivariate propositions relating certain social phenomena with changes in the form or degree of subsystem differentiation?

Propositions of this kind turn the concept of functional differentiation into an explanatory tool – and Luhmann is clear that the concept is intended to be used for this end. For example, in *Ecological Communication* he explicitly asserts that the "theory of functional system-differentiation" is a "far-reaching, elegant, and economical instrument for explaining the positive and negative aspects of modern society" (Luhmann 1989a, 35). Indeed, the main argument of that volume is that functional differentiation can explain why modern society struggles to find adequate solutions to existentially threatening ecological problems. Certain structural features of a functionally differentiated society (such as the "negligible resonance capacity" of its subsystems) are, in Luhmann's (1989a, 35) estimation, significant obstacles to intra-societal coordination, and therefore limit a society's ability to respond to ecological dangers.

Arguments of this sort seem, despite Luhmann's assertions to the contrary, to treat explanation in line with Hempel's deductive-nomological model. As Hempel (1942, 41n3) notes, "explanation by means of a certain *concept* [e.g. functional differentiation] is, in empirical science, actually an explanation in terms of *universal hypotheses* containing that concept." Functional differentiation, by itself, is not an explanation; rather its explanatory power emerges when one places the concept inside a general law: a statement, verifiable by "suitable empirical findings," which asserts that when an "event of a specific kind *C* occurs at a certain place and time, an event of a specific kind *E*" regularly follows, or will "occur at a place and time which is related in a specified manner to the place and time of the occurrence of *C*" (Hempel 1942, 35). Under this model, to 'explain' *E* is to indicate its "causes or determining factors" or to assert that according to certain general laws, an "event of the kind *E*" regularly accompanies an event of the kind *C* (Hempel 1942, 36). With such explanations, one can then predict *E* from *C*.

Luhmann's use of the functional differentiation concept obscures this explanatory structure without fundamentally altering it. For example, in one of Luhmann's (1977) earliest treatments of the differentiation concept, he notes that "increasing functional

differentiation leads to diverging demands and diverging selection rules for the outer boundary of societal systems" (42); that functional differentiation, in comparison to other differentiation forms, "provides for a system with the largest number of elements…" (44); that the "co-variation of temporal structures and forms of societal differentiation seems not to be a spurious correlation" (45); that we can "expect" (i.e. predict), "an increasing differentiation of values, programs, roles, and personal identities if the functional differentiation of the societal system speeds up processes of denial and change" (46); and that "it is a consequence of functional differentiation that the boundaries of the societal system shift towards the extreme, encompassing, finally, all possible social communication" (43). Such statements can easily be reformulated into general tendency laws in which functional differentiation is the causal event (*C*).

Similar formulations may be found across Luhmann's work. For example, his discussion of romantic intimacy in *Love as Passion* advances the quintessentially functionalist thesis that the popularization of romantic ideas is in part attributable to their capacity to mitigate problems caused by functional differentiation. Love is, Luhmann (1986d, 14) claims, a "generalized symbolic communicative medium assigned specifically to facilitating, cultivating, and promoting the communicative treatment of individuality," and it thus acts as a functional counter-weight to the impersonal, reductive, and role-based interactions demanded by subsystems other than the family (or intimate relationships more generally). This thesis relies on at least two distinct causal propositions, as well as on a series of auxiliary hypotheses – some of which (in line with Hempel's (1942, 40) claim that universal hypotheses in sociology frequently invoke psychological principles) rely on assumptions about psychic systems. Luhmann's argument posits, for example, that an increase in functional differentiation is causally associated with feelings of anomie (or with "a greater differentiation of personal and social systems" (Luhmann 1986d, 15)); that these feelings are experienced as undesirable; and that romantic intimacy generally has a corrective, 'nomic' effect on the individual.

It is evident, then, that the concept of functional differentiation is often used to explain phenomena other than itself, and that despite Luhmann's aversion to the deductive-nomological model it does so by acting as a causal term in explanatory hypotheses targeting these phenomena. It may be the case, as Winthrop-Young (2003, 313n16) suggests, that Luhmann is hampered by a language that "cannot but stress causality,"

but one simply cannot make sense of his claims, commitments, and prescriptions without relying on some kind of causal framework. It is, for example, hard to see on what grounds Luhmann could justify his well-evidenced support for functional differentiation as a social arrangement (see Borch 2011, Münch 1992) without relying on a host of causal hypotheses about the consequences of *de*-differentiation for some aspects of world society.

If one follows Hempel's recommendations, further development of Luhmann's theory would consist in the elaboration of its universal hypotheses, which should be made amenable to empirical testing and given clear explanatory functions. One should also attempt to delineate, with as much precision as possible, the various subsidiary laws or assumptions which connect functional differentiation as a cause or effect with its correlate effects or causes (Hempel 1942, 47). Refining the theory in this manner would help us arrive at a more precise account of the explanatory or predictive capacity of Luhmann's differentiation concept. This is not only necessary to defend it against the charge that it lacks cognitive content, but also helps one avoid an over-estimation of its explanatory potential.

A number of critics argue that this latter tendency is an issue in Luhmann's work. Wagner (1998, 455), for example, claims that Luhmann treats the differentiation concept in an "absolute" manner – unduly affording it "all-encompassing explanatory power." Similarly, Münch (1994a, 99) has repeatedly criticized Luhmann's tendency to over-emphasize differentiation above both complementary and antagonistic sources of change. In comparison, Münch (1994b, 271-206) prefers Parsons' approach, in which empirical processes of differentiation are only one dimension of macro-social change, and stand alongside processes of adaptive upgrading, integration, and value generalization – each of these processes having equal analytic weight.

In advancing such ideas, Parsons allows his *analytic* model of differentiation (i.e. the AGIL paradigm) to inform his methodological approach. He thereby attempts to avoid an undue prioritization of differentiation as an *empirical* process. A similar move is evident in Luhmann's work, which argues that the empirical fact of functional differentiation has important methodological ramifications, and should lead one to distrust theories which treat developments in single function systems (the economy, for example) as "decisive," "dominant," or "formative" for the social system as a whole

(*TS:*2, 310). In other words, the autopoietic model of functional differentiation leads Luhmann to stress that no one function system can control the others, and that no system is the 'lead' source of change. Yet unlike Parsons, Luhmann tends to treat differentiation *itself* as a meta-trend to which social phenomena are necessarily subordinate, or to argue that such phenomena will typically adapt to the demands of the dominant differentiation form. As a result, he is less sensitive to the overuse of the differentiation concept as an explanatory tool, and often neglects to consider phenomena which do not conform to the overarching pattern of societal differentiation (Münch 1992, 1468ff.).

Luhmann himself seems to admit this tendency; indeed at one point he explicitly notes that theorists must not "overburden the concept of differentiation with explanatory demands and then make overuse of it" (Luhmann 1995, cited in Wagner 1998, 471). Instead, he recommends that they "[enrich] the theory of social differentiation with corresponding conceptual tools" and "[give] up the expectation that one can adequately describe society from the prevailing typology of stratificatory or functional differentiation" (Luhmann 1995, cited in Wagner 1998, 471). Comments of this kind speak to the possibility that the concept of differentiation is, by consequence of its historical prominence, currently afforded undue weight in sociological discourse. In such instances it is important to remember that historical notability is by no means a reliable measure of present utility. In fact, the long history of the differentiation concept may, insofar as it has created unrealistic assumptions, over-inflated expectations, and a significant amount of discursive baggage, actually be an impediment to its explanatory potential.

The question animating this thesis is whether the concept of differentiation can be refigured with an eye towards practical, positive analysis, or can demonstrate its worth with respect to rather conventional markers of progressive development in scientific theory (namely those of explanatory or predictive capacity). It is, however, questionable whether Luhmann's theoretical apparatus provides us with the appropriate ground for such efforts. To say nothing of his seemingly unrealizable opposition to 'causal scientific positivism', the various innovations he introduces – whether the notion of autopoiesis, the concept of binary coding, or the communication-based model of society – give rise to a host of conceptual, methodological, and epistemological difficulties. One cannot, of course, make a final ruling on the *correctness* of these ideas, or on their

ultimate ontological validity, but must instead, as Luhmann himself notes, simply observe "what consequences certain conceptual decisions entail" (*TS:*1, 11). The following section will therefore consider whether Luhmann's decisions can help us achieve a coherent, practically-minded theory of functional differentiation, or whether they are instead likely to hinder our progress.

IV. CRITICAL ASSESSMENT

Our critical evaluation of Luhmann's theory must focus on the concept of autopoiesis, which is the undeniable centrepiece of his approach to differentiation. Despite this prominence, it is notable that Luhmann himself does not provide us with a strong, explicit justification of the autopoiesis paradigm. In lieu of rational argumentation, one is typically met with appeals to the authority of 'systems theory' – a reified entity whose perspective seems always to accord with Luhmann's own positions. Indeed, despite himself questioning the cumulative character of systems theoretical knowledge (*SS*, 5), Luhmann often implies that the autopoiesis paradigm is widely regarded as the most mature iteration of systems thinking, exaggerating the degree of consensus in this field and downplaying its largely hypothetical character (Wolfe 1992, 1739).

To take a common formulation, Luhmann (1977, 30) states that "general systems theory…replaced the classical conceptual model of a whole that consists of parts…by a model that focused on the difference between system and environment" – a conclusion which would undoubtedly surprise many contemporary systems theorists. He asserts, further, that "[i]f we describe society as a system, it follows from the general theory of autopoietic systems that it must be an operationally closed one" (*TS*:1, 49). If one describes society as an *autopoietic* system then it is operationally closed by definition, but merely describing it as a *system* necessitates no such commitment. Luhmann's assertion makes systems theory coextensive with autopoietic theory, a move which is hard to justify considering that the concept of autopoiesis was devised to describe *living* systems alone, and is not always accepted even in this role.

Rather than relying on these assumptions, our analysis must evaluate the concrete merits of the autopoietic approach. We are, however, immediately frustrated by ambiguities in Luhmann's position. Despite the above pronouncements, it is entirely unclear whether the claim that social systems are autopoietic is a factual assertion about social ontology or a starting assumption with tactical benefits (Scholl 2012). On the one hand, social

systems are treated as concrete, actually existing entities; indeed Luhmann explicitly claims that "the most narrow interpretation of systems theory as a mere method of analysing reality is deliberately avoided" (*SS*, 13). On the other, Luhmann also claims, as the above quotations indicate, that the validity of ontological concepts is largely pragmatic (*TS*:1, 11). As King and Thornhill argue:

> "…the test is not whether autopoietic social systems actually exist, but whether interpretations of social phenomena based on the supposition that they exist offer useful and critical insights into the nature of society and its operations." (2003, 279)

The following does not argue for either of these positions, but instead examines the problems of each. As such, it not only investigates the claim that function systems are concrete, self-reproducing entities – asking whether this position is empirically justifiable – but also examines its practical ramifications – asking whether it provides for a coherent, parsimonious, and analytically fruitful description of functional differentiation. Several reservations emerge in each case.

The production of communication

The notion of social autopoiesis has faced decades of critical attention, with no clear consensus being achieved from this protracted debate (see Cadenas and Arnold 2015; King 2015; Hejl 2015; Zeleny 2015; Corsi 2015). A commonly held view is, however, that Luhmann's description of self-reproduction in social systems is excessively vague, and relies on descriptive chicanery – or at the very least on a distorted meaning of 'production'.

Let us examine Luhmann's position in detail. For Luhmann, communication is autopoietic because it is "produced only in recursive relation to other communications…" (*TS*:1, 42). This is because a particular 'unit' of communication is only 'completed' when a further communication is mustered to convey understanding or misunderstanding. As Luhmann notes:

> "…this completion takes the form of a transition to further communication that can pursue…clarification or turn to other topics. The production of elements is autopoiesis. Communicating acceptance or rejection of the proposed meaning of a communication is already *another* communication, and…does not arise of itself from the preceding communication. An essential precondition for the autopoiesis of society…is that

> communication does not of itself contain its own acceptance; this has to be decided through further, independent communication." (*TS*:1, 43)

Luhmann's argument is that communications produce communications because communications only exist *as communications* if they are demarcated as such by other communications. It is, however, notable that this is a matter of definition, rather than an empirical claim about communicative events, and that 'production' here means something quite different than it does in the biological theory of autopoiesis. On an empirical level, it is not clear that the process of communications *inviting* future communications or *referring* to previous communications can be given the status of a self-producing network, or that it is rationally tolerable to call this process *production* (Mingers 1995, 149-150). Indeed, Luhmann's above depiction itself indicates that the communication of acceptance or rejection "…does not arise of itself from the proceeding communication" (*TS:*1, 43), implying that something other than this communication must work to produce it. Here, one is forced to reintroduce the individual agent. For communication to begin, to continue, or to end, participating agents must "undertake specific actions and make specific choices" (Mingers 1995, 150). The individual agent is, as Mingers (1995, 165) notes, "necessary to make the selection that constitutes the understanding of the received message and the selections that constitute the understanding of the next message and actually generate it."

That Luhmann establishes autopoiesis by definition, rather than empirical demonstration, is especially clear in his description of function systems. For example, the economic system is said to encompass all communications which take the form of a payment. The autopoiesis of this system is justified by the claim that payments produce payments, or by the idea that the possibility of payment depends on other, prior payments (Luhmann 2004, 391). This statement is simply an *a priori* axiom, which provides us with a wholly analytic, empirically unfalsifiable conception of the economic system (Münch 1992, 1465). The claim that payments reproduce payments is true by definition and the resulting autopoiesis of the economic system is, in Münch's (1992, 1465) words, "always there, independently of any real act in the world." The same can be said of the assertion that the economy is operationally closed. Because Luhmann defines the economy as the totality of recursively linked payments, the claim that payments cannot be 'output' from the economy, nor communications other than

payments ‘input’ into it, is *always* true, and tells us nothing in itself about the *empirical* differentiation of economic activity or the autonomy of economic organizations.

For Münch (1992), the fundamental issue with Luhmann’s approach is that the differentiation of communicative types at the *analytic* level is conflated with the differentiation of systemic entities at the *concrete* level. As a result, Luhmann describes supposedly empirical entities – such as the economy or legal system – in terms which only make sense if these ‘systems’ are simply analytic categories. For example, while autopoietic systems determine and reproduce their own boundaries, the *empirical* autonomy of economic or legal phenomena is determined and maintained by “a multiplicity of action elements” outside of the economic or legal subsystems as Luhmann defines them (Münch 1992, 1463). The ‘differentiation’ of the legal system, for instance, depends on a host of values, practices, cultural ideas, and communicative events which are not, by Luhmann’s definition, legal communications, but which nonetheless work to convey normative force on legal judgements and to protect the autonomy of the legal system in the face of attempts to corrupt it (Beck 1994, 412-414; Münch 1992, 1468).

One can not only question whether the *boundaries* of the subsystems are self-produced, but whether elements within them display the same quality. To continue with our example, Luhmann argues that legal communication is autopoietic because legal communications rely on, and create invitations for, other legal communications. A juridical decision, for example, “typically relies on past legal communications, such as prior decisions,” and “creates connective possibilities for future legal communications” (Baxter 1998, 2006). While these statements are relatively uncontroversial, one must, in light of the above, question whether this process of communications *referring* to other communications constitutes an example of autopoietic reproduction, especially considering that juridical decisions also make reference to communications outside of the legal system as Luhmann defines it (Baxter 1998, 2032; also Luhmann 2004, 86, 90, 97). This would, if one follows Luhmann’s understanding of production, imply that ‘non-legal’ communications are just as responsible for producing legal communications

as are other legal communications, in which case the legal system would not be autopoietic.[9]

Similar criticisms arise if we consider the concept of structural coupling, which struggles to capture the degree to which the functionally differentiated entities described by Luhmann are *empirically* interpenetrated. In the case of the legal system, for example, Luhmann usually speaks only of a small number of structural couplings: such as the coupling of politics and law via constitutions and the coupling of economy and law via contracts. Intersystem connections appear, however, to be much more extensive than this. For example, in the case of law and economy one can speak not only of property and contract, but also of the legal concept of the corporation, certain notions within tax law, the idea of 'competition' in anti-trust law, and the concept of liability, to name but a few examples (Baxter 1998, 2077).

The density of these connections gives one cause to doubt that the compatibility of function systems is ultimately the product of random, one-sided perturbations, rather than more direct forms of influence (Schwinn 1995, 210-211). It is, quite simply, difficult to maintain that function systems are fully autonomous in their judgement of, and response to, environmental perturbations when one considers just how closely these systems are linked with one another (Teubner 1991, 1447), and accounts which begin from this position often lead to unintuitive conclusions. For example, Luhmann's theory of law must necessarily marginalize the role of legislation, which "profoundly and ubiquitously influence[s] what goes on in courts" (Beck 1994, 411). Though legal systems are generally afforded a degree of autonomy in the interpretation of statutes, it simply seems misleading to describe statutes as routine "perturbations" to which legal systems are structurally attuned rather than direct inputs (or some theoretical variant of them) (Lempert 1988, 183-185).

Considering these difficulties, it is hard to maintain that the structural coupling concept has any advantages over the "obscure metaphor of interwovenness" it supposedly "promises to clarify" (Teubner 1991, 1447). Indeed, models of integration based on structural coupling seem likely to underestimate the degree to which functional

[9] This criticism can also be exemplified by Knorr-Certina's (1992) empirical study of scientific communication. Analysing the practical, day-to-day experience of scientific practitioners, as well as the standards of discourse in scientific publications, Knorr-Certina (1992, 417) documents significant imports from, and investments in, language games and provinces of meaning which are in Luhmann's view 'external' to the scientific system proper.

subsystems are open to external influence, leading to a lopsided account of functional differentiation lacking in descriptive credibility. For example, Luhmann may, in response to Beck's argument, reiterate the thought that legislation is not an element of the legal system, and that legislators do not, by his understanding of this system, themselves 'make' law. While Luhmann is free to define the legal system in this manner, his assertions will inevitably jar with popular conceptions of legal institutions (as well as with competing theoretical accounts) (Lempert 1988, 185). A theory does not, of course, need to be intuitive in order to be accurate (nor to be useful), but in this case we have insufficient reason to suppose that the sacrifice of verisimilitude demanded by the autopoiesis paradigm will lead to worthwhile gains in explanatory capacity.

The status of binary codes

These various conceptual issues make it difficult to maintain that the autopoietic systems of which Luhmann speaks are not analytic constructions, "voluntarily created by…stipulative and hence arbitrary definition," rather than the empirical entities he purports them to be (Grzegorczyk 1991, 130). Nowhere is this more evident than in the concept of binary coding. The concept of coding is intended to provide for the empirical delineation of function system boundaries, or to allow one to perceive these boundaries with "sufficient practical clarity" (*TS*:2, 90). Luhmann is, however, quite reticent about the ontological status of binary codes, and thus about the methodology by which he 'discovers' them. As a result, it is hard to have confidence in the idea that codes are concrete, empirical entities whose nature, number, and respective values could be a point of scholarly consensus.

Indeed, Luhmann's own catalogue of binary codes proves quite unstable. For example, Luhmann repeatedly alters his position about both the values of the economic code and the number of codes operating in the economic system. In *Social Systems*, he argues that "all operations that are economically relevant, and only operations that are economically relevant, refer to money," or a payment/non-payment code (*SS*, 461). In *Der Gesellschaft die Gesellschaft*, he speaks of a "property/money" *medium* related to the problem of scarcity (*TS*:1, 208-209). In *Ecological Communication*, the payment/non-payment code is said to have supplanted the code of property (having/not-having), yet

we are also told that "the economy uses property and money to distinguish clearly between possession and non-possession…" (Luhmann 1989a, 52, 36).

The political code is similarly problematic. For Luhmann (2004, 378), the political system asserts its boundaries using "the distinction between superior power (authority) and those subordinate (the governing/the governed)" *as well as* "by the coding of authority by the schema government/opposition." As in the case of the economy, two codes are implied, one nested in the positive value of the other. But how can a system have multiple codes operating at once, especially if the purpose of the code is to differentiate the operations belonging to the system? If, as Baxter (1998, 2068) notes, "we accept the idea that only a binary code can establish a system's unity," then a system with two codes "would seem to be two systems rather than one."

While some systems have a surplus of codes, others have entirely ambiguous codes. For example, in *Art as a Social System*, Luhmann (2000a, 188, 189) asserts that it is "inconceivable that an art system could emerge without coding," and that an artistic code is necessary to "differentiate artworks as a special observational domain." At the same time, he claims to have "difficulties in finding convincing names" for the code's values (Luhmann 2000a, 188). If art is an empirically existing function system, how could its constitutive code be in any way opaque? Considering that codes establish the unity of systems, any ambiguity in a system's code would mean ambiguity in that system's boundaries, which is incompatible with the idea of autopoietic closure. It seems, as Baxter (1998, 2068) notes, highly implausible that one could be unable to determine the code of a function system if codes are necessary for these systems to establish closure. Thus either art is not a function system or the notion of coding needs revision.

In the case of the artistic code, several proposals are rejected. An obvious candidate, beauty/ugliness, is said to be unable to account for "operations of observation (such as producing and observing an artwork) which…are neither beautiful nor ugly" (Luhmann 2000a, 191). A code based on novelty, new/dated, is likewise excluded (for it would, Luhmann (2000a, 201) claims, "[devalourize] the entire stock of existing artworks") as are codes which simply duplicate the system/environment distinction, such as literary/non-literary or art/non-art (Luhmann 2000a, 366). Luhmann (2000a, 181) eventually settles on the idea that the art system is based on a "binary orientation

concerning the 'fit' or 'lack of fit' of forms," a conclusion which seems highly debatable considering that this code is rather remote from practical experience (see van Maanen 2009, 119; Roberts 1997).

Our present concern is the epistemological grounds on which this debate is meant to take place. Throughout his work, Luhmann treats codes as concrete, empirical phenomena, rather than as analytic constructs. Binary codes are not, in other words, seen as mere conceptual tools, but as empirical elements constructed and deployed by function systems themselves (Luhmann 1989a, 36, 37; *TS:*2, 91). If our above analysis is accurate, then this conclusion is not sustainable, for function systems cannot be described as concrete entities, nor treated as subjects with a single, unified perspective. Instead, it seems more accurate to say that the 'boundaries' of generally recognized institutions, such as the economy or the legal system, are constantly redefined, reinterpreted, and contested by social actors, and that Luhmann's comments on coding are simply part of this struggle (Münch 1992, 1468ff.; Baxter 1998, 2073).

The boundaries of the art system, for instance, are incessantly disputed by individuals both inside and outside of the conventionally defined 'art world'. The notion of coding implies that these boundaries *can* be, and *have* been, unambiguously defined – not by Luhmann but by the art system itself. This claim is not justifiable on an *empirical* level. On an *analytic* level, Luhmann is free to draw the boundaries of the art system however he pleases, and to insist on the accuracy or utility of his definition for social inquiry. But this act of theoretical demarcation cannot be conflated with an empirical description of the 'art system.' The boundaries of artistic communication cannot be defined by theoretical fiat, for they are not an empirical fact to be discovered but a value judgement on which individual agents will differ.[10]

By speaking of a singular 'art system', structured by one, unambiguous code, Luhmann treats his own perspective on the meaning of art as an objective, factual claim (Münch 1992, 1471). For this claim to have authority, Luhmann must demonstrate how he determines which of the many potential art codes is the 'correct' one. Methodological

[10] This problem is also evident in the case of the religion system. As Thomas (2006, 119) notes, Luhmann's attempt to specify a religious code "gives the impression across wide stretches of text that one is dealing with 'direct access' to – and into – religion." Luhmann's (2000, cited in Thomas 2006, 119) conclusion, that "forms of meaning are religiously experienced when their meaning refers back to the unity of difference of the observable and unobservable and finds a form for it," is not put forward as his own personal construction, but is stated as an empirical observation about the actual nature of religious communication.

guidance is, however, not provided, and considering our above criticisms the very question seems nonsensical. As a result, Luhmann is unable to assert that his catalogue of function systems reflects genuine empirical distinctions, or is any less arbitrary than those it seeks to replace. It is also difficult for him to maintain that function systems are concrete, autopoietic entities which produce and maintain their own boundaries. If what counts as an internal operation of a particular function system is constantly under dispute, then one has no way to demonstrate that internal operations have causal independence in determining a system's identity.

Theorizing social change

Many of Luhmann's problems can be traced to the demands of the autopoiesis paradigm, and to his associated claim that social systems and psychic systems are operationally distinct. In the case of binary codes, for example, the primary issue is that Luhmann treats codes as structural features of *social* systems, and thus circumvents discussion of the ways that individual actors may differentially hold, enforce, or interpret these codes. Similar issues arise in his general theory of social change, in which gross reifications are commonplace. Attempts at structural change are thought of as perturbations against a hypostatized set of structures that may then decide to change themselves, rather than as challenges to the institutionalized viewpoints of certain individuals or groups.

It is instructive to compare Luhmann and Parsons on this point. While Parsons also argues that social systems are not comprised of individuals, such systems are, for Parsons, *analytic* constructions. The exclusion of individuals is thus a matter of definition, rather than an empirical claim. The basal unit of a Parsonian social system – the social role – is not self-reproducing, nor is it imbued with any kind of agency. Rather, it arises through processes of institutionalization, in which cultural ideas are translated into role expectations through social action. Parsons' work thus presents a clear theoretical avenue for thinking about the role of the individual in the process of social change. While he argues that social systems are, *analytically* speaking, sets of complementary role expectations, these expectations are not *empirically* independent of individuals. They are, quite simply, individual expectations that have a sufficient level of commonality in a relevant population. It is thus relatively easy to consider how they might be altered by individual or combined effort.

Luhmann also claims that social structures are generalized expectations; indeed, he argues that there are "*no other structural possibilities* for social systems" (*SS*, 293). These expectations are, however, considered to be attributes of *concrete* social systems, rather than beliefs of individual actors that are distinguishable as social elements in an analytic sense. Luhmann is forced into this argument because the autopoiesis concept demands a strict separation between the elements of psychic systems (thoughts) and the elements of social systems (communications). He must therefore adopt the counter-intuitive position that systems of communication can hold expectations, and must further hold that these expectations can in some manner change themselves. As Luhmann writes:

> "Self-referential systems are closed systems in the sense that they produce their own elements and thus their own structural changes. There is no direct, causal intervention of the environment on the system without the system's cooperation. That is why the system endows its own structure…with causality. …All structural change, whether adaptation to the environment or not, is self-change." (*SS*, 350)

It is, however, entirely unclear how social systems, as networks of communication, can hold expectations, let alone change them (Rottleuthner 1989, 785). Indeed, Luhmann himself seems uncertain on this matter, because he consistently anchors expectations within psychic systems. For example, in a passage describing the reflexivity of social structures, Luhmann claims that "ego must be able to anticipate what alter anticipates of him to make his own anticipations and behaviour agree with alter's expectations" (*SS*, 303). While the expectations described are *about* other participants (and thus social in a conventional sense), and while they may be expressed *by* communications, they are still best described as beliefs – i.e. thoughts within psychic systems – rather than expectations *of* communications themselves.

Luhmann's belief that social structures have autopoietic independence from psychic structures thus has little justification, as also has the claim that the former kind of structures can change themselves. In defending this position, Luhmann clearly privileges the conceptual demands of the autopoiesis concept above the utility and accuracy of his theory, leading to a rather impoverished account of the contribution which individuals can make to the creation, maintenance, and alteration of social structures. It is thus unsurprising that his approach has tremendous difficulty explaining how differentiation actually occurs. As Wolfe (1992, 1740) notes, accounts which

describe empirical cases of functional differentiation – many of which are cited within Luhmann's own narratives – emphasize "the popular activities of people themselves," who "made demands upon states, carved out new arenas of social action, and began to develop conceptions of privacy and autonomy." In Luhmann's theory these actors are absent, and their contributions are instead attributed to the function systems themselves (in a wholly non-rhetorical sense). "Politics," for example, is said to have become "increasingly reluctant to conduct wars of truth" (*TS*:2, 74). "Science," likewise, is said to have "developed a new concept of evidence" (*TS*:2, 80), and to have "accepted the hypothetical nature of all truth…" (*TS*:2, 85).

The function systems cannot, however, have differentiated themselves, for this would not only mean they had the capacity to act, but that they had this capacity *before* they established themselves as distinct systems. Unfortunately, Luhmann often falls into this explanatory contradiction. For example, in discussing the differentiation of the economy, he notes that "the economy learned to regenerate itself by systemic means…" (*TS*:2, 76). One wonders, then, what the economy was before it learned to regenerate itself. The same problem emerges in regards to binary coding, for the functional systems are thought to define their own code and thus establish their own boundaries. This does, however, render the entire notion of coding redundant. Binary codes are supposedly required in order to 'mark off' the internal operations of the system which they structure. If the function systems can produce their own codes, then they are already acting as unified, bounded entities, and thus do not require a code to establish this unity. If, alternatively, function systems arise around codes produced by other systems, then they are determined from without, and cannot be autopoietic.

These issues arise from Luhmann's insistence that *all* social systems are autopoietic, which means that one cannot describe the progression of differentiation as a gradual transition in which an allopoietic system progressively produces more of its own elements. Luhmann does, at points, speak of differentiation in this manner – claiming, for example, that changes in legal doctrine correspond to the "*increasing* differentiation of the legal system" (Luhmann 1986c, 124, emphasis added), or that the economy became "*increasingly* independent of the sources of wealth covered by stratification" (*TS*:2, 76, emphasis added) – but this is clearly an oversight, for the autopoiesis concept does not allow for *degrees* of autopoietic autonomy. Either the function systems exist as *wholly* autopoietic entities or they do not exist as social systems.

These discrepancies reveal significant conceptual friction between the notion of differentiation and the notion of autopoiesis. Substantial elements in Luhmann's theory of differentiation were developed before he adopted the autopoietic model, and it seems that his attempts to rethink the former in light of the latter failed to eradicate contradictions between the two (Berger 2003, esp. 207-208). Tension between these components can, in fact, already be seen in the work of Maturana and Varela, which allows for the possibility that two autopoietic systems may 'couple' together (thereby forming a 'second order' autopoietic system), but is far less confident that this process could occur in reverse, or that such unities could 'decouple' into two distinct autopoietic entities (Mingers 1995, 149). One must, then, question whether it is possible to speak of 'differentiation' in regards to autopoietic systems, at least where differentiation means disaggregation.[11] As Koschorke (1999, cited in Winthrop-Young 2003, 314) notes, differentiation is a "time-dependent" process – it leads from "some kind of 'less' to a 'more'." Autopoiesis, by contrast, implies a binary logic: a system is either autopoietic or not. While Luhmann's theoretical declarations maintain fidelity to the latter claim, his narrative accounts of functional differentiation often use the language of gradation (Winthrop-Young 2003, 313). As a result, his overall position is contradictory and confusing.

Take, for instance, his aforementioned thought that the "reaction" to functional difficulties in stratified societies "was an attempt to improve the internal coordination of functional systems, to give them a monopoly of the given communication medium and to waive coordination between them…" (*TS*:2, 66). It is hard to picture this process without viewing differentiation as a continuum, such that one can speak of attempts to *increase* the differentiation or autonomy of already existing, less differentiated function systems. Likewise, one has to introduce social actors into the account (for who else is doing the 'reacting?'), and to argue that these actors are in some manner causing

[11] While it is true that Luhmann uses this term to refer to *any* process of subsystem formation, rather than solely to the disaggregation of pre-existing unities, he also quite clearly deploys it to describe cases of the latter kind. The definitive feature of modern society is, for example, said to be that "[t]he old, multifunctional institutions and moralities are… dissolved and replaced by a co-ordination of specific codes to specific systems (Luhmann 1989a, 49). This use is also evident in the quotations cited on the previous page, in which the economy and the legal system are thought to *increase* their differentiation when they further detach themselves from external influence. Confusion is here created because Luhmann uses the differentiation term to describe both cases in which a new entity breaks off from an existing entity *and* cases in which existing entities converge to form a new entity, as in Stichweh's (2013a, 57) thought that a sport system 'differentiates' when three cultural traditions – gymnastics, athletics, and sports – *converge* with one another (p. 158n5, above). Most other approaches would likely describe the latter process as *de*-differentiation.

structural change in the function systems. While such claims are at odds with the thought that function systems are autopoietic entities, it is difficult to see how one can coherently describe the process of differentiation without them.

The function of function systems

Contradictions between the theory of autopoiesis and the theory of functional differentiation are also evident in Luhmann's account of functionality, it being difficult to see systems as both autopoietic *and* functional. The original, biological theory of autopoiesis was radically non-functionalist, in that it sought to explain biological phenomenon without notions of function or purpose, and thus conceptualized autopoietic systems as inwardly directed, concerned only with self-reproduction (Mingers 1995, 38). Luhmann seems to agree with this approach; indeed he explicitly asserts that the function systems are non-teleological systems, in that they use their binary codes to protect autopoiesis and to prevent themselves from "reaching a goal (end, telos) and ceasing to operate" (*TS*:2, 91). How are we to reconcile this with their status as *functional* systems, considering that the 'function' of these systems relates to a "problem of society," rather than the "self-preservation of the functional system" (*TS*:2, 88)?

Unfortunately, functionality remains an ambiguous, inconsistent, and elastic notion in Luhmann's work, and we are never provided with a thorough account of what it means for operations within autopoietic subsystems to perform social functions (Schwinn 1995, 207). In lieu of rigorous definitions, one is left with ad hoc assertions that elide crucial questions. For example, Luhmann claims that functions relate to problems of society, but it is difficult to know what he means by this considering that his concept of society is, in practice, devoid of substantive content, affording little sense of what society *is* – and thus what the subsystems are functional *for* – outside the operations of these subsystems (Schwinn 1995, 207).

As such, it is hard to discern what it means for societies to have *problems*, or what needs said problems relate to. Although Luhmann's work provides a number of potential responses – such as the need to reduce complexity, maintain autopoiesis, or sustain a level of evolution – these formulations are too vague to be practical, and invite the construction of dubious, 'just-so' stories (it being difficult to conceive of a social phenomenon that a motivated scholar could not in some way connect to such ends). It

is, furthermore, telling that these ends do not play a large role in Luhmann's descriptions of individual function systems, and that the various changes made to the function concept had little impact on his accounts of the specific problems these systems supposedly address. The precise relationship between the action of the functional subsystems and the fulfilment of societal-level needs thus remains loose and indistinct, and is often quite questionable.

It is, for example, not certain that the referential problems addressed by the subsystems are in fact problems of the same societal suprasystem. For Luhmann, there is only one society, world society. The function systems are, in his view, subsystems of that society, and should thus solve problems for world society, rather than distinct national entities. Despite this, some of the postulated subsystems (notably politics and law) seem oriented to national problems. For example, the legal system is said to have the function of reproducing generalized behavioural expectations (Luhmann 1988a, 27). There is not, however, one legal system which performs this function for world society, but a multitude of distinct legal systems whose judgments are valid only within national boundaries. These systems are intertwined, and interact, but they are not component elements which work together to perform functions *for* the benefit of world society, save in minor cases (Münch 2013, 79; Schwinn 1995, 205).

The functional 'address' of these systems thus seems quite different from that of systems whose functionality is not tied to national societies in such a specific and explicit manner (such as the systems of art, religion, or science), and it seems improper to claim that these systems all function for the same entity. Indeed it seems quite unusual to argue that systems like religion or art function to benefit societies at all, national or otherwise. It certainly makes sense to treat art and religion as differentiated entities or institutions, and even to claim, in the spirit of Weber or Dilthey, that they are functional for *individuals*. Yet by describing them as functional subsystems, Luhmann argues that they make a functional contribution to society itself. His efforts to justify this are, however, not overly convincing. It is not at all clear how the function of art ("to [demonstrate] the compelling forces of order in the realm of the possible" (Luhmann 2000a, 148)), for instance, addresses any sort of societal-level problem; indeed Luhmann (2000e, 207) himself asserts that the "collapse of art would not be very harmful for the total society."

These problems introduce significant uncertainties into the analysis of functional differentiation. Not only is there confusion regarding the object which the function systems supposedly 'function' *for*, it is also entirely unclear how the reference problems they address come to be considered *as problems*. In treating problems as constructions of the societal system itself, and not of particular individuals or groups within this society, Luhmann leads us back to the postulate of functional unity, with its associated epistemological issues. To justify this position, Luhmann must explain how he is able to identify societal problems, and must explain why his interpretation of what societies need or require, or of what problems individual function systems are oriented towards, is more accurate than available alternatives. Developed methodological guidelines are, however, once again absent. His claims about the problems that function systems address are derived solely via counterfactual thought experiments, and the existence of these problems *as problems* for anyone other than Luhmann himself is never convincingly demonstrated.

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To elide these criticisms, Luhmann needs to demonstrate that function systems are concrete systems, to evidence the agency he attributes to them, and to provide cogent criteria by which to identify their functions. It is, however, clear that his theory lacks the resources necessary to accomplish these aims. Luhmann (1992b, 1439) himself recognizes the difficulties in play, for he notes an "uncomfortable tension between theoretical conceptions and the present possibilities of empirical research." He does not, however, take full responsibility for this, but instead argues that there are "insufficiencies on both sides," and that sociology's repertoire of empirical methods is "very limited and completely inadequate" for objects like functional subsystems (Luhmann 1992b, 1439, 1438).

While methodological developments may alleviate some of the above issues, one must admit that Luhmann's theory lacks key points of empirical anchorage and eschews attempts to create them. In the case of the function systems, for example, Luhmann simply does not provide cogent criteria by which one can identify and delineate the object of study – as is well evidenced by the large variance in attempts to catalogue the subsystems of contemporary society (Roth and Schütz 2015). As we have seen, there are, in Luhmann's work, three key requisites of function system status: a function,

operational closure, and a binary code (Baecker 1994). In light of our above claims, it is questionable that any of these criteria could be effectively deployed in empirical analyses, and one must have serious reservations about their logical grounding and practical utility.

If one agrees with the objections presented, then the difficulty that empirical researchers face when dealing with Luhmann's theory seems less to do with the vulgarity of their methods and more to do with a conceptual apparatus that can – as Winthrop-Young (2003, 310) has aptly put it – only breathe on "very high ground." One is, as such, forced to give a negative appraisal of Luhmann's concepts, regardless of whether they are treated as genuine reflections of social reality or pragmatic instruments of social analysis. In terms of the former, epistemological problems cast significant doubt on Luhmann's empirical assertions. In terms of the latter, the analytic demands of the autopoiesis framework seem too stringent to be practically workable, even for Luhmann himself.

While one can certainly admire the ambitiousness, novelty, and internal sophistication of Luhmann's work, it seems that these traits have not led to a genuine advance in our ability to theorize functional differentiation. Indeed, it must be remembered that complexity is not, in and of itself, indicative of a theory's utility; in fact a lack of parsimony can often be a significant drawback. This seems evident in Luhmann's case. His positions on crucial matters of ontology, epistemology, and methodology are simply too ambiguous, and are too frequently expressed in a consciously paradoxical manner. Indeed, Luhmann often seems unwilling to defend the truth of his own theory, preferring to maintain a more ambiguous position about its correspondence with any particular reality (Müller and Powell 1994; Wolfe 1992, 1739-1740). He is, in that sense, a provocateur (or, if one prefers, a "troublemaker" (Rottleuthner 1989, 779), an ironist (Joas and Knöbl 2009), or a "mystic" (Rossbach 2004, 50)), who does not hesitate to challenge the ground on which his own theory rests.

This provocative capacity may help to explain the widespread proliferation of Luhmannian theory. Despite the issues with the apparatus by which it is derived, Luhmann's idea that science is an autopoietic system conveys an important insight: that scientific communication is often oriented to its own, recursive reproduction, rather than to a goal or point of consensus (*TS*:2, 91). From this perspective, the disputatious nature

of Luhmann's theory is an asset, in that its internal ambiguities provide a tremendous range of connection points for future communication. Yet at the same time one must also ask whether Luhmann's theory actually belongs in the 'system' of science, for its relatively abstruse character, in addition to its ambivalent epistemological standpoint, make it difficult to treat as scientific communication – at least if we agree, with Luhmann, that such communication must ultimately relate itself to the distinction between truth and falsity.

Sociology is, of course, not bound to this distinction. Occupying a unique position between science and art, it can, to again use Luhmann's language, draw on either system's 'code' in the determination of what 'counts' as sociological communication. With this in mind, it should be stressed that our critique makes no recommendation about the aesthetic value of Luhmann's project, nor about its utility in social philosophy. But it is clear that for one committed to the scientific study of society, Luhmann's theory of functional differentiation is only of interest if it can be pressed into a form more agreeable to conventional dictates of empirical science. Considering our above analysis, it is difficult to see how this can be done without sacrificing the theory's distinguishing elements.

PART II

Enduring Problems in the Theory of Functional Differentiation

Introduction to Part II

Part I demonstrates the existence of a specific sequence of sociological theory, which began with the founders of the modern discipline and has persisted into present day. While the accounts of functional differentiation presented by our four theorists diverge on both semantic and substantive issues, each adhere to the same meta-theoretical presuppositions, such that we can place them within a single research tradition and can treat their notions of functional differentiation as conceptual equivalents. Each of our four theorists conceptualizes society in a *systemic* manner, argues that structural elements within society fulfil functions *for* society, and holds that functional responsibilities can be redistributed in such a way that one can speak of *functional differentiation* – i.e. of a *process* in which social elements become more functionally distinct, or of a *degree* to which said elements are distinguishable on functional grounds. While these propositions reflect the basic assumptions of comparative functionalism, our specific theorists are also united by a common belief that the differentiation construct is of *special* significance to this general method, or possesses, in comparison to other descriptors of macrosocial structure, an especially high degree of explanatory power.

While this approach has a long history, and while the differentiation construct continues to hold theoretical prestige, one struggles, considering the material presented, to offer a positive appraisal of its achievements and potential. Looking back on this sequence of theory, it is difficult not to conclude that the tremendous intellectual effort expended by its primary contributors has led to rather underwhelming results. Instead of a systematic theory, possessing some amount of empirical support, differentiation theorists have collectively produced a disparate assortment of descriptive assertions, comparative frames, and loosely formulated hypotheses, none of which show evidence of cumulative development. Indeed on most major metrics of theoretical progress – whether conceptual clarity, internal consistency, predictive capacity, or deductive fertility – the theory of functional differentiation seems to have stalled, if not regressed, since its initial presentation in the nineteenth century.

The continued appeal of the differentiation concept is thus in some sense a puzzle. While it may simply reflect a reluctance to part with classical ideas, it does seem that

the empirical descriptions of long-term change provided by differentiation theorists are generally felt to have a persuasive verisimilitude, or to capture *something* important about social organization. There seems, in other words, to be a pervasive belief in the explanatory salience of the differentiation construct, or in what we can, following Hempel (1952, 46), refer to as its *systematic* import. As Hempel (1965, 146) explains, the systematic import of a scientific concept lies in its capacity to contribute towards the "systematization of knowledge…by means of laws or theories." To judge this capacity, one considers the explanatory or predictive propositions in which concepts can be implicated, or the "scope, the degree of factual confirmation, and the formal simplicity of the general principles in which they function" (Hempel 1952, 47). A scientifically fruitful classification will, for example, contain terms that are "empirically associated with a large number of other attributes," such that members of a particular class "will exhibit clusters of empirically correlated features" (Hempel 1952, 47).

To establish the systematic import of the differentiation construct, one must therefore demonstrate that the manifestation of functional differentiation as a process, the overall level of functional differentiation in a society, or – if one were to adopt Luhmann's approach – the presence of functional differentiation as a dominant form, is associated with a range of concomitant characteristics. None of the theorists examined in this thesis have, however, been able to evidence relations of this kind – in large part because they have consistently failed to connect their key theoretical construct with observable phenomena, or to demonstrate the *empirical* import of the differentiation term (on this notion see Hempel 1952, 39). The weight of this issue must be stressed. As Hempel (1952, 39) notes, a scientific term can "only have explanatory power in the context of an interpreted theory." Because differentiation theorists have, by and large, failed to supply us with empirical interpretations, and because the differentiation term has, as a result, rarely been utilized as a variable of interest in cross-societal comparative research, the explanatory power of the differentiation construct is, at present, *wholly* hypothetical. One may place it in propositional statements, and may convey them with persuasive force, but if the notion of differentiation is not given sufficient empirical meaning then such statements are incapable of being verified by external evidence.

To remedy this, the differentiation term must be given empirical interpretation – or at the very least be situated in a system of laws and definitions which connect it to other, adequately interpreted terms (see Hempel 1952, 39). Problems do, however, abound in

this regard: some practical, others logical. Marsh (1967, 330), for example, notes that a valid, cross-societal measure of structural differentiation (which he defines, in a relatively clear and catholic manner, as "the number of structurally distinct and functionally specialized units in a society" (Marsh 1967, 31)) must be formulated "in terms of indicators for which there are at least convertible data in all societies, from the simplest hunting and gathering bands to the most differentiated modern industrial nations." This naturally restricts the range of indicators which can be deployed.

Marsh's own measure of functional differentiation – presented in his 1967 work *Comparative Sociology* – provides a salient example of the difficulties that this requirement creates, and is of interest to us here as one of the few attempts to deploy the concept of functional differentiation as a quantitative variable within cross-societal comparative research. While numerous studies deploy differentiation as a descriptive tool in the analysis or interpretation of particular historical events, Marsh's survey adopts the notion – evident in our four major theorists – that functional differentiation can be treated as a macro-social variable, applicable in principle to all societies and thus comparable across them. Moreover, Marsh (1966, 30) shares, with our major theorists, a fundamental faith in the centrality and importance of the differentiation concept – so much so that he treats it as the key point of reference for comparative social inquiry, arguing that any cross-societal comparison of a specific social trait should first examine its relationship with structural differentiation (only moving to alternative explanations if a relationship fails to be demonstrated). His work thus provides a relatively rare attempt to apply and to test the key claims of differentiation theory – in its functionalist form – on an empirical level.

To operationalize the concept of 'structural differentiation', Marsh (1967, 330) relies on the measures of political integration and social stratification in Murdock's *World Ethnographic Sample* (1957) – the former measured from 0, an absence of political integration, to 4, the presence of states; the latter measured from 0, an absence of significant social stratification, to 3, complex stratification into three or more social classes. A society's level of differentiation is measured by the aggregate of these two variables. Marsh (1967, 332) does, however, note that the majority of contemporary nation-states are marked by both a state and complex stratification, and will thus be given the highest score, 7. To distinguish these societies, he introduces two "indirect" indicators: the proportion of adult males in the population engaged in non-agricultural

work, and gross energy consumption in megawatt hours per capita for one year (Marsh 1967, 332).

By operationalizing societal differentiation using indirect variables, Marsh is able to skirt many methodological obstacles. The validity of the resultant measure (and thus of Marsh's empirical conclusions) is, however, questionable, for it is not clear that it speaks to his particular understanding of the differentiation term, let alone to any of the more specific conceptualizations advanced by the four theorists discussed in part I. The measure of political integration, for example, is based almost entirely on population size, and does not examine the differentiation of functionally specialized roles in the political arena or the functional differentiation of politics as an institution or set of organizations. Likewise, the measure of social stratification is likely to prove problematic considering that *rank* differentiation and *functional* differentiation are conceptually distinct; indeed many theorists – Parsons and Luhmann among them – argue that processes of functional differentiation are associated with a *reduction* in stratification, or a general decrease in the number or prominence of rank distinctions.

One can also express concerns about the additional two indicators, particularly the measure of energy consumption, as Marsh does not present sufficient evidence to justify their link to functional differentiation. Instead, he simply states that "technological variables, such as per capita energy consumption, tend to be highly correlated with degree of societal differentiation" (Marsh 1967, 34). Putting aside the issue of how these correlations are determined considering that the direct measurement of differentiation is, in Marsh's (1967, 33) own estimation, still "in its infancy," the claim is also dubious on the theoretical level. Many of the examples of functional differentiation discussed in part I would not significantly increase energy consumption, and it seems plausible to claim that in many cases functional specialization would – via gains in efficiency – have the opposite effect.

Marsh (1966, 29) bases his choice on the work of Schnore (1961, 234) – who deploys energy consumption as one of ten indicators of "modernization"[1] – and Berry (1960) –

[1] The 10 variables presented by Schnore (1961, 234) are: (1) energy consumption (in metric tonnes of coal); (2) motor vehicles registered per capita; (3) daily newspaper circulation per 1,000 inhabitants; (4) percent of economically active males engaged in non-extractive pursuits; (5) per capita value of imports and exports; (6) per capita income; (7) physicians per capita; (8) literacy level; (9) population growth; and (10) age composition (the ratio of ages 15-64 to all other ages). In Schnore's (1961) analysis, the first variable – energy consumption – has the highest average correlation with all others, and is thus said to be

who refers to energy use as a measure of economic development. These two authors do not, however, mention the sociological notion of structural differentiation, and it remains unclear exactly why Marsh chooses to measure this attribute with the aid of a variable which is intended, in the cited studies, to speak to the development of the economy. Economic *development* is by no means synonymous with economic *differentiation*, and measuring the latter using metrics of the former would preclude the possibility of studying relationships between the two.

Problems of this kind have been noted by a number of critics (e.g. Howton 1968, 557). Haller, for instance, argues that:

> "…macro-sociological variables such as differentiation and integration can, when operationalized, easily be confounded with variables such as economic development, gross national product, size of population, etc. These, unfortunately, are the types of variables we wish to use in order to test hypotheses about differentiation and integration. It is therefore exceedingly important that macro-sociological variables be measured directly through observations taken on empirical referents rather than indirectly by means of external variables hypothetically related to them." (1968, 99)

From this, it is clear that the direct measurement of functional differentiation is an important goal.[2] While there are undoubtedly practical problems in play, measures which rely on indirect indicators appear insufficient, and, considering their conflation of key variables, do little to augment the theoretical utility of the functional differentiation construct.

Acknowledging the weight of this issue, part II considers whether it is possible to advance an adequate empirical interpretation of the functional differentiation concept. My intention is not to present a fully-fledged measure of functional differentiation (such tasks being best left to more competent methodologists), but to instead consider the various impediments which frustrate attempts to apply this concept as a comparative

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a parsimonious measure of modernization. It is, however, unclear why Marsh then treats it as a sound indicator of structural differentiation, especially considering that none of Schnore's other nine variables speak directly to the kinds of empirical transitions described by the differentiation concept.

[2] It is, at the very least, important to consider what the direct measurement of differentiation would in fact look like, in its most ideal form. While practical considerations undoubtedly demand certain compromises, ideal measures afford us with a standard to approximate, and help us illuminate the various distortions which more practical metrics will invariably introduce (Savitz 2003, 164). In addition, they force us to confront conceptual ambiguities, and to ask whether a particular construct can in fact be presented in a suitably systematic form. In this manner, it is hoped that the present discussion will not only create a benchmark of validity for more pragmatic approaches, but will also add additional precision to our understanding of the differentiation term.

variable in empirical research. I will, in other words, be focusing on the practical, logical, and conceptual constraints which have prevented the notion of functional differentiation from being afforded sufficient empirical import, and will delineate the major problems that future theorists must address if they wish to continue with this concept, or to justify their belief in its explanatory capacity.

Any attempt to construct a direct measure of functional differentiation must first consider the three starting assumptions of comparative functionalism: first, that one can speak of certain entities as *systems*, second, that these systems contain component elements or *units*, and third, that these components can bear *functions*. These assumptions underlie what I will refer to as *functional assignments*: statements of the kind, "in system *S*, unit *U* performs function *F*." For the concept of functional differentiation to be workable, such assignments need to be both cogent and contingent, for differentiation describes a process (or an outcome of a process) in which functional assignments *change*.

This is true for all of the conceptualizations presented in the previous chapters, and holds regardless of whether one adopts a decomposition or an emergence approach. Parsons, for instance, describes differentiation as the process by which a single, multifunctional unit 'splits' into two or more units which each perform a distinct subset of these original functions. Luhmann, by contrast, argues that differentiation describes *any* process by which a unit comes to perform a function that no other unit in the wider system performs. Despite the obvious differences between these approaches, one's ability to apply the differentiation term to an empirical process relies, in each case, on whether one can confidently assign functions to the relevant social units. Likewise, if one were to use either approach as a basis for a differentiation variable, or for the measurement of an overall 'level' of functional differentiation in a particular system, one would have to assemble a body of propositions which delineate the various functions performed by the various units within this system, after which one would determine the extent to which these units diverge in the functions performed (or in their general functional composition).

Procedures of this kind can be cogently applied in any case where the above three assumptions hold – that is, in any case where one can speak of a *system* whose composite *units* perform *functions.* Such procedures would, then, be relatively

uncontroversial, and in fact relatively practical, in the case of many sub-societal social entities (such as productive firms or formal organizations). This thesis is, however, focused on attempts to apply the concept of functional differentiation at the *societal* level, treating *societies* as the primary systems of interest. This introduces a range of important difficulties – consideration of which will be the focus of the following three chapters. These difficulties are not caused by problems with the differentiation term itself, but by issues with the proposed object of study. In speaking of societies, we shift to a more abstract level of analysis, and this brings greater ambiguity in the key conceptual components of functional assignments, and thus of the functional differentiation term. Thus while it is, in the analysis of a productive firm, relatively straightforward to delineate a system, its units, and their functions, the analysis of society presents a more intractable set of difficulties for the same set of theoretical terms.

Part I provides ample evidence of the challenges at play. As we have demonstrated, each of the four theorists examined rely on the mereological ontology of comparative functionalism, and each deploy functional assignments in which *units* internal to *societies* are said to perform *functions* for these societies. At the same time, each theorist fills out this basic structure with unique definitions of its three key terms. Each has a different concept of society, a different sense of the entities of which societies are composed, and a different view of what it means for these entities to have functions – which is why we are able to document variance in their specific understandings of functional differentiation. None have, however, been able to give these terms sufficient empirical meaning, and as such they have struggled to demonstrate that the analysis of functional differentiation is a workable approach in the comparative study of societies. This may, in part, explain why few empirical comparativists have deployed differentiation as a variable of interest, and why those who have attempted to do so seem significantly hampered by matters of construct validity.

For such scholars, terminological ambiguities undoubtedly frustrate the process of operationalization. For example, Marsh (1967, 31), as noted, defines the level of differentiation as the number of *functionally* specialized, structurally distinct *units* in a *society*. This definition relies on the three key terms of functional assignments, and Marsh's interpretation of these terms is often vague. To give one example, he is ambiguous on the question of just which units should be targeted in a concrete analysis

of structural differentiation. Though Marsh (1967, 31) claims to be focusing on both roles and collectivities, he also notes that these are only the "principle units under consideration," thereby implying that other structural entities could be relevant. This introduces a range of measurement difficulties: not only is it unclear just which structural entities can bear functions, and can thus be treated as functional units, one is further unsure whether certain structural units have priority in the analysis, and should be more heavily weighted in a differentiation variable.

The unit term is not the only point of contention in Marsh's approach; it is also unclear how he discriminates distinct functions. Marsh's (1967, 32) discussion of functional exigencies tends to follow the tenets of mid-century structural functionalism, and speaks of such exigencies as "the weaning and socialization of the young and the provision of food and shelter." But at the same time, his concrete examples of social functions include culturally specific 'needs' (such as "the need for increased cotton production to satisfy new markets" (Marsh 1967, 32)), which are clearly needs of specific individuals or groups rather than existential requirements of societies. In this sense, the conceptualization is somewhat confused. In defining differentiation, Marsh relies on mereological ideas, and approvingly cites corresponding organic analogies (such as MacIver and Page's (1949, cited in Marsh 1967, 31) claim that differentiation involves "the emergence of more distinct organs to fulfil more distinct functions"). This conceptualization is, however, not maintained, and Marsh often shifts to a model of differentiation which more closely resembles the non-mereological idea of the division of labour in *society*, as is evidenced by his willingness to use measures of "craft and occupational role differentiation" as indicators of societal differentiation more broadly speaking (for further examples of this approach see Naroll 1956; Gibbs and Martin 1962; Gibbs and Poston 1975).

As this discussion makes clear, the empirical import of the differentiation construct – and, therefore, its capacity to serve explanatory ends – relies on our ability to confer empirical meaning on the three key terms of functional assignments: society, structure, and function. As such, part II will consider each of these three concepts in turn, examining the logical and practical problems which have thus far impeded, and which continue to obstruct, attempts to deploy them in empirical analyses. The aim is, quite simply, to determine whether one can curtail their ambiguities, enhance their precision, and anchor them in concrete observables, such that functional assignments can, when

applied at the level of society, be given substantive content. If this can be done, then an empirical interpretation of functional differentiation becomes a real possibility, for the concept does not complicate such assignments but relies only on their sound explication.

CHAPTER FIVE

Considerations in the Conceptualization of Society

To apply the theory of functional differentiation at the level of society, one has to first articulate what a society is. This grounds the analysis of social functions, and allows one to specify the units which perform these functions. Little agreement is, however, found on this particular subject. Each of the four theorists examined in this thesis have a different understanding of the society term, and some imbue it with entirely novel meanings. This is not an issue with differentiation theory *per se*, but rather reflects broader problems of conceptualization within sociology as a whole. Polemics against the discipline are suffused with complaints about conceptual laxness, but this has done little to stem the widespread adoption of ad hoc, intuitive, or colloquial definitions of key terms. This is especially true of the society term, which demarcates the object of sociological inquiry and is, for this reason, a point of significant contest. Attempts to specify its meaning are, at the same time, attempts to institutionalize particular views about the nature of social science.

In surveying the theoretical literature, one gets the sense that sociology as a discipline has tired of definitional debates, and that the push to specify a common general vocabulary has largely exhausted its potential. For many working sociologists, whose research object is, ironically, very rarely society itself, an ad hoc approach is agreeable enough, for the precise meaning of the society term has little impact on their approaches or conclusions. Things are, however, not quite as simple for theorists of functional differentiation. Functional differentiation is a comparative concept, and the comparativist must first begin by defining the objects of their comparison. Indeed, as Ragin (1982, 104) has noted, the "direct, empirical implementation of the abstract concept of society is a metatheoretical act" which "separates comparativists from non-comparativists." For the non-comparativist, society "is and remains an abstraction": such researchers can "assure themselves that the patterns and processes they study exist in a society, some society, and not concern themselves with what constitutes a society" (Ragin 1982, 104-5). In contrast, the comparativist must begin with the assumption that societies exist, and must choose between definitions which impinge on their work in a "very fundamental manner" (Ragin 1982, 105).

Similar conclusions have been reached in the field of biology, which faces an analogous situation with the organism term. Wilson (2000, S303), for example, holds that "nothing that biologists or philosophers of biology care about" would depend on the clarification of the organism concept, because the most important questions about organisms do not depend on the existence of a strong conceptual distinction between organisms and non-organisms. While this may be true for many biologists, Wilson's claim fails to account for the prominence of the comparative method in the study of evolutionary processes (Pepper and Herron 2008). In order to make effective comparisons, one must first define a class of comparable entities. This cannot be done in the absence of explicit and agreed-upon definitional criteria (Pepper and Herron 2008, 625).

As Pepper and Herron (2008, 622) note, "the primary challenge for any organism concept is to distinguish organisms from *parts* of organisms and from *groups* of organisms" (emphasis added). Similar problems emerge when distinguishing societies, and such problems are especially prominent in the study of societal differentiation. A comparative study of functional differentiation must, for example, decide whether modern nation-states are distinct societies (as in Parsons) or whether they are parts of one global society (as in Luhmann). In making decisions about comparative units, one's concern is to ensure that the comparison is done on like-entities, such that one's conclusions are not biased by the addition of unlike cases. If, for instance, one is "interested in organismal senescence, and [wants] to correlate lifespan with some environmental factor across a wide taxonomic range," then conceptual decisions about what constitutes an organism (such as whether one should, for a given species of coral, "record the lifespan of a single polyp or of the entire colony") are of fundamental relevance (Pepper and Herron 2008, 625). The same reservation applies in macro-sociological analysis, whose findings are sensitive to conceptual choices and to the sampling strategy which these choices inspire.

This is not to say that one needs to impose a single definition of society across the entire discipline; indeed the existence of a range of distinct species concepts in systematic biology demonstrates that different conceptualizations can often "coexist harmoniously" (Pepper and Herron 2008, 625). One does, however, need to be explicit about which concept is being used, and about the purposes best served by each. For a theory of functional differentiation, one needs a concept of society which meets the following requirements, each of which comes with a host of associated issues:

1. *The concept must be sufficiently broad as to allow for the historical reach of the differentiation concept*

The historical particularity of the society term remains a matter of some debate. As Peel (1996, 56) notes, a number of entities generally referred to as societies have no clear linguistic equivalent for the term, the meaning of which is in many ways situated within the cultural and historical milieu of early modern Europe. The applicability of the term to entities far removed from this cultural context is thus highly contested, with some arguing that the description of these entities as societies inevitably leads to misleading claims about their organizational or cultural patterns (see, for a critique, Peel 1996, 56-57). By contrast, differentiation theorists are typically interested in the study of long term change, and in juxtaposing contemporary 'societies' with the social forms preceding them. Because of this, they have generally sought to group widely different forms of social organization – from small-scale bands or kin groups right up to a postulated world community – under the same conceptual heading.

The terminological elements of this debate need not concern us; the present issue is whether one is right to treat these diverse forms of social organization as comparable units, or as members of the same statistical population. Critics of cross-societal comparative research answer in the negative, arguing that entities like the nation-state – to which the society term is commonly and uncontroversially applied – are fundamentally incomparable with other kinds of social entities (Leach 1960, 137; Hopkins and Wallerstein 1967). Yet as Goldthorpe (2007, 41) notes, comparability is not an "inherent [property] of things; whether meaningful comparison is possible is entirely a matter of the analytic concepts we have at our disposal." One can, in fact, compare apples and oranges if one is equipped with concepts like 'mass' or 'cost' or 'nutritional value', just as one can compare two vastly different types of structural change, such as role differentiation in a productive firm and cellular differentiation in the organism, with the aid of abstract concepts like 'system' and 'element' (see Sartori 1991).

For the comparative study of differentiation, the salient question is whether the entities being compared share enough properties for the comparison to provide explanatory utility. A comparison between differentiation in a business organization and differentiation in an organism is not typically useful because the kinds of covariates

which can be implicated in the analysis are rather slim. This does not, however, seem to be true when comparing the diverse range of entities generally termed societies. It is plain that Tikopia 'society', with a population of less than two thousand, differs greatly from Chinese 'society', with a population of over a billion, but this does not substantiate the claim that a comparison between the two is, as Leach (1960, 138) believes, worthless *ab initio*. So long as both share a particular property, a comparison between them is possible. If other shared attributes are present, then the utility of the comparison is likely to increase, unless the entities are identical in regards to *all* of their properties and respective values (Sartori 1991, 246). The very fact that we can, for instance, describe both of our above examples as having a population means that we can compare them. If they share the possession of no other qualities, then the comparison is pointless, but if we can also say that both have a political structure, or a GDP, or a suicide rate, or a dominant lineage system, then we are afforded the ability to test generalizations involving these variables, regardless of whether the *values* of said variables are widely divergent.

In Leach's (1960) view, such efforts are futile in principle, for 'societies' are simply too distinct in their characteristics, patterns, or internal dynamics for there to be generalizations which hold across them. The more expansive concept of society deployed by differentiation theorists may, it is thought, be an example of what Sartori (1991) refers to as a 'cat-dog' concept: a concept which brings under a single class that which should, for theoretical reasons, remain distinct. The fundamental problem with such concepts is that no generalization can conceivably hold across all of the entities they group. Generalizations about a hypothetical "cat-dog-bat" class will, for example, face the problem that "what might apply to cats will only apply in part to dogs, and in almost no respect whatsoever to bats (and vice versa)" (Sartori 1991, 248).[1]

[1] Arguments of this kind are not uncommon in the methodological literature on societal comparison. Vallier (1971, 251), for instance, claims that the focus on "total societies" as primary units of observation is a stumbling block to the success of comparative sociology, which should, he believes, shift from studying "all-societies" to "particular societies," and from "total societies" to "middle level units." Likewise, Hopkins and Wallerstein (1967, 34) argue that nation-states diverge from the social forms proceeding them "in their developmental patterns, in the causal processes responsible for the patterns, and in the research procedures appropriate to the empirical study of the patterns and processes." For this reason, they argue that comparative sociology should, as a discipline or enterprise, be equated with the systemic study of national societies alone (Hopkins and Wallerstein 1967, 34; for critique see Marsh 1968).

While this may be true of the various entities which differentiation theorists typically seek to compare, we need not make this assessment on the theoretical level alone. By remaining sensitive to the differences in these entities, and by categorizing and coding them accordingly, one can assess whether the inclusion of certain sub-classes in a sample of 'societies' impacts the associations being tested. This is not to say that one should simply define away those cases which weaken one's hypothesis – the point is simply that if a generalization fails to hold in a particular sub-class, but can be evidenced in all others, then the supra-class in question may be a cat-dog concept, in which dissimilar entities are improperly grouped (Naroll 1965, 444). Findings of this kind may prompt one to revise their concept of society, or else to restrict the ambitions of comparative macrosociology, but in both cases it is important that these decisions work with the available data, rather than relying on unchecked assumptions about the comparability of 'social' entities.

2. *The concept must harmonize with commonly held notions in the field*

Comparative studies of functional differentiation do not typically limit themselves to presently existing societies, but often seek to sample historically documented social groups. As such, these studies must take the results of historical analysis as their main resource, and are dependent on existing work to provide empirical data (Goldthorpe 1991, 220). Because of this dependence, it is unlikely that a comparative analysis of functional differentiation could succeed if its own definition of the society concept was radically different from the kinds of definitions present in the existing literature. A theory of differentiation which denies that nation-states are discrete societies will, for example, face obvious difficulties considering that the vast majority of relevant data is collected and organized on the assumption that they are. To deviate from this position, one would have to gather new empirical evidence – which would drastically limit one's pool of data – or else reinterpret the existing literature in line with alternative conceptual frameworks. Given that comparativist researchers are, typically, already engaged in "second-order interpretation" – in that they interpret the interpretations of primary data provided by the researchers who initially gathered it (Goldthorpe 1991, 222-223) – attempts of this kind risk introducing further interpretive distortions.

The basic point is that methodological demands place limits on conceptual freedom. For example, palaeontologists do not, generally speaking, use the so-called biological

species concept, for its main criterion – interfertility – is assessed via methods which are inapplicable in the study of fossil remains (such as field observations and cross-breeding experiments) (Sokal and Crovallo 1970). In the same way, the comparative sociologist must respect both the historical conventions of the discipline and the limits of the archaeological record. It is thus unlikely that definitions of the kind proposed by Luhmann, who seeks to reorient sociology towards an entirely novel society concept, will be of much utility. The idea that societies are autopoietic communication systems has certain merits, but practicality in comparative research is certainly not one of them. One cannot reasonably expect to begin anthropology anew, and one cannot simply overlay new concepts onto existing studies and then use their results unchanged.

This does not mean that one must treat groups as societies wherever primary researchers have done the same. As Naroll (1970, 731) has noted, ethnographers have not, by and large, followed a consistent pattern of unit definition. Indeed, in surveying the literature, Naroll (1970, 727-731) finds at least nine different attributes which have been used to define societal boundaries, including: 1) the distribution of the specific social phenomena being studied; 2) territorial continuity; 3) political organization; 4) linguistic intertelligibility; 5) ecological adjustment – i.e. the "predominant ecological pattern" (foraging, farming, etc.); 6) the limits of a local community; 7) the widest social unit relative to the people concerned; 8) the presence of an identifiable native name; and 9) common folklore or culture. There is, however, no consensus on the centrality or even the necessity of any of these attributes. Each has been treated as definitive in at least one ethnographic study; and yet each is absent in at least one entity which has, by at least one ethnographer, been termed a society (Naroll 1970, 727-731).[2]

Because of these inconsistencies, a comparative study which simply follows the definitions of primary researchers will face significant methodological difficulties. As Naroll (1970, 726) notes, language groupings are "often not congruent with

[2] This suggests that the society concept is a so-called *family resemblance* or *cluster* concept: a concept defined with reference to a list of attributes in which no single item is necessary or sufficient. The attributes may be weighted, and attributes shared by many members may be considered more 'central', but no single item *must* be displayed as a requirement of inclusion in the conceptual category (Podsakoff, MacKenzie and Podsakoff 2016). If society is a concept of this kind, then there is no 'core' meaning to the term, and no one attribute which all societies must display. Instead, an entity would be considered a society if it displayed a specified *n* number of societal attributes, and it would be *more* of a society if it displayed > *n* attributes. Society status would thus not be an either/or matter; instead, possessing *more* societal attributes, or more *central* societal attributes, would make an entity more 'society-like'. One could then speak of minimal societies, which bear the threshold number of relevant attributes, and maximal or paradigmatic societies, which display *all* of the relevant attributes.

distributions of other important traits; neither are political organizations, endogamy groups, or largest meaningful social units." If such markers are used indiscriminately in the literature, and if this literature is used to provide a sample pool of comparative cases, then one is likely to include vastly different and potentially overlapping units in the same sample (Naroll 1970, 731). This problem is well illustrated by Naroll, who, referring to a comparative study conducted by Hobhouse, Wheeler and Ginsberg, notes that these men:

> "…counted the Indians of Lower California collectively as one unit, and the Waicuri [Guaycura] and Pericui [Pericú] of Lower California as two other units; the Hopi as one unit and the Moqui (another name for the Hopi) as another unit; the Azande as one unit and Niamniam (another name for Azande) as another unit." (1970, 731)

The inclusion of overlapping cases, such as both the Guaycura and the "Indians of Lower California," violates the assumption of statistical independence. Methodological considerations require that one of the cases be removed, in which case one is faced with a difficult decision. By the criterion of common language, the Guaycura constitute a single society, whereas the native tribes of Lower California do not. Other criteria will, however, lead to different conclusions. While linguistically united, the Guaycura were split into territorially distinct bands, which often warred amongst one another (Burckhalter 2013, 8; Crosby 1994, 101). Definitions based on political organization would likely treat these bands as distinct societies in their own right.

In judging these options one should refer to the needs of the particular study and to its analytic focus. The point of the present discussion is simply to highlight that one cannot attempt to meet these requirements without first considering the practical limitations of the relevant data. The choice of different society concepts needs to be made from *within* the available alternatives, or at the very least with an eye towards the kinds of data commonly available in ethnographic and historical literature. It is, for instance, highly unlikely that one could successfully deploy a society concept which did not hit on *any* of the nine attributes discussed above. Elegant as such a concept might be, it would no doubt prove impossible to reconcile with the practical realities of historically-minded comparative research.

3. The concept must provide for a clear cut delineation of societal boundaries

Deference to the literature does, however, create problems with the need to delineate clear and unambiguous societal boundaries. The importance of this need is easily understood: the measurement of differentiation in a particular society requires one to make sharp distinctions between units that are inside and units that are outside of the society in question. Any ambiguity on this point could result in significant problems with the validity of one's conclusions. Combining two culturally distinct populations in the analysis of a single 'society' may, for instance, lead to an overestimation of heterogeneity in that society's practices or beliefs, while improper and overlapping distinctions create the kinds of methodological difficulties discussed above.

Because societies lack a self-evident spatial boundary, equivalent to the 'skin' of an organism, delineation of 'inner' and 'outer' relies on the distribution of relevant traits among populations of societal elements (usually human individuals). Such distributions will, however, rarely provide one with clear and inarguable discontinuities. Societies seem to share this trait with biological species, the delineation of which also involves arbitrary incisions in continuous distributions, and it is of no coincidence that definitional difficulties plague both concepts. A species may, as discussed above, be defined as a group of organisms which actually or potentially interbreed, but interbreeding can range continuously, "from complete interbreeding through intermediate stages to a total lack of interbreeding" (Sokal and Crovello 1970, 133). Interfertility, too, is not an either/or, but involves an average level of reproductive success which is "greater than an arbitrarily established value" (Sokal and Crovello 1970, 133).

Similar issues arise in the definition of societal boundaries. Of the nine criteria identified by Naroll, none provide for clear discontinuities. For example, the criterion of linguistic intertelligibility seeks to define societies as groups of individuals who share a common language or can understand one another. Yet as Naroll (1970, 727-728) notes, there are "serious classification problems" which accompany discussions of intertelligibility, and a range of operational difficulties are presented by the existence of linguistic continuums. Likewise, attempts to consider native names or self-identifications must deal with the fact that some individuals are unsure what ethnic

labels best apply to themselves, or may, if living in boundary regions, identify with both of their bordering communities (Naroll 1970, 730).

The criterion of political organization, one of the more common in the literature, fares no better. According to Nadel (1951, 187), the limits of political organization provide for the best definition of societal boundaries because the two concepts are, in both academic and lay discourse, essentially synonymous. Though Nadel's (1951, 187) own definition is broader than this, and considers a society as the widest population held effectively together in a group, he acknowledges that the political unit – defined as "the aggregate of human beings who coordinate their efforts for the employment of force against others and for the elimination of force between them, and who usually count as their principal estate the possession and utilization of a territory" – will nearly always be the entity which combines "greatest effectiveness with relatively widest compass." The precise boundaries of such entities are, however, quite often difficult to determine, and are in many cases a subject of both scholarly and social dispute.

All this suggests that the boundaries of social units are fluid, porous, and indistinct in nature, and that membership of these units is ambiguous, overlapping, and often in dispute. This leads to significant problems for the analysis of functional differentiation. Consider, for instance, what has become known as Galton's problem, or the problem of how one assures statistical independence in a comparative study of societies. Because social traits are often spread by diffusion, migration, and conscious borrowing, one cannot assume that the occurrence of a feature in one society has no influence on the occurrence of that same feature in another. Thus a correlation between two traits across a sample of societies may be due to a causal or functional relationship between the traits, but it may also be attributable to the common historical association of the sampled societies, or to reciprocal social relations between them (Marsh 1967, 297). This problem is obviously exacerbated if one treats *all* societal boundaries as ambiguous, subjective, or arbitrary in nature, and if one therefore argues that elements within societies overlap or intermingle (Marsh 1967, 13; Zelditch 1971, 283). We would be left, as Blalock (1960, 145) notes, with a situation analogous to that of a deck of cards in which each card "gradually shades off into the others so that it is difficult to determine where one card ends and another begins," and in which each would, moreover, "be capable of influencing the face values of its nearest neighbours."

A conceptual apparatus of this kind would leave us unable to determine whether our observations were independent, and our ability to verify statements about intrasocietal dynamics, including those associated with functional differentiation, would thus be greatly limited. If, for instance, national economies are interlinked to such an extent that one should speak of a single 'capitalist world system', rather than individual national economies, then the influence of changes in economic structure would not be confined to a single national society. Statements about both the causes and consequences of economic differentiation within such societies, such as Durkheim's proposition regarding population growth and the division of labour, would struggle to claim that different nations possess different 'levels' of economic differentiation, and regardless they would have no independent cases with which to verify the existence of a dependent relation between this variable and others.

4. *The concept must allow for the analysis of functional mechanisms*

The above material challenges the idea that societies are unified wholes, bounded systems, or independent totalities, which array their constitutive units within a "common, all-embracing architecture" (Wolf 1988, 757), and which can therefore be said to house an independent economy, political system, family structure, religious culture, and so on. The theory of functional differentiation is, however, heavily dependent on these very ideas – indeed, theorists of differentiation, particularly Spencer and Durkheim, played a key role in their development and propagation. As Barberis (2003, 53) argues, the late nineteenth century saw a swift transition in the ontology of the social. In the span of three decades, one witnesses a shift from frail, amorphous notions of society, insufficient to promote general confidence in the possibility of *social* science, to a situation in which "neither the reality of society nor the need for sociology were any longer in question" (Barberis 2003, 52). The analogy between societies and organisms, extensively developed by early differentiation theorists, was central to this achievement. Though it soon lost favour in the discipline, its implications continue to be felt in both scholarly and lay discourse – for it did not merely legitimize sociology as a discipline but in many ways contrived society as an object of inquiry (Barberis 2003, 52).

Should one seek to wind back this historical trajectory, and advocate an alternative path (as Latour (2002) has done with reference to Tarde) one would effectively foreclose the

research tradition presented in this thesis. As has been repeatedly stressed, this tradition relies on a mereological model of functionality, or on the idea that components function *for* society as a whole. If one treats societies as nothing more than analytic abstractions, or as purely metaphorical or ideal entities, then one could only apply theories of functional differentiation at lower, sub-societal levels of analysis – such as in the analysis of role structure within an organization or family. At the societal level, one could only speak of the differentiation of activities, or at the most of functional diversification with reference to activities that are 'functional' for individuals, rather than for societies or some variant thereof.

Put plainly, the theory of functional differentiation needs to be linked with a social ontology in which societies are treated as concrete entities: as units which can exist and which can cease to exist. In the absence of this, the functionalist language of health, maintenance, or preservation has no clear referent. The literature on societal definition does, however, fail to inspire confidence in this general position. Not only is it difficult to identify the 'skin' of society, it is further difficult to find any consensus on the criteria by which one can judge a society to have 'died' – i.e. collapsed or disintegrated (Faia 2005, 43). As Faia asks:

> "If…a social organization is 'absorbed' by another, has it ceased to exist? If an organization 'breaks up,' or is 'partitioned' (as in the case of Poland around 1795) by its enemies, at what point has it failed to survive? Can a society cease to exist through mass apathy? Can rates of social deviance become so high, or failures of social control so massive, that an organization thus afflicted may be said, at some point, to have terminated? These questions are not merely rhetorical: at least one scholar has answered each of them in the affirmative." (2005, 43)

Answers to such questions rarely emerge from definitions alone, for most definitions of society are too vague to provide guidance on ambiguous cases. For example, Parsons asserts that self-sufficiency is an essential requirement of a total social system, meaning that the loss of self-sufficiency would indicate the loss of society status (Parsons and Shils 1951, 196). A similar criterion is used by Aberle et al. (1950, 101), who conclude that society is a "self-sufficient system of action which is capable of existing longer than the life-span of an individual…." In both of these cases we are not given an unambiguous, operationalized definition of self-sufficiency – instead this notion is

discursively defined (as, for example, the capacity of a society to provide structures by which it can meet its functional pre-requisites).

It is, however, at this level that the real conceptual difficulties arise. In judging self-sufficiency, we are told that participation in political structures, as well as "the nature of economic ties, the degree to which value-systems are shared, and the like" are all worthy of consideration, and that "the decision as to the distinctness of two or more aggregates as societies rests on the analysis of all aspects of the systems of action, and not merely of a single variable, in their consequences for the self-sufficient character of the systems of action" (Aberle et al. 1950, 102). As a result, such decisions are left relatively unconstrained. Distinguishing different societies, and demarcating states of societal 'death', is in large part left to the taste and inclinations of the theoretical observer, who is given a set of analytically salient variables rather than a stringent system of conditions or thresholds.

It is worth considering *why* further specification proves so difficult. One answer is that debates over conceptualization are not confined to scholarly discourse, but are of relevance to both the moral and political debates of lay citizens (Ingold 1996, 47). This is likely to dampen the possibility of scholarly consensus, save for at the most abstract levels of conceptualization. Swanson (1960, 44), for instance, considers societies to be "relationships among members of the same ultimately sovereign organization." By this it is meant that the members of a society are members of an organization which exercises "original and independent jurisdiction over some sphere of social life," and is "more inclusive in its membership than any other organization acknowledged as sovereign by a particular population" (Swanson 1960, 44). This is assessed through specific criteria, such as whether the group or its representatives meet once per year, whether it is considered legitimate by its members, whether it is an agency of another organization, and so on (Swanson 1960, 43-44; see, for discussion, Marsh 1967, 13-14).

One can agree to all these broad points only to be embroiled in debates when further specification is required. If, for example, it is agreed that a society is an "ultimately sovereign organization," and if it is likewise agreed that one aspect of this is that a society must not be an agency of another organization or society, one would still expect fervent debate as to how one establishes this, and how one's definition should speak to cases of colonization, regional unions, and so on. This means confronting the normative

question of just how much autonomy needs to be compromised before a particular social entity becomes a vassal or sub-element of another, in which case scholarly issues of definition and measurement – disputatious at the best of times – are brought into direct contact with a range of highly contentious public debates.

The other issue is that conceptual specification requires one to postulate cut-off points, which are generally recognized as arbitrary and which are therefore subject to little agreement. The requirement of self-sufficiency, for instance, cannot be an all or nothing proposition: for only completely isolated societies would then be worthy of the name. One must instead introduce an arbitrary point at which a particular population is too reliant on another for the first to be considered a society, and even if one could agree on an operational measure of reliance there may be no good theoretical reason for declaring a particular point in the scale to be indicative of societal collapse. The best method would be to show a deterministic association between the crossing of that point and a change in the entity's attributes, such as is demarcated by the boiling point of water, but regularities of this kind are not likely to be documented for societal entities.

Regardless of their source, ambiguities in the temporal boundaries of societies create problems for the comparative study of functional differentiation. Some of these relate to the question of how one defines social functions, which we will further explore in the coming chapters, but others are tied to sampling requirements of comparative research. It is, for instance, necessary to consider whether, in a discussion of two historically *distinguishable* societies, we are not in fact discussing one continuous society which cannot be said to have collapsed at any point. The same problem exists in reverse, as an entity that seems to have persisted as a single society may in fact have undergone distinct societal phases which are best kept discrete in analytic comparisons. Questions of this kind can have significant ramifications on a comparative analysis. Should, to take Faia's (2003, 43) example, an individual be considered a member of Polish society before the third partition, and then a member of Prussia immediately thereafter? Insofar as behaviours or beliefs of individuals will necessarily inform conclusions about the structural attributes of societies, questions of this kind need to be decided.

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Considering the above, one wonders whether it is possible to sustain the image of society which theorists of functional differentiation have cultivated. Whether such

theorists take, as their basic model, an organism, a machine, or an abstract system, society is always understood as a bounded and cohesive entity: an empirical whole made up of a "limited number of readily identifiable parts" (Leach 1971, 6). On a purely practical level, this basic idea does not present many difficulties. The history of comparative macrosociology shows that one can choose specific boundary criteria, operationalize them in a particular way, draw societal boundaries, and delineate general attributes of the elements contained therein. The point of contention is not whether this procedure is *possible*, but whether, considering the above problems, the lines thereby drawn will have any utility vis-à-vis the explanatory aims of sociology as a discipline or of differentiation theory as an apparatus therein.

For many, one must answer this question in the negative. Leach, for instance, argues that comparative macrosociology, of the kind pioneered by Murdock:

> "…rests on the assumption that the population of the world can usefully be divided up into a limited number of mutually exclusive named societies and that, if this is done, the cultures of these different societies can be discriminated by drawing up a long list of ethnographic facts and noting whether each listed item occurs or does not occur among the reported customary behaviours of each of the peoples concerned." (1960, 137-138)

Leach's (1960, 137-138) primary issue with this approach is that it must consider societies as neatly bounded entities, whose unique practices, beliefs, and customary forms can be reduced to values in universal variables. China, Leach (1964, 299) notes, is a single state, but persons of "Chinese culture" live both inside and outside of this state; speak a number of mutually unintelligible languages; and follow a diverse array of customary practices. How is one to assign a specific level of differentiation to 'Chinese society', considering the ambiguity of its boundaries and the heterogeneity of its patterns?

In making this claim, Leach (1964, 137-138) attacks what has been termed the "total society" view (see Vallier 1971): the idea that societies are "discrete entities composed of further discrete entities" (such as subsystems, sectors, or institutional spheres), each of which is neatly housed, and homogenous across, the societies in which they are situated. China provides one potential counter-example, but others are numerous. Zelditch (1971, 285), for instance, has questioned whether modern Italy can rightfully be treated as a single societal case. Though North and South Italy are united by a

common currency, a single school system, and a highly centralized polity, divergences are evident in culture, folklore, tradition, production, and language (Zelditch 1971, 285). Cases of this kind prompt Zelditch to argue that 'societies' are best treated as flexible analytic units, rather than concrete entities. A comparative study of school systems would, for instance, likely find it useful to treat Italy as a united society. By contrast, a comparative study of family structures would likely wish to recognize that "no more different family structures could be found than [those] of urban Tuscany and…[those] of rural Calabria" (Zelditch 1971, 285; see also Vallier 1971, 208-216). This obviously creates issues if the level of differentiation between education and family is treated as a societal level attribute.

Just as intra-societal variation provides a significant challenge to the total society view, so too does the overlap of societal 'components'. As Runciman (1989, 5) argues, roles and institutions, traditionally thought of as being 'housed' within particular societies, will often transcend their supposed boundaries; as a result it is hard not to think of these boundaries as fluid, tenuous, and ambiguous. Likewise, Mann (1986, 16-17) holds that the individual has, for most of human history, not lived in a "unitary society" – i.e. an entity in which the boundaries of economic activity, political authority, linguistic continuity, cultural community, and other such phenomena each correspond – but within intersecting networks of social interaction, the boundaries of which fail to add up to a single unambiguous border (see also Wolf 1988, 757). The former model may, as Runciman (1989, 5) notes, prove accurate in the case of an "independent autarkic *polis*, or an isolated and homogenous linage group, or a nation state with clearly delineated frontiers, a common language, an autonomous government, and a stable population," but "no society strictly conforming to these ideal types has ever existed for any length of time, and even societies which come anywhere near [them] are rare enough."

Criticisms of this kind attack the basic assumptions of comparative macrosociology, which were in no small part developed and advanced by central figures in the differentiation tradition.[3] For the comparative approach, it is essential that the societal entities being compared are discrete, autonomous, and statistically independent systems,

[3] Schriewer (2006, 322), for example, argues that the basic framework of cross cultural comparative study was decisively shaped by Durkheim and his followers, who are said to be responsible for the "single-society model": the idea that the world is composed of a "multiplicity of clearly distinguishable, autonomous societies thought to develop by virtue of essentially endogenous forces" (see also Tenbruck 1981). This point is further supported by Ragin and Zaret (1983, 737) who note that "[c]ontemporary applications of statistical methods to cross-societal data follow Durkheim's comparative strategy."

such that patterns of relations between variables within them can be treated as "emergent features," reflective of "permanent causes" or universal social laws rather than historical influence (Ragin and Zaret 1983, 737). In other words, the rationale of cross-societal comparative study, insofar as it has been shaped by the "logical premises of modern experimental science," implies an "…unequivocal distinction between units of comparison conceived as mutually independent and virtually self-sufficient entities, suited, exactly because of this, to meeting the experimental logic of analysis" (Schriewer 2006, 321).

Considering the conceptual difficulties presented above, it is hard to mount a strong defence of these starting assumptions. While one can certainly delineate consistent criteria by which to assign individuals to a particular societal grouping, it seems implausible to suggest that the 'societies' thereby described are not simply abstract sets, devised by scholarly fiat, which do not reflect the empirical realities of social behaviour and are likely to be of little utility in attempts to explain it. As Schriewer (2006, 321) argues, to envisage the world as a population of "clearly distinguishable entities…coherent in themselves due to internal homogenization processes," is to "ignore the manifold relations of influence, filtration, interference or interdependence which have, to varying degrees, always been in existence between historically concrete units of analysis." Likewise, to consider these entities as bearers of comparable attributes, and to, with this aim in mind, formulate these attributes as highly abstract variables, is to overlook the many ways in which the meaning of certain traits can vary across societies (Ragin and Zaret 1983, 739). It is questionable that decisions of this kind will have a positive effect on one's ability to explain social phenomena.

This is not the place to make authoritative judgements on the possibilities of comparative macrosociology. It is enough, for the present thesis, to note that the possibility of differentiation theory – at least as envisaged by its early progenitors – depends on the formulation of a society concept which complements this theory's intentions and reach. Because theories of differentiation typically treat this quality as a societal *attribute,* measurable in principle in every society, and because the purpose of this is to discover concomitant variation vis-à-vis other such attributes, the society concept demanded by this theory is of a very particular form. It does not require that societies be composed of people, or communications, or particular elements of any kind, but it does require that it is plausible to conceptualize societies as discrete, independent,

and boundary maintaining entities (or, quite simply, as *systems*) (Ragin and Zaret 1983, 737).

The argument, simply expressed, is that comparative research is facilitated when the units being compared are "definite, identifiable, and bounded" (Vallier 1971, 251). The comparative study of formal organizations is, for example, relatively uncontroversial because organizations tend to fit this pattern (Vallier 1971, 251). By contrast, the typical units of macro-structural comparative research, such as institutional spheres, communities, regions or societies, seem to be far more indistinct (Vallier 1971, 251). If this is accurate, and if, then, one finds the systemic model of society dubious, one is likely to be rather pessimistic about the explanatory possibilities of variable-oriented, societal-level comparative analysis, and of the utility of treating differentiation as a universal comparative variable. This would naturally result in a strong repudiation of the research tradition presented in this thesis.

One faces similar problems in the analysis of social structure, our topic of investigation in the next chapter. If structure refers, in its broadest sense, to a certain arrangement of units or parts, then an analysis of structure relies on one's ability to identify these units and to 'map' their relations. An analysis of this kind is obviously hampered if a systemic model of society proves unsustainable. Indeed, critics of this model often display skepticism towards the very idea of macro-social structure, if by this we mean an "identifiable, durable, and relatively stable sociological 'shell' which is coincident with the total geographical territory of a sovereign nation" (Vallier 1971, 210). This is, for example, the position of Vallier (1971, 210), who argues that intra-societal variation contradicts the conclusion that there is a single, overarching organizational arrangement that can be thought of as a societal attribute. In Vallier's (1971, 210) view, sociologists should instead focus on the comparison of lower-level "behavioural arenas," such that they would not speak of different levels of structural differentiation in different *societies*, but would rather compare the level of structural differentiation in more definite sub-societal units (such as civil service organizations, welfare agencies, or universities), disregarding their particular societal setting.

In the following chapter, we will bracket these potential objections in order to examine some enduring questions in structural analysis. That is, we will consider what it means for one committed to the idea of cross-societal analysis to observe, chart, or otherwise

measure social structure, and will address some prominent difficulties in analyses of this kind. Our primary interest is the 'parts' of which societies are composed, specifically those which may be thought to perform functions for their containing society. In drawing societal boundaries, one delineates a population of units which belong to a particular society, but nothing has yet been said about the kind of elements which are thereby circumscribed, nor about how these elements can have or bear functions. One may, considering the above material, be skeptical about the merits of these inquiries, but it is important to note that many of the issues in the following two sections, whether ontological, epistemological or methodological, impinge on sub-societal analysis as well. Even if one agrees, with Vallier, that comparative analysis should focus on sub-societal units, an analysis of differentiation within such units follows the basic analytic structure outlined above, in which units perform functions for an overarching unity. It is, then, useful to explore the sociological connotations of these key terms, and to consider the options available for their study.

CHAPTER SIX

Considerations in the Analysis of Societal Structure

For functional differentiation to operate as a comparative concept, one must first specify the boundaries of comparable entities. These boundaries must then be thought to include a series of discrete parts, whose functional relationship with the entity in question is the subject of the analysis (Bates and Peacock 1989, 566). If, for example, the higher-order unit is a manufacturing organization, then functional differentiation may describe specialization in various productive roles. Roles, and the relations between them, make up the structure of the organization, and this structure would become more differentiated when tasks previously allocated to one role are divided between two or more separate roles. For the theorists discussed in this thesis, the higher-order unit of analysis is typically society itself, and functional differentiation is generally used to refer to the specialization of units *within* and *for* society.

Just what are these units? What is their fundamental nature? How can their differentiation be assessed? These questions raise a series of ontological, epistemological, and methodological issues, none of which seem amenable to simple solutions. Three major points of contention will be addressed in this chapter, those being: (1) the question of which entities should be treated as structural units in an analysis of societal differentiation; (2) the question of how best to conceptualize these structures; and (3) the question of how one should address inconsistency or heterogeneity in structural patterns. Many other issues impinge on structural analysis, but sufficient consideration of these three should clarify the major obstacles faced in functionalist conceptualization.

It must be stressed that the following is concerned with analytical questions about structure alone, and not with the setting in which these structures are located or the precise meaning of the function term. For the present, it is assumed that structural units can be treated as elements in discrete societies, and that the action of these units can in at least some cases be considered functional. Extended treatment of the former assumption is provided in the previous chapter; treatment of the latter will be held until the next.

1. The basic elements of social structure

In the literature on functional differentiation, the question of 'what' differentiates is usually answered with reference to a specific kind of macro-structural unit, initially modelled, by Spencer, on the biological notion of organ systems. These units have variously been described as functional *institutions* or functional *subsystems*, and it is the differentiation of these entities which one has in mind when speaking of differentiation theory as a general project in sociology. While all four of our major theorists refer to such entities, they disagree on their nature, their concreteness, and their amenability to empirical analysis. This situation has led to a great deal of confusion about the meaning of the differentiation term. If units of this kind are to form the foundation of a comparative research project, greater clarity will have to be obtained about their precise nature, as well as about the feasibility of inquiries which seek to determine their existence, number, or level of autonomy.

A major problem in this endeavour is that structural units are "seldom adequately defined on their own terms – qua structures" (Sartori 1970, 1047). As Sartori (1970, 1047) notes, the question of what structures *are* (i.e. of 'what is') is too often conjoined with the question of what these structures *do* (i.e. of 'what for'), such that structures are "almost invariably perceived and qualified by [their] salient functions." An election, for instance, might be defined as a "means for electing office holders," just as a legislature might be thought of as an "arrangement for producing legislation" and a government as a "set-up for governing" (Sartori 1970, 1047; Dowse 1966). The question of what these entities actually *are* is typically left open, or is answered in vague and ambiguous terms.

This problem is exacerbated in the case of functional subsystems, because the very term conjoins the notions of function and structure. It is thus quite difficult to describe what these systems actually *are* without considering their function. Turner, for example, defines a functional institution as:

> "…a complex of positions, roles, norms, and values lodged in particular types of social structures and organizing relatively stable patterns of human activity with respect to fundamental problems in producing life-sustaining resources, in reproducing individuals, and in sustaining viable social structures within a given environment." (1997, 6, emphasis omitted)

This definition explains both the *elements* and *purposes* (i.e. functions) of institutions, but gives little shape to the term itself. We are told that institutions are 'complexes' (i.e. systems), but it is not clear that the 'parts' of these systems need to interact or cooperate in a particular way, if at all. Instead, these 'parts' seem to be parts only because they are each oriented to the same functional end. This suggests that functional institutions *are* functions more than they *bear* functions. Instead of being seen as discrete or concrete entities in their own right, they may be better conceptualized in the Parsonian manner: as analytically derived reference problems which structural components may address.

If this is correct, then attempts to treat functional subsystems as units which differentiate will generally result in conceptual confusion. As our earlier discussion indicates, processes of functional differentiation are typically thought to involve a *change* in the functional orientation of structural units. This cannot be the case with functional subsystems, because such entities are defined *by* their function. If, for instance, one follows Turner (1997, 9) in defining the economy as "the institutional system that organizes members in a population for the purpose of gathering resources from the environment, converting them into usable commodities through production, and distributing these usable commodities of production…," then the economy cannot, by definition, perform a different function. An assessment of the economy's level of differentiation would have to refer to the degree to which this system's component parts also participate in other functional institutions.

The question, then, is just which entities can be treated as component parts. Unfortunately, there is a great deal of inconsistency on this point. Wide-ranging variance in the conceptualization of the structure term has led to a proliferation of unit catalogues, many of which use idiosyncratic terminology, or unique definitions of common terms. For example, Turner's above definition includes four structural units: positions, roles, norms, and values. Parsons also speaks of four units, though in his case they are roles, *collectivities*, norms, and values. Though relatively close in nature, the omission of collectivities in Turner's catalogue creates a significant difference, as does the inclusion of both positions *and* roles.

Differences in unit catalogues leave decisions to be made. Which units are to be used within our measure of differentiation? Should we only count functions performed by one type of unit, or should we instead focus on a wider range of entities? The former

option is obviously more practical, for a measure of differentiation which demanded an account of *every* possible type of structural unit would likely prove unduly onerous. At the very least, one would wish to avoid overlapping or redundant terms. It would, for instance, likely be unnecessary to consider both roles and positions as distinct structural units – at least for this kind of analysis. As will be explored in the following section, roles are usually defined either as the expectations which a group has of a recognized position or as the actual behavioural patterns associated with position incumbents. In both cases, it is simpler to speak of the function of the position *as defined by the role*, rather than speaking of the role itself as having a function.

The same may be said of norms. In Parsons' (1960, 124) definition, norms are "generalized patterns of expectation which define differentiated patterns of expectation for the differentiated kinds of units within a system." In this case one would again want to speak of the functions expected of the "differentiated kinds of units," rather than the functions of the norms themselves. The norm, like the role, assigns a function to a unit, and the norm itself is only 'functional' to the extent that it encourages the unit to produce this behaviour. This does not mean that one should ignore either roles or norms; rather they should be treated as units of *investigation*, using which one can examine the assignment of functions to units of *analysis*. In most accounts, two kinds of units are generally included in the latter category: social positions and social groups (see Smelser 1959, 2, who terms them 'roles' and 'organizations'). It is likely that terms beyond these would be largely unnecessary if not actively detrimental to the analysis of differentiation.

Regardless of the particular units chosen, it is important for researchers to be explicit about their decisions, and to recognize how conceptual choices may impact their results. For example, in assessing Parsons' claim that the religious *institutions* of American society have gradually become more specialized (or have come to focus on religious functions alone), Sykes (1969) notes that many religious *groups* actually gained functions over the course of American history. Whereas colonial churches were limited to "worship, prayer, hearing the Word of God as interpreted by the minister, and participating in the sacraments," the contemporary church is, Sykes (1969, 294) argues, implicated in an "elaborate network of men's clubs, sewing circles, athletic and recreational activities, discussion groups, adult education classes, and social reform committees." At the same time, Sykes (1969, 296) also notes instances of functional

divestment in clergical *positions* – arguing, for instance, that the clergyman's role as a public educator, common in the first two and a half centuries of American history, began to wane with the rise of private secular teachers.

If one only examined groups (i.e. organizations or collectivities), then the above changes would register as a *de*-differentiation of religious institutions; if only positions, then the opposite. If both are combined in the same measure, then the results would depend on the exact number of positions and groups in play, as well as the exact number of functions being gained or dispossessed. One's conclusions would also depend on whether a single instance of *position* differentiation is considered equivalent to one of *group* differentiation. If not, then one faces the tricky question of how to weight the units in question. This is all the more reason to restrict one's analysis to a small number of unit-types, if not a single type alone.

2. The nature of structural elements

Assuming that one can settle on a particular catalogue of structural units, one must then confront the issue of how these structures should be defined. Definitions of the structure term are, however, relatively ambiguous, and generally encompass several different structural 'modalities'. For example, Brown and Barnett (1942, 31) define social structure as "the placement or positioning of individuals and of groups within [a] system of obligation relations," and argue that there are three ways of analysing this system. One can ask the members of a society "what an individual should do under given conditions"; what an individual "may be expected to do" under these conditions; or can "observe what many individuals actually do under these conditions" (Brown and Barnett 1942, 31-32). These methodological prescriptions give the sense that the 'structure' term encompasses three distinct meanings, those being: 1) shared expectations of *ideal* unit behaviour; 2) shared expectations of *anticipated* unit behaviour; and 3) statistical regularities in *actual* unit behaviour (Brown and Barnett 1942, 31; Gross, Mason and McEachern 1958, 60-61).

Sociological theory has gathered a wide range of different terms to describe these three modalities.[1] For example, the distinction between structure as a set of ideal norms and

[1] Normative expectations and predictive anticipations have, for instance, also been referred to as *injunctive* norms and *descriptive* norms (Cialdini, Reno and Kalgren 1990). Other scholars have followed Gibbs (1965) in designating the former as "collective *evaluations*," and the latter as "collective

structure as a pattern of actual behaviour is conceptually equivalent to Leach's (1961, 296ff.) well-known distinction between *jural rules* – norms or customs supported through sanctions – and *statistical norms* – averages of individual behaviour (see also Nutini 1965, 711). Approaches targeting the former consider social structure to be a set of "sanctioned rules," while approaches examining the latter treat structure as nothing more than the statistical "by-product of the sum of many individual human actions" – i.e. as what is "normal" rather than what is "normative" (Leach 1961, 300, 297).

Terminology aside, it is evident that attempts to define structural elements are split on just which of these three modalities to refer to. Take, for instance, the concept of a norm. While some definitions treat norms as statistical uniformities in actual behaviour, others consider them as patterns or 'blueprints' for correct behaviour: rules about what "should and should not be done by various kinds of social actors in various kinds of situations" (Williams 1960, cited in Gibbs 1965, 587). The same is true of the role concept, definitions of which diverge on the question of whether to treat roles as "characteristic behaviours," "social parts to be played," or "scripts for social conduct" (Biddle 1986, 68-69). For example, Davis (1949, 90) argues that roles are defined by "how an individual *actually performs* in a given position, as distinct from how he is supposed to perform" (emphasis changed). Others argue the opposite, and define roles with reference to *expectations* of performance – sometimes predictive (e.g. Sarbin 1954, 225), sometimes prescriptive (e.g. Parsons and Shils 1951, 190; for more examples see Gross, Mason and McEachern 1958, ch. 1-2).[2]

In some cases these various structural modalities are collapsed into one another, leading to a number of problems. For example, Newcomb (1950, 280) speaks of roles as "ways of behaving which are *expected* of any individual" (emphasis added) – yet later in the very same paragraph notes that roles represent the "[actual] *behaviour* of the occupants of a position" (emphasis added). Approaches of this kind mistakenly assume

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expectations." The terms "normative expectations" and "empirical expectations" are also common (see Biccheiri 2006).

[2] Definitions of this latter kind are evident in both Parsons' and Luhmann's work. For example, Parsons (1960, 125) defines roles as "system[s] of normative expectations for the performance of a participating individual in his capacity as a member of a collectivity." Likewise, he considers norms to be "generalized patterns of expectation which define differentiated patterns of expectation for the differentiated kinds of units within a system" (Parsons 1960, 124). These ideas are carried forward in Luhmann's work, which explicitly defines social structures as sets of generalized behavioural expectations held by individual actors (see *SS*, 96, also 303) and which distinguishes between *cognitive* (i.e. predictive) and *normative* (i.e. prescriptive) expectations (*SS*, 293ff.).

concordance between different structural modalities, when it is plain that normative expectations, even of the relatively 'formal' variety (such as those expressed through the law) may have little in common with actors' factual expectations, or indeed with their actual behaviour (Leach 1961, 9). This has been well demonstrated in studies of organizational structure, which regularly distinguish between the formal, prescribed framework of positions and command rules within an organization; the *perception* or internalization of this framework by members; and the ad-hoc, 'day-to-day' network of their regular interaction – i.e. the organization's 'informal' structure (Flynn 2015, 194-195; Hunter 2015, 24). Attempts to measure the structural attributes of organizations must therefore consider which of these modalities is being represented in the indicators under study, for measures that 'tap' one structural dimension often show a lack of convergent validity with measures that capture another (even when they are thought to be expressing the same underlying construct) (see Pennings 1973).

The measurement of functional differentiation as a structural attribute of *societies* faces the same issue. As we have discussed, the application of the differentiation term at the societal level requires one to determine the particular functions performed by particular social units, such as positions or groups. But it is unclear whether the statement that the function of position *P* is to *F*, or that the role of persons in position *P* is to *F*, is a statement about the normative expectations, factual expectations, or actual behavioural patterns associated with *P*. When we say, for instance, that in society *S*, one function of police officers is to enforce the law, are we saying that such actions are *expected* of individuals in this position (in a normative sense), that such actions are *anticipated* of these individuals (in a predictive sense), or that these are the types of actions that such individuals *actually perform* (as a statistical regularity)?

Questions of this kind have significant ramifications for analyses of social differentiation. Say, for instance, one wishes to examine the degree of functional differentiation between legal and economic institutions. According to Luhmann (2004, 392-393), these two institutions (or subsystems, in his terminology) have two different functions: the former is "looking for just, or at any rate, sufficiently consistent decisions…," while the latter is "looking for profits or profitable investments…." One may then ask whether certain social positions are oriented to both of these functions. Thus one would see, for instance, whether incumbents in the 'judge' position are simultaneously oriented to both justice and profit (in their role as judges), perhaps

asking whether the legality of an action is often determined on the basis of monetary enticement.

One's answer to this question will likely depend on the structural modality under study. For example, Helmholz's (2001, 309-310) discussion of the relationship between monetary payments and ecclesiastical judgements in the Medieval church notes a strong "disparity between…accounts of common practice and the formal law," in that "consistent and mordant" criticism of venality among court officials coexisted with prohibition of bribery in canon law. To make matters more complicated, Helmholz (2001, 310) suggests that much of the former criticism can be attributed to disappointed litigants, and that it is likely "that there was actually much less corruption than contemporary criticism suggested." In this case there are clear contradictions between common behavioural norms (which held that judges *should not* take bribes) common factual expectations (which held that judges generally *did* take bribes) and actual practices (in which bribery seems less common than typically thought).

Similar discrepancies can be documented in contemporary nation-states. Countries in which corruption is a widespread and largely accepted practice will, for example, rarely condone it in written law (Campbell 2013, 255; Sheahan 2010, 470). Furthermore, numerous scholars have noted that measures targeting *perceptions* of corruption have poor statistical relationships with measures targeting *experiences* of corruption (see Triesman 2007, 217). Abramo (2008, 1, 5), for instance, concludes that "personal or household experience of bribery is not a good predictor of perceptions held about corruption among the general population," and that opinions seem to behave randomly vis-à-vis experience. As such, countries in which corruption is seen to be a widespread practice will often have much lower levels of actual corruption than these perceptions suggest.[3]

[3] Brazil, for example, has passed various laws prohibiting corrupt acts, and though it has had difficulties in implementing these laws they can be taken as examples of an ideal structure for which such acts are not normatively permissible (Campbell 2013, 262). At the same time, measures of perceived corruption indicate that Brazilians believe their country to have highly corrupt public institutions – meaning that they generally *anticipate* corrupt behaviour in interaction with public servants (Campbell 2013, 264). Studies measuring the *experience* of corruption do, however, offer an opposing perspective. For example, the 2010 Global Corruption Barometer found that only 4% of Brazilians claimed to have paid a bribe, which is a lower percentage than was found for the United States or for any other country in Latin America (Campbell 2013, 267).

An analysis of differentiation using such measures cannot assume that they all correspond, and must instead consider which structural modality should be privileged. If one argues, with Leach, that statistical norms supersede jural rules, then widespread venality would be taken as evidence of a lack of differentiation between legal institutions and economic institutions, regardless of whether such practices were prohibited or generally discouraged. If the opposite position was taken, such that the focus was placed on expectations rather than behaviours, then one may obviously reach a different conclusion. For this reason, it is imperative that differentiation theorists are explicit on the question of modality, and clear about whether statements of functional assignment are representing normative expectations, anticipatory expectations, or actual patterns of action.

3. Heterogeneity in structural patterns

One of the major fallacies in structural analysis – especially where structures are thought of as expectations – is what has been termed the *postulate of consensus*: the assumption that beliefs are uniform across all members of a societal population (Gross, Mason and McEachern 1958, 21). Assumptions of this kind are evident whenever expectations are treated as group properties, or as beliefs held by societies themselves. The fallacy is therefore an instance of misplaced concreteness, in that it locates expectations within a reified collective consciousness rather than in the minds of individual group members. While it is particularly prominent in the study of expectations, it is also evident in accounts which treat structures as behavioural patterns. In such cases there is a clear temptation to treat the actions associated with a particular structural unit as consistent across all instances of this unit (an assumption I will refer to as the postulate of *consistency*).

Numerous examples of these two postulates can be found in the literature. For example, Sargent (1951, 360) argues that social roles involve "…the demands and expectations of *those in the group*," (emphasis added) adding no further qualification. The expectations of the group are thus considered uniform. The same assumption is held by Bennett and Tumin (1948, 96) – who define roles with reference to that which "*society* expects of an individual occupying a given status" (emphasis added) – as well as Linton (1945a, 77) – who defines roles as "…the attitudes, values, and behaviour *ascribed by the society* to any and all persons occupying [a particular] status" (emphasis added). Definitions of

other structural elements also display this issue. For example, Davis (1942, 209) argues that a status is a "position in the general institutional system, recognized and supported by *the entire society*" (emphasis added), while Newcomb (1950, 276) tells us that "both *behaviour standards* and *norms*…are shared by *all* members of any group" (emphasis added).

Of the above, only Newcomb (1950, 281) qualifies the statement presented; indeed he directly contradicts it by later claiming that roles are "ways of carrying out functions" which are only "generally agreed upon" among those who recognize the role. Ambiguities of this kind are typical of definitional work in this area, which will often acknowledge variation in beliefs or practices while disregarding its analytic relevance (Gross, Mason and McEachern 1958, 16, 21ff.). This can, in part, be attributed to certain methodological demands. As Linton (1945b, x) notes, "anthropological conventions have required that cultures should be described in terms of norms of behaviour without reference to either deviations or individuals." This allows the researcher to treat structure as an objective entity, whose dimensions and characteristics can be accurately 'mapped'.

The analysis of differentiation has generally relied on procedures of this kind, and as a result assumptions of consensus are heavily entrenched in its logic. Such analyses typically assume that one can definitively state that a particular unit performs a particular function in a particular society, ignoring the implications of differences in unit definition, divergence in evaluative standards, and deviation in actual behaviours.[4] This is likely to produce misleading conclusions. Regardless of the modality at play, the entities targeted in structural analysis cannot be separated from the beliefs, ideas, and perceptions of social actors. They are not objective units, but are, as Giddens (1984, 26) has noted, something *internal* to individuals. For example, in analysing positions we may speak of either the behaviour which is *expected* of position incumbents or the actual behaviours which these incumbents *display*, but in both cases it must be recognized that the position itself is an abstract classification rather than an operating

[4] Newcomb (1950, 277), for example, claims that "every position which is recognized by the members of a group contributes in some way to the purpose of the group," and that "this contribution represents its function." Likewise, he argues that "societies and organized groups are structures of positions which are organized to reach certain goals"; that "every position" is "associated" with "a body of common beliefs concerning its function" vis-à-vis these goals; and that "these beliefs, or ideologies…, represent one part of the group's system of norms" (Newcomb 1950, 277). Statements of this kind not only display the postulate of consensus, but the postulate of universal functionalism as well.

unit in its own right.[5] It is, in other words, a cognitive construct of individual social actors, which can be more or less shared by fellow actors. Because of this, there is no guarantee that each and every member in a particular society will conceptualize structural units in an identical manner. One person's expectations of the 'family' group might, for instance, refer only to immediate kin, while another's may include a more extended group.

The problem at hand is well described by Nadel, who notes, in his analysis of the role concept, that:

> "…each actor in his role knows about all the other roles from which his own differs in some manner, and is guided by this knowledge in his own actions. We might say he carries a role map of his society in his head, indicating the way in which his role fits in amongst others." (1957, 98)

It is, however, notable that:

> "The map which people carry in their heads may be less than rough and approximate; where the general consensus on the proper character of roles is weak, the maps of different people will altogether fail to tally and to add up to a uniform, unambiguous total map." (Nadel 1957, 99)

Because structural units may be differently conceptualized or recognized across a population, one must question the idea that they are objective, tangible, or discrete units (Nadel 1957, 99). If the objection is upheld, then it is not possible – from a strictly logical perspective – to provide an exhaustive catalogue of a particular society's composite 'parts', save for in hypothetical cases of *perfect* consensus.[6] At best, one can

[5] As Bates and Peacock (1989, 569-70) note, "[t]he collective thing called the class 'plumbers' *does not exist* as a collective entity in the empirical world"; rather it is "an idea or concept in the mind of the classifier representing the perception of similarity among many separate objects." While these authors take this to mean that such categories cannot be structural units, this is largely because they define structures as networks of *actual* interaction between *concrete* units. As abstract classes cannot, technically speaking, interact, it is thought that they should not be considered as structural units in the same way as can actual organizations or role incumbents (Bates and Peacock 1989). Bates and Peacock (1989, 574) do, however, admit that relationships between abstract classes can be represented in "idealized structural forms": "general rules for organizing and forming common types of social units and for behaving in social situations." While these idealized forms are said to be the "contents of social structure," rather than "structure itself" (Bates and Peacock 1989, 574), there is no reason why differentiation theory could not be oriented towards the former.

[6] An example of such an attempt is provided by Denton (1998, 40), who notes that observational data for the study of differentiation (which he operationalizes as the number of distinct structural roles in a society) can be obtained by simply "count[ing] a sum of structured roles observed in an autonomous political unit or seasonal sequence thereof." As our above comments illustrate, this procedure is anything

simply represent the particular 'role maps' of individual actors, and assess the degree to which they are intersubjectively shared.

For the analysis of functional differentiation, this raises the difficult question of how one is to delineate the units under study. Regardless of whether one examines expectations, anticipations, or actual behaviours, one is in each case referring to the actions (expected or actual) of a particular structural unit, and must therefore consider how this unit is defined and delimited by the members of the population under study. If the postulate of consensus is rejected – i.e. if it is not assumed that there are objective structural elements which are commonly defined by *every* member of a societal community – then one must determine how widely recognized a particular unit must be before it can be treated as a component element in a commonly shared *social* structure, rather than as a purely personal entity.

The question of proportion also impacts judgements about functionality. Just as there may be a lack of consensus about the existence or contours of a particular structural element, so too may individuals disagree on what behaviours are proper or common to these units. Indeed, this lack of consensus is one of sociological theory's foundational concerns, as seen in Durkheim's analysis of *la conscience collective*. One simply cannot assume that expectations will be uniform across an entire population. The level of consensus is a variable, not a constant, and will likely be sensitive to a range of concomitant factors. Assumptions about the rights and obligations proper to members of one's family will, for example, typically vary in accordance with economic class, as will views about the statistical prevalence of corruption (see Maeda and Ziegfeld 2015, 3). Higher levels of economic stratification may thus contribute to lower levels of structural consensus.

The situation is no better if one focuses on behaviours rather than beliefs. It must be remembered that in speaking of the actions common to a particular social unit, we are not speaking of units as single individuals, but as elements in a 'shared' (hence social) structure. In asking whether unit *U* performs function *F*, we are not treating *U* as a concrete person or organization, but as a particular *type* of position or collective: 'mothers' rather than *a* mother; 'schools' rather than *a* school. One cannot, however,

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but straightforward; especially because Denton (1998, 49) recommends measuring "idealized expectations rather than actual behaviour of real individuals."

assume that each individual who occupies the 'mother' position, or each group comprising a 'school' organization, will produce identical outputs, and in many cases it will be empirically misleading to say that *all* instances of a particular structural unit perform *F*. Consistency, like consensus, is a variable quality.

This variability creates obvious issues for the direct measurement of differentiation. As we have discussed, empirical, cross-societal studies of functional differentiation generally assume that ideas and practices are consistent across societies, such that one can say, for example, that in 'American society' mothers perform function F_1 and fathers perform F_2, while in some other society mothers and fathers each perform both F_1 and F_2 (for a study along these lines see Zelditch 1956). Statements of this nature operate with distributed subject terms, assuming that *all* instances of *U* (e.g. all 'mothers') perform *F*. If the postulates of consensus and consistency are rejected, then such propositions must instead be taken as generalizations from statistical norms, which express consensus or consistency above some arbitrary threshold marker. *U* would, in other words, be considered to perform *F* if over *n* percent of instances of *U* performed *F*, or if over *n* percent of people believe that instances of *U should* perform *F*. In historical studies, estimates of these quantities would have to suffice.[7]

An example of this procedure is provided by Newcomb, who presents the following comments on the analysis of what he terms *prescribed roles*:

> "If you are interested in drawing a line between what is included and what is not included in a prescribed role, you will have to choose some arbitrary point. For example, determining what is included in a mother's prescribed role in a specific society would involve obtaining the following kinds of information from a representative sample of all the people in that society who recognized that particular position: (1) a list of behaviours which are expected of mothers…(2) information as to whether each behaviour on the list is

[7] For example, an analysis of religious positions in Ancient Rome may conclude that it was *relatively common* for those who performed religious functions to perform medical functions as well. As Israelowich (2015, 45ff.) notes, temple medicine was commonly sought after in high Roman society, in which there was considerable overlap between the rights and duties of religious healers and those of what would today be thought of as specialized physicians (see also Scott 1955, 281). As a result, patients generally expected those who performed religious actions, such as magic or divination, to also treat internal illness, and saw little (if any) distinction between an adept prognostician and a magician or seer (Israelowich 2015, 55, 61, 63). A higher level of differentiation between religion and medicine is obviously evident in the modern West, in which it is *relatively uncommon* for religious functions and medical functions to overlap in the same position. This is especially true if we are speaking of expectations. A modern priest may, for instance, also happen to be a trained physician, but one would likely not expect them to be capable of medical provision *because* they were a priest, just as one would likely not expect a physician to be capable of imparting absolution *because* they were a medical doctor.

> demanded or is merely permitted of mothers. A criterion of 50% agreement that any given behaviour is demanded of all mothers might be set up. In that case, the prescribed role would consist of all behaviours which were considered by at least half of the respondents to be demanded of all mothers." (1950, 281-282)

The direct measurement of functional differentiation would likely need to follow a method of this kind. To determine an overall level of differentiation in a particular society, each structural unit within the society (a single position, for instance) would need to be associated with a list of prescribed or common behaviours. One would then relate these behaviours – ideally in consideration of documented empirical relationships – to particular functional ends, or else would recognize them as afunctional. From this, one could determine which functions, and how many functions, each structural unit performs, which would open up a number of different ways to assess or to measure functional differentiation as a general societal *attribute* (the selection of a particular measure being dependent on one's precise conceptualization).

From the standpoint of the present discussion there are two major issues with this approach. First, there is the issue of how to delineate a single structural unit considering that these entities do not appear to be objective or discrete. Second, there is the issue of how one should handle functional assignments if one cannot assume consensus in belief or consistency in behaviour. Newcomb's method illustrates one possible solution to the latter problem, but it is not without its issues. It is, in essence, simply a way to convert a continuous scale into a binary classification, and any such method is bound to face questions about the acceptability of the particular threshold markers being used. In addition, it will also face challenges from those who believe that it will necessarily obscure important analytic dimensions (see Labovitz and Hagedorn 1973, 299; Gross, Mason and McEachern 1958, 35, 30-31). Newcomb's method will, for instance, consider a unit which fifty percent of a population believe should perform a certain activity to be functionally equivalent to one which one hundred percent of them do. Similarly, it would consider a unit which fifty percent of a population believe should perform a certain activity to have a different functional orientation to a unit which forty-nine percent believe should perform that same activity.

As concerns of this kind are inescapable in any threshold-based classification system, some scholars argue that structure should instead be treated as a matter of degree, or analysed as a wholly quantitative attribute (Labovitz and Hagedorn 1973, 299; Jackson

1966, 36; Gross, Mason and McEachern 1958). Practical issues do, however, make it difficult to recommend this as a general principle. In order to measure differentiation using the method discussed above, functions must be treated as qualitative attributes of units. This allows one to count the number of discrete functions that units perform, much in the same way that treating *beliefs* as qualitative attributes of individuals allows one to ascertain the proportion of individuals who *hold* certain beliefs. At the same time, analysis of this kind should recognize that simple functional assignments (of the kind, "in society *S*, unit *U* performs function *F*") conceal complexity in a number of salient dimensions. Variation can, for instance, be identified in:

1. The way *U* is *conceptualized* – i.e. the boundaries of the 'set' *U*, within which instances of *U* are included as objects.
2. The *contexts* in which instances of *U* perform *F* or are expected/anticipated to perform *F*.
3. The *proportion* of individuals who believe that instances of *U* should/do perform *F*, or the proportion of instances of *U* which actually perform *F*.
4. The *intensity* of expectations or *commonality* of behaviours – i.e. how strongly it is believed that instances of *U* will/should *F*, or how often *U* performs *F*.
5. The *strength* or *directness* of functional performance – i.e. how *much* of a contribution, and how *direct* of a contribution, *U* makes/is expected to make to *F*.

Simple functional assignments should therefore be seen as purposeful simplifications of far more extended formulations, such as "in society *S*, *n* percent of instances of *U* (or of people identified, by *n* percent of a population, as members of the *U* class) *frequently* perform actions which *directly* increase the probability of functional end *F* by *n* percent," or "…*n* percent of people consider it *essential* for instances of *U* to, in a particular context *C*, *sometimes* perform actions which increase the probability of functional end *F* by *n* percent."

Thoughts of this kind introduce significant complexity into structural analysis, and it is obviously not possible for a single metric of functional differentiation to express all of these variable dimensions. Instead, they are best considered in studies of specific structural units or specific points of functional differentiation. In such cases, one can make use of a well-developed body of methodological literature for the analysis of

structural variation (see, for a summary, Bicchieri 2017, 50ff.). For example, one common way to represent normative expectations is the so-called "return potential model," initially developed by Jackson (1966). The model combines a gradated measure of behaviour with a rating scale of approval or disapproval, and thereby allows one to chart a range of tolerable behaviour (see figure 6.1). Calculation of the 'return potential curve' provides a number of salient data points, such as the point of maximum return (the 'ideal' behaviour); the range of tolerable behaviours (the range of behaviours above the point of indifference); the intensity of sentiments (expressed by the height of the return potential curve); the degree of crystallization (defined as the average variance in approval or disapproval across the different behavioural gradations); and general normative power, which is determined by combining intensity scores with crystallization scores (Jackson 1966, 39ff.; Nolan 2014, 837-838).

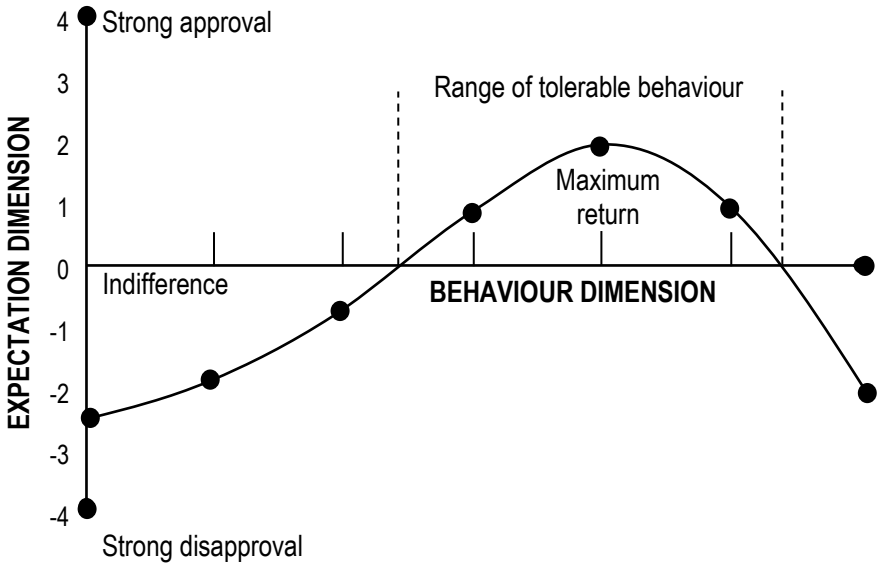

Figure 6.1 – The return potential model.
Adapted from Dunkerley (1970, 293).

Models of this kind can provide a robust picture of the relationship between a particular structural unit and a particular social function, and are applicable whenever performance of the latter can be treated as a matter of degree. One may, for instance, develop a gradation representing the performance of educational instruction, varying from no instruction to high levels of instruction. This could be done with a simple numeric scale, or it could be done using specialized scenarios or vignettes. One could then ask respondents about certain social units (whether positions, e.g. 'mothers' or 'teachers', or collectivities, e.g. 'families' or 'schools'), and gauge the degree to which it is

normatively or *descriptively* expected for that unit to act in the manner described by each step on the behavioural dimension (for examples of similar procedures see Labovitz and Hagedorn 1973; Nolan 2014).[8] Alternatively, the 'expectation' dimension could be replaced with a scale measuring the commonality of behaviours in instances of the unit in question.

Although this model would only provide information about a single structural unit and a single social function, the use of additional behaviour dimensions would allow one to see if performance of other functions is also expected of, or evident in, the action of a unit, and if so at what levels of intensity or commonality. This would give us a comprehensive 'functional profile' of the unit in question, expressing many of the above complexities. These complexities will, however, most likely be lost in any attempt to aggregate such measures into a global differentiation variable. Here, one would likely have to adopt a method similar to that of Newcomb, and to assert, for example, that any unit with an average point of maximum return above that of a certain level can be treated as bearing the function expressed by the gradation, leaving situational considerations aside.

Questions can certainly be asked about the image of social structure which such methods construct, but it must be recognized that any attempt to treat functional differentiation as a single, universal societal attribute will necessarily obscure significant complexity in behaviours or beliefs. This is an unavoidable aspect of abstraction, avoidance of which is not being recommended here. The problem at hand is not abstraction *per se*, but rather the ad hoc and haphazard manner with which many analysts approach the task. Different scholars may, for instance, have widely different ideas about the thresholds at which a belief or practice can be considered common, and will rarely articulate these thresholds as explicit methodological decisions. At worst, generalizations are not even recognized *as* generalizations, because the postulate of consensus (or of consistency) is taken as a starting assumption. In such cases, social structure is presented as a monolithic, unitary system of common belief – over which there is perfect consensus – or common behaviour – from which there is no deviation.

[8] Jackson (1966, 37) explicitly asserts that the return potential model is oriented to the study of normative expectations, in that it is designed to measure how much "others care whether or not a particular act is produced by an actor in a given situation." The model can, however, be refigured to study anticipatory predictions if one replaces the measure of approval/disapproval with a measure targeting the perceived *likelihood* of certain actions. The range of tolerable behaviour would then represent the range of action perceived as *likely* to occur (see Wallen and Kyle 2018).

In critiquing this idea, my intention is to show that general statements about the functions of structural elements will always suppress *some* variable dimensions, and that both the *nature* and the *amount* of variation being suppressed should be a conscious and explicit consideration on the part of the structural analyst. If the procedures by which generalizations are made are not presented as explicit methodological decisions, or if consensus or consistency is simply assumed, then it becomes entirely unclear just how much variation is being concealed. This creates points of inconsistency and ambiguity in comparative analyses, which rely – as discussed in the previous chapter – on pre-existing scholarship to furnish primary data. Consideration of the kind of variation discussed above would help to temper this issue, as would more explicit presentation of the threshold markers which are used in statements of functional assignment. Details of this nature should therefore be examined and presented wherever possible.

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Further development of the above matters brings us into contact with a range of methodological issues, attention to which is best left to specialists. The intention of the present section, and, indeed, of the present part, is not to provide a complete set of procedures for the measurement of differentiation, but to give a rough sense of what such measures would, ideally, look like, and to present some methodological questions which are relevant to their further development. It is recognized that issues of practicality will frustrate many of the above approaches, and that it is not, in the vast majority of cases, feasible to denote each and every function of each and every structural element in a society. The present discussion is, however, primarily intended to be of theoretical import. While I have presented some options for measurement and analysis, these ideas are largely advanced as tools of conceptual development, with which we can evince points of ambiguity in the functional differentiation term. The hope is that conceptual work of this kind can lead us towards a more succinct, grounded, and empirically applicable understanding of the differentiation concept, and can stimulate the development of methods of measurement which can better address the technical problems in play (on this approach see Denton 1998, 70-71).

The present chapter has focused on what it means to ‘map’ a society’s functional organization, or to chart the distribution of functions among its structural elements. For

efforts of this kind, three questions will necessarily arise: the question of which types of structural elements count as discrete, function-bearing units; the question of which 'modality' of structure should be prioritized; and the question of how one should convert complex patterns of belief and behaviour into simple functional assignments. The above material has not prescribed answers to these questions, and has not sought to resolve the disputes which surround them. Instead, it has tried to explicate the decisions which structural analysts must make; to present the range of options which are available to them; and to advocate for more explicit, and more transparent, methodological procedures. My primary message is not that one structural modality is superior to another, or that certain units should be privileged in one's analysis; rather it is simply that decisions of this kind cannot be left as vague and unrecognized assumptions. If they are not addressed in an explicit manner, analysts will continue to talk past one another, and to create needless confusion about the meaning and merit of their conclusions.

Some implications of the preceding material should be examined as a prelude to the following chapter. The present discussion has assumed that structural units can 'have' or 'address' functions. Under a behavioural model of structure, this would mean that concrete instances of structural units produce actions or outputs which are causative of functional effects or states. Under an expectation model, it would mean that such outputs are *expected* or *anticipated* of these instances. Analysis proceeds by coupling *unit-types* with *action-types*, and *action-types* with *function-types*. The intention is not to analyse the specific ends targeted by the specific actions of specific individuals, but to analyse *general* structural patterns, such that abstract, socially recognized positions or collectivities are associated with a list of action types, which are in turn linked with different functions. One may claim, for instance, that incumbents in the *doctor* position are generally expected to diagnose illness, and that such actions are generally expected to enhance individual health, which one may define as a functional end of the *medical* type. One could then say that doctors perform a medical function, meaning (in this case) that incumbents in this position are expected to perform actions which are expected to contribute to medical ends.

Assignments of this kind face a number of methodological and conceptual challenges, in addition to those discussed in the present chapter. First, one must specify what makes a particular effect a *functional* effect. Second, one must determine how certain effects are grouped under the same functional banner, such that one can speak of different

units, engendering empirically distinct effects, as having the *same* function. Finally, if functions are specific types of effects, and if structures 'have' functions when they engender these effects, one must consider the ramifications of our point, articulated above, that functional performance can be a matter of *degree*. Do structures 'have' functions if they make *any* contribution to a functional end, or only a contribution above some degree of significance? Questions of this nature speak to fundamental ambiguities in the concept of social *function*, which is one of the most tenuous and contested terms in the theoretical literature. The following chapter analyses its meaning, its merits, and its critical reception.

CHAPTER SEVEN

Considerations in the Analysis of Societal Functions

What does it mean for a social entity to have or perform a function? I cannot, in the space here allocated, provide an exhaustive account of the debates surrounding this question, nor detail the tumultuous history of sociological functionalism as an analytic paradigm. Instead, I simply seek to determine if *any* of the models of functionality available in the literature can – regardless of their disciplinary provenience – form a cogent basis for the analysis of functional differentiation in human societies.

In the previous chapter, I referred to functions as contributions which units make to the engendering of states or ends. A unit is, however, generally not thought to 'have' a function when it makes *any* contribution to *any* end; rather its 'functionality' is usually tied to particular *kinds* of ends or effects. This raises a simple question: how can one distinguish functions from effects? While it may seem straightforward, the function/effect distinction has proven especially contentious, in large part because it is implicated in debates about the scientific utility of functional assignments. For example, one can distinguish between definitions which treat functions as effects which units are *designed* to produce and definitions which treat functions as effects which *causally contribute* towards a specific kind of state. In the former, the functional assignment is intended to explain the presence of a unit within a system; in the latter, it is intended to explain the presence of a state which is attributable, at least in part, to the effects of the functional unit.

While the question of just *which* effects qualify as functions is relevant in any functional analysis, the measurement of differentiation makes further demands. As examined in the previous chapter, analyses of differentiation have generally posited the existence of a limited set of functional reference problems, often concretized as subsystems or institutions. For this idea to work, one must hold that structurally distinct units can perform the same *type* of function, and one must therefore delineate possible types. These types would be the 'bases' of functional differentiation, or the reference goals of functional subsystems. In assigning units to these subsystems, one must also consider the variability of causal influence, or the question of when a contribution to a particular functional type is sufficiently *strong*, and sufficiently *direct*, for the unit making that contribution to be considered as a component 'part' within that type's

associated ‘subsystem’. We are, then, faced with three major questions: the question of how one defines functions; the question of how one categorizes functions; and the question of the degree of causal influence involved in functional assignments. Each will be examined in turn.

1. *The reference point of the function term*

The distinction between functions and effects is not strictly necessary; indeed some theorists have advocated its wholesale abolition. Adler (1963), for example, argues that sociologists should adopt a largely mathematical understanding of the function term, and should treat any action which increases the probability of a certain state as functional *to that state*, regardless of its desirability. This would divest the function term of evaluative or normative connotations. While this position has its merits, the decision to treat *every* effect engendered by a unit as a function of that unit would greatly expand the number of functions to consider, making an analysis of functional differentiation exceptionally unwieldy.

If one wishes to distinguish *functional* differentiation from *effect* differentiation, then one needs to propose some kind of criteria by which to separate a ‘proper function’ from a ‘mere effect’ (on these terms see Millikan 1984). Several such criteria are present in the literature, including those of design, fitness, welfare, goals, and capacities. The following examines the logic and potential of each.

Function and design

In its most traditional, uncontroversial meaning, the function of an entity is the *reason* or *purpose* for which it was designed. Under this definition, the function term has a clear scientific purpose, in that there is a strong link between functional analysis and historical-causal analysis. The statement: “the function of unit *U* in system *S* is to *F*” is, at the same time, a causal explanation about why *U* is present in *S*: it is present because it was consciously introduced into *S* in order to *F*. This requirement places significant restrictions on functional attributions. Unit *U* may engender a number of effects, but it is the production of a specific effect – the one it was *meant* to produce – which is considered its function.

This position has one obvious disadvantage: it is only applicable where entities have been subject to conscious design. This limits its applicability in social analysis. While

many of the structural units studied in the social sciences are intentionally and consciously fashioned, others are generally thought to develop in a crescive manner (see Davis 1949, 309, who distinguishes between an *office* and a *status* on precisely this criterion). Even if one simply presumes that *all* structural units are purposively designed, it will, in many cases, be extremely difficult to trace their genesis to specific social actors. Moreover, in some cases the progenitors of a structural innovation may themselves disagree about its intended purpose. It is thus not at all simple to determine what a certain social entity is 'supposed' to do, or what kinds of states it was 'designed' to engender.

Sociologists have, furthermore, generally held that certain functions may be *latent* – i.e. unrecognized or unintended. This idea would, if coupled with the above understanding, lead to a clear contradiction – unless it is assumed that all latently functional items were once consciously 'selected' for a now-forgotten or unrecognized purpose. For this reason, sociologists have typically sought a concept of functionality which can speak to the purposiveness of entities without having to assert that this purposiveness is always the outcome of conscious design.

Function and fitness

A similar problem appears in biology, which has sought to describe the purposiveness of biological entities without reference to notions of natural teleology. Efforts in this direction have continued to operate with a design based notion of functionality, but have reformulated it in accordance with the idea of natural selection. This has led to what are typically designated as *etiological* or *selected-effects* models of functionality: models in which the function of a trait is to cause the kind of effects which initially led the trait to be favoured by natural selection (Buller 1998, 506; Wouters 2005, 141ff.). Models of this kind sustain the main advantage of the design approach, in that functional categorizations remain causal explanations. The statement: "trait *T* of organism *O* has function *F*" tells us that *T* is present in *O* because a trait of *T*'s type was present in ancestors of *O* and was causative of effects that enhanced these ancestor's reproductive fitness (Neander 1991, 174).

While etiological models solve the problem of latent functions, in that they allow one to speak of functional traits which were not consciously designed, it is questionable that they could operate effectively in social research. As the above formulation

demonstrates, the logic of the etiological paradigm depends on the presence of reproduction, ancestry, and selection: *T* is present in *O* because a trait of *T*'s type enhanced the reproductive fitness of *O*'s ancestors. Cogent analogues to both reproduction and selection are, however, largely absent in sociology (Elster 1982, 463). As societies do not "reproduce themselves according to species (with slight random mutations) then die," it is difficult to see what quality can be taken as a fitness analogue, and difficult to assert that the perpetuation or elimination of social forms, types, or structures is explicable via a "mechanical principle of selective survival" (Munch 1976, 204-205). Attempts to do so are expected to run into a variety of issues.

It may, for example, be asserted that the fitness analogue is societal survival; a functional trait would thus be a structural feature of a society present in that society *because* of its contribution to survival value. But in the case of latent functions, where this contribution is neither consciously recognized nor deliberately engendered, one has to explain why the feature in question is *retained* (Catton 1967, 10-11). One might, in other words, argue that the unperceived advantages of a structural feature explain the presence of that feature because systems without that feature have expired "somewhat more readily than systems with it" (Catton 1967, 9), but an explanation of this kind can only explain the perpetuation of the feature in question if it can demonstrate that social structures follow an inherent "principle of inertia," such that a society which possesses a particular structural trait or pattern will, in the absence of modifying forces, always continue to carry it (Catton 1967, 11). Without this, it is hard to argue that the activity of the structure in the past could contribute to the retention of the structure in the present. One has to account for the conservation of the structure in the intervening time.

A *lack* of societal survival is, moreover, a relatively rare phenomenon, if by this it is meant the complete dissolution or elimination of a society. As Homans (1962, 27) notes, intrasocietal competition rarely presents itself as a 'struggle for existence'; indeed even cases of explicit conflict usually result in the absorption or diminishment of the less competitive entity rather than its wholesale eradication. This process, which allows for the structural patterns of the 'defeated' society to be preserved and propagated, is a significant challenge to selection analogies, for the infrequency of fatal competition (and thus of differential survival) means that the ability of selection to 'shape' societal traits via the elimination of less fit variants is extremely cursory.

Function and system goals

Without an analogue to natural selection, it is difficult to sustain the idea that social entities are subject to an unintended process akin to purposive design, for there is no way to assert that the *unrecognized* effects of an entity can explain the origin or persistence of that entity in a particular society. If functions are to be treated as the purposes for which entities were designed, preserved, or selected, then one must simply accept that 'latent functions' are mere effects, rather than proper functions, and must be willing to restrict the notion of function accordingly. The alternative is to sever the connection between functional analysis and historical-causal analysis, and to argue instead that functions are the causal contributions which the units in a system make to the specific goals of that system, regardless of whether the units were designed or selected to engender such effects. Theories of this nature, which are more common to the study of physiology than they are to the study of evolutionary history, are usually grouped under the heading of *causal-role* theories, so-called because their focus is on the causal role which a particular entity plays in engendering another phenomenon.

Causal-role models are common in the functionalist tradition and well evident in theories of functional differentiation. Societies, like organisms, are thought to have certain existential needs, and differentiation occurs when there is greater specialization among the parts that fulfil these needs. This paradigm expresses a so-called *welfare* view of functionality, in which the ultimate reference point of the function term is the 'welfare' or 'proper working' of the system under analysis (see Hempel 1965, 304; Nagel 1977a, 290ff.). As explicated by Hempel (1965, 306), the basic idea is that functional statements, of the kind: "[t]he function of item *i* occurring in organism (or system) *S* during period *t* and in environmental setting *C*, is to do *e*," purport that "the effects *e*…satisfy the conditions *n* which are necessary for the proper working of *S*."[1]

The welfare model is a more specific instance of what has been termed the *goal-contribution* view of functionality. Under this model, a structural trait is considered functional if it makes a causal contribution to the maintenance of a goal state in a particular system, or if its presence or action is a necessary condition of that state being

[1] It is recognized that Hempel's theory continues to operate with the assumption that the aim of functional assignments is to explain the presence of the item performing the function (Cummins 1975, 741-742). Hempel's (1965, 313) investigation of functional statements does, however, conclude that "the information typically provided by a functional analysis of an item *i* affords neither deductively nor inductively adequate grounds for expecting *i* rather than one of its alternatives."

achieved (Wouters 2005, 138). The system in question is said to have a certain property (often denoted as *G*), and to be analytically decomposable into a series of "state variables" whose values will determine the presence or absence of *G* (Cancian 1960; Nagel 1957, 247-283). The welfare model can be expressed in these terms, but the goal-contribution model is, in general, a broader approach. *G* could, for instance, be considered the 'proper working' of the system, but it could also be considered an *output* or *capacity* of that system.

Approaches of this kind are common among theorists of functional differentiation. Parsons, for instance, considers a particular social structure to be functional when it makes a positive contribution to the maintenance of equilibrium (here thought of as *G*) in its containing social system. Importantly, the designation holds regardless of whether this contribution is recognized by actors within the society, and irrespective of whether the structure was expressly constructed for this purpose. The property of equilibrium can, furthermore, be disaggregated into a series of variables (the four AGIL functions), adequate 'levels' of which are necessary for equilibrium to be present. A similar approach is displayed in Luhmann's work, in which *G* is variously treated as the reduction of complexity, the preservation of autopoiesis, or the maintenance of a certain level of societal evolution.

Applications of the goal-contribution model have, however, consistently struggled to agree on just *which* states should be taken as the 'goals' of societies. Though there may be a degree of agreement on broad, non-empirical terms (such as 'equilibrium' or 'complexity'), analysts may imbue these concepts with diverse valuational overtones (Hempel 1965, 321), especially considering that the very notion of society – and thus of its ideal or essential characteristics – is a matter of significant dispute (Homans 1962, 24-27). *G* may, for instance, be defined as the 'preservation' or 'survival' of society, or the maintenance of the society at a certain level of 'health' or 'proper functioning', but the difficulty of finding a state in society analogous to that of death in organisms means that it is extremely difficult to fix upon criteria for these referents which can "have fruitful uses and not be purely arbitrary" (Nagel 1961, 527). As a result, it is hard to maintain that certain units are *objectively* or *intrinsically* functional for any society.[2]

[2] The closest biological analogy to societies is thus not organisms – which appear to be intrinsically purposive (Nagel 1977b, 262) – but ecosystems, in that it is similarly difficult to define both the boundaries and the 'vitality' of an ecosystem, and in that the goals or ends of ecosystems are not

Instead, functionality must be defined with reference to the evaluative standards of particular observers, and while any such standard could – if appropriately operationalized – be applied in an objective manner, it is unlikely that its selection would be met with widespread agreement.

Function and system capacities

The same problem occurs if one takes *G* to refer to the *capacities* of a society, as in the model of functionality proposed by Cummins. In Cummins' (1975, 765) view, "[t]o ascribe a function to something is to ascribe a capacity to it which is singled out by its role in an analysis of some capacity of a containing system." In other words, the function of unit *U* in system *S* is said to be *F* when *U*'s capacity to *F* is part of an adequate analytic account of *S*'s capacity to *C* (Cummins 1975, 762). The heart, for instance, engenders physiological processes which causally contribute towards the capacities of the circulatory system. As a result, one can say that the heart fulfils a function in the circulatory system, whose capacity to *circulate* blood could not be adequately explained without reference to the heart's capacity to *pump* blood. Applied to the analysis of differentiation, one would say that societies possess either a single capacity, whose accomplishment can be disaggregated into a series of component tasks, or multiple capacities, each of which would act as one 'base' of differentiation.

There are, however, some issues with this approach. First, if one argues that the function of a social component is relative to some capacity of a society, one immediately faces difficult philosophical questions about when a capacity is an attribute of *society*, rather than of certain social components. That is, one must ask what it means for a containing system to itself have a capacity to *C*, and must answer this in a way that is compatible with the basic logic of differentiation theory. It may, for example, be claimed that a containing system has the capacity to *C* when *all* of that system's contained components are implicated in an adequate analytic explanation of *C*. A position of this kind would, however, raise some difficulties in the analysis of differentiation, which rests on the idea that certain system components can *specialize* in particular functions, and hence become causally *inert* in regards to non-specialty

generally thought to be given in nature (Jax 2005). Thus while studies of 'ecosystem functions' can objectively determine whether a certain variable (biodiversity, for instance) causally contributes to a postulated ecosystem function, the selection of functions generally invokes essentially subjective criteria, and is "always…dependent on the observer and his or her specific questions and perspective of interest" (Jax 2005, 645).

functions. If a certain capacity is produced solely by the action of a differentiated collection of system *components*, one may question whether this capacity can rightly be considered as an attribute of the *system*, or as something that the system as a whole does. If not, then functionally differentiated components would not, by definition, perform social functions. Though they would still produce a capacity, the capacity would 'belong' to the differentiated units, rather than their containing system.

Second, it is by no means self-evident what kinds of effects can count as capacities, and the notion can be stretched to include almost anything that a system might 'do' (Amundson and Lander 1994, 448). This has led to the objection that causal-role models of this kind are excessively liberal in their assignment of functions, and cannot make a strong distinction between functions and effects (see Millikan 1989). If *any* ability or condition of a system can be treated as a capacity of that system, then almost every effect engendered by components could be labelled with the function term. To preserve the function/effect distinction, there must be some way to distinguish between those states or outputs of containing systems which are relevant to a functional analysis and those which are simply mere-effects or by-products of component activity (Cummins 1975, 752).

Attempts to deal with this issue have led to a wide variety of proposals, one being the idea of *constituent functions* (Johansson et al. 2005). The constituent function approach is based on a multi-level system model in which the causal contribution made by a system component to a system capacity is only considered to be a function of the component when the capacity is itself a function of the containing system – meaning that it makes a causal contribution to a capacity of an even higher-order containing system. In other words, an element (at system level S_{-1}) would have a function where it engenders an effect that contributes to the ability of its containing system (S_0) to engender an effect that contributes to the ability of a suprasystem (S_1) to do the same for an even higher-order system (S_2). The function of the heart (S_{-1}) may, for instance, be specified as the contribution which this element makes to the relevant capacities of the circulatory system (S_0), defined as those capacities which make a causal contribution to the relevant capacities of the human body (S_1), and so on.

While this procedure could, in theory, go on indefinitely, one is likely to reach a level at which it becomes implausible to consider the systems being examined as constituent,

functional components within higher-order entities (Cummins 1975, 753). This means that one must be able to, as Cummins (1975, 754) puts it, "analyse at least some functional ascriptions without appealing to functions of containing systems." In other words, one must operate with a notion of either *intrinsic* functions – i.e. functions which are properties of an entity in and of itself – or *imputed* functions – i.e. functions which are projected onto an entity by human beings (Johansson et al. 2005; Johansson 2006).

This limitation is particularly pertinent when considering the utility of a constituent role model in social analysis. If society is taken as a system, and if its parts are taken to be functional if they contribute to the capacities of this system, one must determine which societal 'capacities' are relevant in a functional analysis. It is, however, quite difficult to solve this issue with reference to a suprasystem, and even if one wished to attempt the argument there appears to be no clear consensus candidate for what that suprasystem would in fact be (save for Parsons' rather unsuccessful notion of a 'system of modern societies'). As a result, the analysis of constituent functions will most likely terminate at the societal level. Rather than arguing that elements within a society allow this society to itself perform functions for a higher-level system, one must instead argue that social components enable societies to perform either *intrinsic* or *imputed* functions.

This simply leads us back to the problems of goal-based models. Intrinsic functions are goals that are considered to be objective properties of the systems which house them, and attempts to postulate the existence of such goals have, in the case of societies, proved rather fruitless. Imputed functions, by contrast, are goals which individuals ascribe to systems, and regardless of the system in question the choice of these goals is fundamentally arbitrary. The capacities approach thus falters on the same hurdle as did the goal contribution model, in that it is unable to circumvent normative questions on which little consensus is expected and on which factual rulings are impossible.

Function and human needs

Many of the above problems stem from imprecision and ambiguity in the society term, disputes over which frustrate consensus on the issue of what it means for a unit to contribute to a society's goals, needs, or capacities. For this reason, it has been recommended that one should instead focus on the ways that social units function to benefit *individuals.* The classic formulation of this position is given by Malinowski (1924, 274-275), who claims that the value of societal organization is to be gauged only

by the "manner in which it ministers to the wants of the individuals which constitute it." Under this model, the basic needs of the human organism represent different functional reference problems, to which there are different "cultural responses" (see table 7.1). To apply this model in the study of differentiation, one would examine whether the activities of certain social units causally contribute towards the 'meeting' of these needs. Units which meet the same needs would participate in the same "cultural response" – treated here as equivalent to a functional subsystem.

basic needs	cultural responses
Metabolism	Commissariat
Reproduction	Kinship
Bodily Comforts	Shelter
Safety	Protection
Movement	Activities
Growth	Training
Health	Hygiene

Table 7.1 – Malinowski's catalogue of basic needs. Reproduced from Malinowski (1960, 91).

Approaches of this kind differ in the role they afford to society. Some present a particular variant of the capacities approach, in that they treat the 'function' of a structural unit as the contribution it makes to a *society's* capacity to meet the needs of its individual members. In such cases, societal capacities are not thought of as causal contributions to the capacities of *suprasystems*, but as contributions to the welfare, goals, or capacities of lower-level, subsystem elements.[3] Other approaches bypass the level of society altogether. In line with our above comments, it is argued that the

[3] Models of this kind have been used to describe biological functions at levels of organization above that of the organism (such as colonies, packs, or symbiotic relationships). Fitzpatrick (2000, 172), for instance, argues that the primary level of biological functionality is always the "genetic interests" of the organism, and that systems above this level "get [their] functional nature by virtue of playing a role in the functioning of [organisms]." Likewise, ecological studies generally impute functions to ecosystems when these systems contribute to the satisfaction of human needs or desires (de Groot, Wilson and Boumans 2002, 394). The ecological model is of particular interest because it is often used to study functional redundancy – i.e. the degree to which species in an ecosystem perform similar ecosystem functions (see Ricotta et al. 2016; Mouillot et al. 2014; Holmlund and Hammer 1999; Laliberté et al. 2010). Unfortunately, this literature is not an especially promising source of analogical inspiration for sociological theory, as it seems hampered by many issues. A consistent framework for measuring redundancy is, for instance, not evident (Ricotta et al. 2016), and the 'functionality' of organisms *for* ecosystems remains under-conceptualized. Instead of examining how specific species traits contribute to specific ecosystem functions, researchers in this area typically assume that organisms fulfil different functions whenever they possess unique combinations of physical or behavioural traits (Mouillot et al. 2014, 13761; Laliberté et al. 2010). *Functional* distinctions are thus conflated with *structural* distinctions.

meeting of individual needs is not – in a differentiated society – something that society itself does (acting as a cooperative, functionally organized system), but something that components handle directly. Denton (1998, 37, 68), for instance, operationalizes societal differentiation as the "number of different structured roles in a relatively self-sufficient system of interdependent structured roles that, directly or indirectly, enable individuals in the system to meet their basic biological needs…." In this approach, the 'system' is simply a boundary marker, and has no capacities or functions; it is only a container for the functional relationships between structured roles and human needs.

Because they do not examine how social units contribute to a condition or capacity of a containing society, but instead examine how these units cater to *individual* needs, goals, or capacities, approaches of this latter kind jettison the mereological model. They thus remove us from the tradition of theory favoured by Spencer, Durkheim, Parsons, and Luhmann – in which society is the major reference point of the function term – and move us towards the tradition of Dilthey and Weber – in which 'functions' are nothing more than positive contributions to analytically distinguishable human ends.

The latter model is, however, not without its own problems. It is, in essence, a version of the welfare model of functionality, oriented towards *human* welfare rather than *social* welfare. In comparison to approaches focused on the latter, approaches targeting the former work with a far less ambiguous referent: the survival of the human organism. One would thus expect less disagreement over the meaning of human needs, or the conditions necessary to human welfare. This is, however, only really true with respect to *biological* needs, which are grounded by the relatively objective referent of organic death, and even in this case subjective evaluations intrude (see Clifford 1984). If one was to expand the conception of human needs to include psychological, cognitive, or emotional needs, then one is immediately thrown into a range of longstanding philosophical debates which are no less complex, and no less normative, than those discussed above.

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It appears, then, that attempts to specify the function term prompt difficult decisions for differentiation theorists. If we are unable to provide an objective basis by which to distinguish between functions and effects, we must concede that the 'functionality' of a structural component will always depend on the explanatory interests and normative

preferences of the individual researcher. This does not impede one's ability to *conduct* a functional analysis, but it does mean that functional assignments are likely to remain controversial, even when the underlying causal claims are the same. Two researchers may, for instance, agree that a unit is causally associated with a particular effect, and may further agree that this effect is a *functional* effect according to a particular definition of the function term (each claim being, in principle, verifiable). Whether they agree with this definition is another matter entirely, and we have found no points of appeal to quell the debate at hand. It is expected that this will remain the primary stumbling block for the further development of sociological functionalism, and of differentiation theory as an aspect of it. The alternative, as described at the beginning of this chapter, is to abandon the distinction between functions and effects entirely, transforming the concept of functional differentiation into the concept of 'effect differentiation'. While less controversial in application, pragmatic considerations make this recommendation difficult to endorse.

2. The categorization of function types

An analysis of functional differentiation must not only define the function term, but must group the effects described by that term into categories. If, for instance, one was to deploy a system welfare approach, one would likely disaggregate this particular end into a series of necessary conditions. Thus one might say, for instance, that the 'survival' of the human organism is dependent on the provision of food, shelter, clothing, and so on. A design-based model may do the same, except in this case the 'end' would be the reason for which the system was designed. For example, the various components of an automobile each serve the intended end of this system: motorized vehicular transport. To analyse the differentiation of these components, one must disaggregate this goal into a series of conditions, and to consider which conditions particular parts are intended to contribute towards. Thus the specific purpose of a fuel filter is, obviously, to filter fuel, but it can be said to have the same function as other components in the fuel *system* because the cooperative action of these parts is designed to meet the same general condition of motorized vehicular transport: the supply of suitable fuel to the vehicle's engine.

Categorizations of this kind are an important aspect of any theory of functional differentiation, for the very term speaks to the idea that system components either *share*

or *diverge* in functions. If we simply treat functions as causal contributions to an overarching end (such as 'survival' or 'locomotion'), making no further sub-divisions, then every functional unit within a system would have the same function: to contribute to the overarching end. Alternatively, if we say that each functional unit has been designed for a specific, unique purpose, then it is not possible to say that *any* units share functions – in such cases differentiation would be wholly coextensive with the number of discrete structural units within a system. Ideally, an analysis of differentiation would instead deploy mid-level categories with which to speak of qualitatively different *types* of contributions to an overarching functional purpose.

As is expected, there is a great deal of disagreement over functional categorization, even when theorists use similar models of functionality. For example, both Spencer and Parsons consider components to be functional when they contribute to a state of societal equilibrium. A comparable referent is also given by Aberle et al. (1950, 104-110), who argue that the function term refers to the basic conditions of social existence. Despite each deploying welfare models, and despite Spencer and Parsons each using the same terminology, these three approaches lead to entirely divergent functional catalogues. Spencer subdivides equilibrium into *three* distinct functions (the operative, regulative, and distributive), Parsons provides us with the *four* AGIL exigencies, and Aberle et al. speak of *nine* separate social pre-requisites.[4]

Unfortunately, none of the alternative referents explored in the previous section provide for more stability. Denton (1998, 40), for instance, notes that "a rigorous definition and inventory of basic [human] needs does not yet exist," and while he is confident that different catalogues would closely resemble his own, thirteen point list,[5] the claim is somewhat tenuous, especially if 'basic needs' include not just biological demands but cultural, cognitive, aesthetic, moral, or emotional needs as well. Considering that needs of this kind do appear in Denton's catalogue (such as needs for sex, reproduction, and courtship) one must question his belief that it will meet with significant agreement. As

[4] Those being: (1) provision of adequate relationship to the environment and means for sexual reproduction; (2) role differentiation and assignment; (3) communication; (4) shared cognitive orientations; (5) a shared, articulated set of goals; (6) normative regulation of means; (7) regulation of affective expression; (8) socialization; and (9) the effective control of disruptive behaviour (Aberle et al. 1950, 104-110).

[5] The needs presented by Denton (1998, 41) are: (1) obtaining/maintaining shelter; (2) upkeeping shelter; (3) obtaining clothing; (4) cleaning/mending clothing; (5) obtaining food; (6) preparing food; and obtaining/maintaining: (7) sex/reproduction; (8) safety; (9) health; (10) courtship; (11) mobility; (12) knowledge; and (13) leisure.

with derivations of social needs, it seems impossible to divorce the specification of human needs from the evaluative standards of a particular observer, for any such specification involves controversial issues about what is typically 'human', and about how to distinguish needs from wants (Clifford 1984, 147-148). Catalogues of 'basic' needs are thus never theoretically neutral, and will – even when focusing only on material or biological interests – reflect the assumptions, ideologies, and ethical standards of their creators (Clifford 1984, 148; Diligensky 1981, 172).

Often, the problem in question is not the exact needs or conditions specified, but how the theorist chooses to distinguish them. Denton, for instance, speaks of thirteen basic needs, whereas Malinowski speaks only of seven. The primary difference is not the content of these lists, but that Denton separates needs which Malinowski combines. The same is true of the typologies presented above: the nine point catalogue of Aberle et al. is in many ways simply an expanded version of the four-function paradigm, pitched at a lower level of abstraction. This creates some difficulties for the analysis of differentiation, which relies on our ability to assess the number of unique functions performed by a social unit. As measures of differentiation will be sensitive to the manner in which functions are categorized, one can easily bias the analysis in favour of certain *forms* of differentiation while remaining comparatively oblivious to others.

The problem, simply put, is that we want to say that a unit has *n* number of functions, yet we have no obvious way to describe what counts as a single function. Regardless of whether the term is taken to refer to purposes, needs, goals, or capacities, it is difficult to isolate and to distinguish single instances of these various phenomena from one another, and difficult to know how fine-grained to make one's analysis. This is especially problematic considering that differentiation processes are themselves likely to expand one's conception of what constitutes a distinct behaviour. For example, while both Malinowski and Denton consider "health" to be a single basic need, Corning (2000, 67) presents an alternative catalogue in which "mental health" and "physical health" are treated as distinct, irreducible requisites "for biological adaptation in the human species" – a position which reflects the influence of specialization in Western medical practice. These different approaches would lead to different analyses of functional differentiation. If we were to adopt one of the former two typologies, then we could not draw a *functional* distinction, at least from the perspective of basic needs, between the actions of dentists and those of psychologists: both units would be thought

to contribute to the single need of health. If, however, we were to adopt Corning's (2000) position, these two professions could be said to perform different functions, or to be part of distinct 'subsystems' (and thus to be functionally differentiated).

The question of how best to demarcate distinct functions applies in all analyses of functional differentiation, even those operating at the sub-societal level. For example, it was earlier mentioned that attempts to compare the division of labour across productive firms regularly utilize abstract lists of occupational tasks, commonly found in national labour force surveys (e.g. Akçomak, Borghans and Weel 2011). Such catalogues do, however, often seem to rest on arbitrary and ad hoc decisions. For example, our earlier discussion noted that the *British Skills Survey* considers reading short documents and reading long documents as two distinct tasks, but makes no distinction between manipulating objects of different size. Likewise, it often distinguishes tasks which would, in practice, be hard to disaggregate (e.g. "teaching people" and "dealing with people," or having "knowledge of particular products" and having "specialist knowledge") (Green et al. 2008). Analogous problems can be found in some of the above typologies. Denton (1998), for instance, provides two distinct needs for shelter (obtaining and upkeeping), clothing (obtaining and mending), and food (obtaining and preparing), but only one need each for sex, safety, courtship, health, mobility, knowledge, and leisure. It is questionable whether one needs to distinguish between, for instance, obtaining and preparing food, when one could simply speak, as does Corning (2000, 67), of a single need for nutrition.

The problem of functional demarcation also exists regardless of whether one adopts a decomposition paradigm – i.e. a 'closed' list of functions – or an emergence paradigm – i.e. an 'open' one. The selection of either paradigm will in large part depend on one's opinion about the ultimate reference point of the function term. If functions are thought to relate to basic, biological needs of the human organism, then the decomposition model would likely be favoured, as such needs are relatively static across time and culture. This would also be the case if social functions were thought to refer to the pre-requisite conditions of societal existence. If, alternatively, one was to focus on a broader concept of needs, or to speak instead of societal capacities or goals, then one would likely need to operate with a variable, contingent catalogue of functional types. While such approaches are attractive when considering the potential relativity of social or individual needs, one still needs some kind of method by which to discern when a

particular end or problem is separate from another end or problem, such that one can speak of a contribution to both as being two distinct functions. Only then can one determine whether these functions are universal across all societies. Judgements of this kind will, however, obviously depend on the degree of abstraction with which one formulates functional types, as a function which seems utterly novel to one theorist may easily find expression in another's typology. Unfortunately, guidance on such issues is not present in the relevant literature, and judgements about the novelty of particular functions, like judgements about what constitutes a distinct function, seem to be based on intuition and inkling rather than well-established theoretical criteria.

It is perhaps for this reason that no single attempt at functional categorization, either of the 'human needs' type or the 'societal prerequisite' type, has ever gained any long-term traction in the discipline – indeed few have made any impact beyond their immediate progenitors. In almost all cases, such catalogues rest on arbitrary decisions which are difficult to defend in a substantive manner. Why, for instance, did Spencer speak only of the regulative, the distributive, and the operative systems, and why did Parsons produce a four-function paradigm rather than a five, or a six, or a four hundred function paradigm? While both of these theorists try to anchor their distinctions in more basic conceptual divisions, or to deduce them from elementary axioms, these starting points, being vague theoretical assumptions rather than empirical generalizations, seem both highly capricious and highly contestable in ways that well established physical distinctions – such as those underlying the categorization of chemical elements – are not (Black 1961, 283).[6]

Adjudicating between these approaches thus proves exceptionally difficult, and is largely left to personal preference. To remedy this situation, theorists need to be more explicit about the rationale behind various typological distinctions, and must explain how various ends or problems are distinguished from one another. At present, many of the decisive choices which underlie these typologies seem utterly capricious – whether decisions about particular categories or decisions about the bases by which they are

[6] For example, the AGIL paradigm was, as discussed in chapter three, devised by cross-tabulating two dichotomous axes for the classification of action *orientations*: the instrumental/consummatory and the internal/external. These two axes did, however, supersede a number of earlier schemes for the classification of action, including the threefold typology of action *motivations* (cognitive/cathectic/evaluative) and corresponding action *types* (strategic/expressive/moral), and the fivefold pattern variable scheme (see Parsons 1951; Parsons and Shils 1951). It is not clear why the later model is any better, or any less arbitrary, as a basis for an exhaustive typology of social functions.

derived. In the worst cases, typologies are presented without any clear rationale, and largely repeat the commonsensical divisions of lay discourse.[7] If we are to develop any consensus around a classificatory scheme of functional-types, practices of this kind must be avoided, and concrete observables must be targeted. Whether this proves possible remains an open question.

3. The significance of the causal contribution

Having decided on the reference point of the function term, and having sorted functions into types or categories, one must then consider when a particular structural unit can be thought of as a contributor to a particular functional category. While judgements of this kind may seem straightforward, the idea that a unit contributes to a category when it is designed to make, or does in fact make, a causal contribution to the end or purpose associated with that category raises several questions and considerations.

Many of these issues were explored in the previous chapter. The assignment of functions to structural units will, for example, depend on whether one sees structures as patterns of *expectations* or patterns of *behaviour*. In the former case, one would consider the kinds of causal contributions units were *expected* to make, either in a normative or descriptive sense, while in the latter one would consider the contributions they *actually* make. Choices of this kind will undoubtedly influence one's assessment of functional differentiation. For example, it was earlier noted that Ancient Roman society conjoined medical and religious roles, meaning that the same entities which were functional for religious ends were also functional for medical ends (see p. 238n7, above). For a model focusing on *actual* contributions, rather than mere expectations, this would mean that the entities which engendered certain behaviours or states designated as 'religious' ends also engendered the improvement of health or the diminishment of illness or some other such 'medical' end. It is, however, quite possible that said entities, owing to the rudimentary medical knowledge of the period, did not *actually* make the latter contribution, even though it was commonly *believed* that their treatments were effective.

[7] For example, Turner's (1997, 8) analysis of institutional differentiation argues that there are six "functional-institutions": economy, kinship, religion, polity, law, and education (with two others, science and medicine, said to be in the process of emerging). While Turner (1997, 5) argues that each of these institutions has a different function for "sustaining people and organizing them in viable ways," he does not explain *how* these different functions are recognized *as different functions*, or why he divides problems of societal reproduction in this sixfold manner.

Another relevant consideration, touched on in the previous chapter, is the treatment of causal influence as a *quality*, rather than a *quantity*. Functional assignments in sociology have usually tended towards the former position, asserting that the performance of a function is a quality of a particular structural unit. Consider, for instance, Newcomb's method for the analysis of prescribed roles, discussed in the previous chapter. According to this method, a position *P* in society *S* has the function of *F* when over fifty percent of the members of *S* believe that incumbents in *P* should perform an activity associated with *F*. Procedures of this kind necessarily assume that all units which 'perform' *F* make the same contribution to the end associated with it. This is somewhat problematic considering that specialization often involves changes in the *prioritization* of functions, rather than a wholesale change in functional composition.[8] A unit which made a *moderate* contribution to two functions at an earlier time may, for example, now make a *strong* contribution to one but a *weak* contribution to the other. Distinctions of this kind may not be captured in Newcomb's model, because there is no guarantee that a *weak* or *uncommon* performance could not be *commonly* demanded of a particular unit.

Just as the postulate of *consistency* conceals that not all instances of a particular structural unit may behave in the same manner, and just as the postulate of *consensus* conceals that not all individuals in a particular population will hold the same beliefs about how instances of a unit should or will behave, so too does the above assumption, which we may call the postulate of *functional equivalence*, conceal that different types of units can make quantitatively different contributions to the same functions. This is relatively easy to demonstrate under a probabilistic model of causation. In this approach, a unit would have a function when its actions increase the probability of a functional effect; one could therefore speak of higher and lower probabilities, and thus of stronger and weaker functional contributions.

[8] A concrete example is provided by Sykes' (1969) analysis of religious differentiation, discussed in the previous chapter. Contra Parsons, Sykes (1969) contends that religious institutions have become *less* differentiated in the course of American history. This is not, in his view, because religious collectivities have 'lost' or 'gained' functions, but rather because they have come to place less emphasis on 'primary' functions (i.e. religious functions) and more emphasis on 'secondary' functions (Sykes 1969). This would generally be thought of as a process of de-specialization, and one would likely want a metric of differentiation to represent it as such. If, however, one does not discriminate between weak and strong performances of functions, or low and high prioritizations of functions, then a unit which makes a strong contribution to one function and a weak contribution to another would have the same number of functions (2) as one which simply makes a moderate contribution to both. If a unit of the former type became one of the latter (as in many of Sykes' examples), there would be no change in the 'level' of differentiation.

Recognition of this point opens up similar problems as those examined in the previous chapter. There, it was asserted that functional assignments require one to set thresholds at which performance of a function is sufficiently common among instances of a structural unit to be treated as a quality of that unit. Considering the above, similar questions arise in regards to the *strength* and *directness* of functional performance. Should a structural unit be considered to 'have' a function, or to 'perform' a function, if its instances tend to increase the probability of a functional end (or are expected to do so) by a very small amount? Likewise, should a unit be considered to have a function if its instances tend to increase the probability of the end (or are expected to do so) in a largely indirect manner? In both cases, difficult decisions must be made.

Take, for instance, the contemporary Catholic Church, considered as an instance of an organizational type (e.g. a 'church'). In assessing the functions of this instance, one can confidently assert that it is *strongly involved* in the *direct* provision of religious services. At the same time, it continues to act as a significant provider of healthcare and education across the world. These latter services are, however, often provided in an *indirect* manner, via the ownership of organizations that are increasingly, and in some cases overwhelmingly, overseen and operated by lay or non-Catholic staff. One must ask whether this means the same thing, for the purposes of 'assigning' functions to the Church as a collective (and thus to 'churches' as a more general unit), as the direct provision of healthcare or schooling by clergy or monastics.

One may, of course, dismiss these issues by arguing that *any* contribution which raises the probability of a functional end, by whatever degree and with whatever directness, should be sufficient for this contribution to register as a function of the unit whose instances engender it. This would, however, likely create significant problems in the analysis of differentiation. Any society of some complexity is expected to be a relatively *coherent* system, consisting of an intricate network of contributory relations between various units (Weber 2005, 193). As any such system is marked by highly interconnected causal processes, in which "many capacities contribute to other capacities that contribute themselves to other capacities" (Weber 2005, 193), it may, under the above model, be possible to conclude that *all* of the structural units within a society are functional for a specific end, because each contributes to this end via various forms of indirect influence. While ideally one could delineate the relative significance of certain contributions, it is exceptionally difficult to disentangle the causal network

which engenders any one functional end, and contributions which seem minor or inconsequential may in fact be highly influential on final outcomes.

This is a particularly prominent issue for the conceptualization and measurement of functional differentiation, which relies, as discussed above, on the thought that entities within a society can be causally active in regards to certain functions while being causally inert in regards to others (i.e. on the property of *functional discreetness*). If the only criterion for assigning functionality is *whether* an entity causally contributes towards a functional end, and the *strength* or *directness* of this contribution is considered irrelevant, then claiming that an entity is functionally inert means proving that it exerts absolutely *no* influence on the probability of the end, an obstacle which may be too high to surmount considering the complex causal pathways in question. For this reason, one may wish to distinguish between different levels or degrees of causal influence, reserving the function term for influence above a certain threshold level.

It is, however, exceptionally difficult to draw lines of this nature. In the case of the strength of the contribution, one would need to make an arbitrary incision in a continuous spectrum of probabilities, such that an action which raised the probability of a functional effect by *n* percent was not functional to that action, but any action which raised it by > *n* percent was. In terms of the contribution's 'directness', one must deal with additional difficulties. One may, for instance, wish to argue that the action of a certain entity is functional to an end only where that entity's action *directly* increases the probability of that end (or perhaps was intended or is expected to do so). This would allow one to speak of an entity as 'divesting' a function even in cases where indirect causal links may still be drawn between the entity and end in question.

The distinction between *direct* and *indirect* causal roles is, however, by no means unproblematic, for the 'directness' of a particular cause – i.e. the degree to which a particular causal pathway depends on intervening variables – depends on the fineness of one's descriptive frame. As Spohn (1990, 126) notes, "a state of affairs which is a direct cause relative to a coarse descriptive frame not mentioning the mediating links may well turn out to be an indirect cause relative to a more complete descriptive frame." Statements of the kind "*A* is the cause of *B*" are not usually definitive statements of direct causes; rather they are, at best, "tentative [summaries] of our current state of knowledge of the cause (or causes) of *B*," which admit the possibility of additional

intermediary variables (Holland 1988, 450). As such, it does not make sense to say that one can definitively label causes as direct or indirect, nor to say that a structural unit is functional for a specific end so long as it causes a discrete event which is < *n* number of events away from the end in a postulated causal chain. Instead, judgements will have to make do with much rougher schematics, in which case consensus is once again likely to be dampened.

These considerations lead us to delicate and contentious issues in the philosophy of causality, detailed discussion of which is beyond both the scope of this thesis and the abilities of its author. It must, however, be noted that the problems discussed here impinge on *all* of the above models of functionality. While each focus on different *types* of effects, and while some privilege intentions over actions, functionality always remains synonymous with causal efficacy. Any deployment of these models, at least where intended as a tool for the specification and enumeration of functional performance, must therefore confront the kinds of problems discussed in the present section. It is not enough to say that a unit has the function of *F* when it causes *F*, is expected to *F*, or is designed to *F*; rather we must consider matters of strength and directness as well. While it is unlikely that this will lead to any clear-cut resolutions, or to broad agreement on the threshold markers at play, it will undoubtedly help researchers to be more conscious, and hopefully more explicit, about the assumptions underlying their measures and conclusions.

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As in the previous chapters, the above material does not present any definitive solutions to the problems explored, nor does it present a fleshed-out method of functional assignment. Instead, it simply attempts to disentangle some conceptual problems of functional analysis, which any effort to further this method will need to address. It is offered as a general summary of the 'state of play' in sociological functionalism, in hope that it may help us judge the viability of the research tradition with which we are here concerned. As to this question, my own sense is that functional assignments seem beset on all sides by ambiguity and arbitrariness – a problem which I take to present the most significant barrier to a well-developed theory of functional differentiation. While it is easy to envisage a model of functionality which can meet the requirements of the differentiation concept, the difficulty is that any such model will need to take a stand on

a range of open problems in the philosophy of science, and to introduce evaluative criteria which are likely to remain divisive.

The major decision points can be expressed as follows. If one does not wish to deal with a near infinite number of potential functions, one must distinguish between the functions of a unit and the (mere) effects caused by that unit. If the concept of design is deployed, such that the function of a unit is thought to mean the production of effects which it was purposely intended or selected to produce, then one must only focus on consciously designed or selected social entities; must be able to determine the reasons for which these entities were designed or selected; and must abandon the notion of latent functions or else find a way to make a non-intentional concept of function-based selection operable in sociological analysis. In alternative approaches, such as those in which units 'function' to produce a system condition or capacity, one must deal with intractable normative disputes about the appropriate reference point of the analysis. In both of these instances, one needs to develop formal procedures to categorize and enumerate functions, and to make key decisions about the degree and directness of causal influence connoted by the function term.

Considering the above, it seems unwise to propose any new functional catalogue until basic problems with the function term are solved, or at the very least addressed in a way that can better augment scholarly consensus. In the absence of such agreement, it is expected that any new functional typologies will fail to gain purchase in the discipline. While our present explorations have given little hope for such an endeavour, it must be remembered that many of the problems under discussion are not unique to sociological inquiry, but appear in other disciplines as well. Elegant solutions may, then, present themselves in the relevant philosophical literature. For now, it seems clear that efforts to specify the meaning of *functional* differentiation will remain caught between two loyalties. On the one hand are the logical dictates of the modern scientific vernacular, for which the teleological, normative language of functionality remains anathema. On the other are the pragmatic realities of social analysis, which prevent any of the major attempts to 'rethink' functionalism in purely positivistic terms (and to thereby collapse the function/effect distinction) from being feasible as a basis for the comparative, macrosocial study of functional differentiation. Whether I am incorrect on any of these counts, and whether there is a way to circumvent this theoretical deadlock, is a matter for the reader to judge – though I would be happy to be contradicted on either claim.

Conclusion

This thesis was initially conceived as an explication of the differentiation term, and for that reason it began with a simple set of objectives. As Hempel (1952, 12) notes, conceptual explication aims to reduce the "limitations, ambiguities, and inconsistencies" evident in the "ordinary usage" of particular concepts, and to "enhance the clarity and precision of their meanings as well as their ability to function in hypotheses with explanatory and predictive force." For this reason, I did not seek to determine whether the functionalist concept of differentiation is factually *correct* – a goal that seems epistemologically confused – but whether one can formulate this notion in a manner that agrees with the demands of systematic theory. This overarching ambition has manifested in two major concerns: to discern the precise meaning of the functional differentiation concept (as used in the functionalist tradition), and to delineate the major problems, both logical and practical, which have frustrated its application as a tool of empirical science. While I believe to have fulfilled both of these aims, considerations raised in service of the latter leave serious doubt as to whether one can provide an account of the differentiation term that truly fulfils the objectives of explicative analysis.

In focusing on the conceptual level, my intention was to understand why, despite consistent theoretical effort, a genuine *theory* of functional differentiation has failed to materialize. While the accounts offered by Spencer, Durkheim, Parsons, and Luhmann present as a single sequence of theory, part I demonstrates that this sequence displays little evidence of progressive development – at least if we take its aim as the provision of *explanations* involving the differentiation term. That differentiation theory has, by and large, stalled at the level of conceptualization implies serious problems in its meta-theoretical presumptions. Our analysis in part II supports this assertion, and suggests that the underdevelopment of differentiation theory is a direct consequence of conceptual, logical, and operational problems common to functionalism as a research tradition. Simply put, the meta-theoretical commitments of this tradition seem unable to support a workable concept of functional differentiation, or one that can successfully operate in a network of explanatory or predictive principles.

As we have discussed throughout this thesis, the successful deployment of the differentiation concept (and of the broader framework of comparative functionalism) follows from one's ability to make sense of three key terms: society, structure, and function. Insofar as these terms lack sufficient grounding, determinacy, and uniformity of use, their application currently invites a serious range of theoretical and empirical dilemmas. Although I have sought to overcome these obstacles, and have perhaps found an appropriate path around some, others continue to loom large, and I confess to seeing no clear way to surmount them.

It therefore seems that the constraints of the functionalist tradition significantly hamper our ability to transform the differentiation term into a more exact concept. In delineating the meaning of functional differentiation we remain trapped at the most abstract levels of thought, and seem unable to reduce the ambiguities in its various definitional components. While one can easily provide a simple definition of functional differentiation – at least in the sense of syntactic complexity – any definition based on functionalist assumptions must work with component terms that show relatively low empirical import. For this reason, the clarity of such definitions is rather illusory. This is not, as our own attempts show, from a mere lack of attention to empirical definition, rather it simply seems that the theoretical *needs* of functionalist analysis, and of differentiation theory as an element thereof, are difficult to satisfy given the ostensible *nature* of social objects. As such, my sense is that further attempts to meet these needs are unlikely to garner much approval.

Because of this, the concept of functional differentiation continues to float freely above the empirical realm. While it is afforded a place within a number of vast theoretical systems, these complex networks of conceptual abstractions seem presently untethered to the world below. One searches in vain for points of anchorage, or for the interpretive strings which link these constructs to experiential data and permit our descent to the plane of observation (on this metaphor see Hempel 1952, 3). This goes some way towards explaining why the theory of functional differentiation has, despite its longevity, remained a speculative project – or why it is, having failed to inspire a concrete program of empirical research, largely a topic for theorists alone. Considering the foregoing discussion, I have little confidence that this situation will change.

As a result, it seems probable that the concept of functional differentiation will meet the same fate as its biological counterpart: the notion of the physiological division of labour. As D'Hombres (2012) has argued, attempts to apply this concept were frustrated by a range of conceptual challenges. Problems arose, for instance, with the claim that each and every organism performs the same functional activities, such that one could speak of a universal scale of functional localization (D'Hombres 2012, 12). Likewise, efforts to calculate the functionality of organic components proved difficult, as it was recognized that these parts typically supply *services* for an interconnected organic whole (rather than, as implied by the economic metaphor, "contributing to the production of an organic substance separate from the body") (D'Hombres 2012, 15). These complications problematized the idea that the differentiation, localization, or specialization of biological functions could be a universal point of comparison, applicable across different species, and together they played a large role in the eventual disappearance of the division of labour metaphor from biological discourse.

If the notion of functional differentiation could not find permanent purchase in comparative physiology, then one must be dubious about its future in comparative social analysis, which not only reproduces the above complications but also adds many additional obstacles. Our discussion of the function concept has, for example, shown that several conceptualizations which are open to biologists are intrinsically denied to social scientists, who, despite numerous attempts, persisting into present day, have failed to ground functionalist ideas in a satisfactory manner, or at least to provide a stable, agreed-upon basis for their application at the societal level. Insofar as sociologists display little agreement on the key empirical referents of the discipline, and primarily work with mental representations rather than visible objects, they are simply far more likely to face disagreement over the use, meaning, and ultimate referents of functionalist terminology than are scholars in biology.

To succeed in the discipline, a sociological theory of functional differentiation must in some way surmount the same conceptual problems which proved fatal to its biological counterpart. Given the above material, a belief in such developments seems unjustifiably optimistic. By its very nature, sociology is compelled to *multiply*, not moderate, the difficulties at hand; and it is of no surprise that despite the long history of the functionalist tradition, which has spoken of differentiation since its very inception, it is still entirely unclear how the sociological concept of functional differentiation can be

anchored in a set of concrete observables. While future formulations may better address the issues at hand, and while I have, with this in mind, tried to present a comprehensive catalogue of the obstacles they must confront, the present lack of progress should give us grave reservations about the prospective utility of the functional differentiation concept.

If a concept is thought to possess a significant degree of explanatory value, certain conceptual difficulties may be overlooked. Theoretical advantages may, in other words, counterbalance operational problems; indeed situations of this kind can, as Hempel (1958, 70) has argued, "suggest further lines of research that may lead to additional connections with the data of direct observation." In the case of the physiological division of labour, it seems that the balance could not be maintained (D'Hombres 2012, 24). The Darwinian revolution repudiated the need for a universal measure of organizational perfection; as such, the notion of the physiological division of labour lost its theoretical significance. With no other clear function, and a range of internal issues, it soon fell into disuse.

This intellectual shift undoubtedly impacted sociology as well. Attempts to justify a hierarchical scale of societies, independent of some clear contextual value, are no longer afforded rational validity, and few would today argue that functional differentiation can act as a universal metric of evolution, development, or organizational perfection in social entities. It is thus curious that the sociological concept of functional differentiation followed a very different path to its biological counterpart. While the notion of the physiological division of labour was, in recognition of the above issues, swiftly downgraded, and soon disappeared from biological discourse, the concept of functional differentiation remains a mainstay of contemporary sociology, appearing in many accounts of long-term social change. While this suggests that sociology has found alternative ends for the differentiation construct, it is concerning that the significance ascribed to the term is generally not supported by demonstrations of its explanatory power. Rather than rational criteria, one quite often sees appeals to tradition: statements maintaining that the *longevity* of the differentiation construct is proof of its importance, or that this notion is bound to be significant considering that many esteemed others thought the same. This is no standard for a mature science. In relying on the authority of tradition, we defer to classical standards of value and utility, and to a range of ideas which have long lacked purchase in the discipline.

Unfortunately, alternative justifications are not readily evident. To defend the theoretical significance of the differentiation concept, one must demonstrate, or at least provide reason to suspect, that processes of differentiation show regular empirical relationships with other observable phenomena. As has been repeatedly stated, assertions to this effect are relatively uncommon in 'theories' of differentiation, and have, moreover, met little success when actually advanced. Indeed doubts have, throughout this thesis, been cast on nearly all of the explanatory hypotheses in which the notion of functional differentiation can be found, such as those involving adaptive capacity (Spencer, and later Parsons), dynamic density (Durkheim), value generalization (Parsons), or the various constructs proposed by Luhmann (e.g. the number of system elements or the capacity for societal coordination). In most of these cases, one can question either the empirical import of the covariate of interest, or the logic connecting it, as cause or consequence, to functional differentiation. It is thus unsurprising that while many of these propositions have had a lasting impact on the discipline's imagination, and continue to be subjects of discussion in the field of social theory, none have been institutionalized as established 'truths' of the science, which we can with confidence believe in.

Differentiation theorists have, quite simply, been unable to integrate their central term into a verified body of systematic theory; indeed we have struggled to uncover a single, empirically supported proposition in which this notion can be found. Even on the speculative level, one still lacks a precise, credible explication of the systematic relationships in which the differentiation term is *supposedly* implicated; so much so that the very existence of a *theory* of functional differentiation remains highly questionable. This is, considering the long history of the construct in question, and the familiarity of this particular complaint, likely to dampen any future enthusiasm; indeed this is one case in which the concept's classical heritage speaks *against* its future utility. Despite immense theoretical effort, and the attention of successive generations, the explanatory capacity of the differentiation concept still remains almost entirely conjectural.

These issues bode poorly for the future of the differentiation construct. In parallel to its biological equivalent, the notion of functional differentiation is beset by a range of conceptual issues, many of which act as significant obstacles to its practical application. As such, its *empirical* import is quite clearly open to doubt. In accordance with the preceding observations, further development of the differentiation construct will hinge

on a defence of its *systematic* import – i.e. its explanatory and predictive capacity. Simply put, one must hold that the concept's logical, conceptual, or operational issues can be offset by explanatory gains, such that efforts to augment its empirical import will likely prove worthwhile. Moreover, one must hold that the *functionalist* notion of differentiation displays a greater degree of theoretical significance than alternative formulations, many of which speak to similar empirical patterns. Considering the above, it seems that the functionalist tradition is presently unable to furnish the necessary conviction on both of these points, and we have strong reasons to question its future ability to do so. Prior investments in the functionalist notion of differentiation have simply been unable to achieve a sizeable return, and our analysis offers little cause to suspect a reversal of this trend.

This does not mean that the differentiation term will vanish from the discipline – indeed as D'Hombres (2012, 26) notes, the idea of differentiation, severed from its prior association with the physiological division of labour, continues to be a fundamental concept in both developmental and evolutionary biology. If history is to repeat, then sociology will likely find alternative uses for the differentiation term. It is, however, expected that these new formulations will distance themselves from the functionalist legacy. As noted in our initial introduction, the concept of differentiation – and even, specifically, of *functional* differentiation – is by no means exclusive to the functionalist tradition; rather there are a number of alternative models available to the theoretician. While I am reticent to claim that alternative formulations can solve *all* of the problems here discussed, and while it is obvious that many points of contention apply regardless of how one chooses to interpret the function term, I am comfortable arguing that such formulations may, while still speaking to the same general *spirit* of the functionalist notion (and thus to some similar potential correlates), help us to circumvent many of its more obstinate conceptual problems.

Recent work by Wortmann (2012, 376, 375), for instance, argues that the models of differentiation proposed by Parsons and Luhmann are "tightly entangled" with the problematic postulates of the functionalist tradition, and with systems-theoretical ideas that are far more suitable in fields like embryology, anatomy, and engineering than they are in social science. In response, Wortmann (2012, 378) develops a model of societal differentiation which, while capturing many of the primary *concerns* of earlier theorists (such as "the rise of higher forms of diversity" or "the origins of differences and

structural complexity"), jettisons a number of their meta-theoretical assumptions. For example, instead of relying on a mereological ontology, and on associated physiological metaphors, Wortmann (2012) finds inspiration in evolutionary biology: in particular the theory of speciation. The resultant construction – derived through analogies to population barriers, evolutionary divergence, and reproductive isolation – provides an elegant model of societal differentiation, which consciously speaks to the proliferation and diversification of abstract "social forms" rather than to the specialization of functional mechanisms, systems, or other such entities (Wortmann 2012).

Formulations of this kind take us well beyond the functionalist tradition, and I cannot, considering the scope of this project, assess them in detail. Many are provisional in nature, and judgements of their value are at best conjecture. It is, however, plain that contemporary theorists of functional, social, or structural differentiation are increasingly distancing themselves from the functionalist heritage – an ambition which was already evident in the work of Luhmann, but which is today being executed in a more decisive manner. What seems clear from our own investigations is that the meta-theoretical presuppositions of the functionalist tradition significantly impede our ability to express, in a more formal, systematic manner, a range of ideas, intuitions, and descriptive assertions which many continue to believe have significant value in the analysis of social organization. Such expression is, to be clear, not objectively desirable, and there are many scholars who are content to treat functional differentiation as a suggestive, heuristic, and fundamentally interpretive tool. But for those who aspire to systematic theory, and who wish to explore the concerns of differentiation theorists on that particular level, it is hard not to see the commitments of the functionalist tradition as a significant epistemological obstacle.

Our conclusions in this area must, however, be particularly tentative. The assessment of any research tradition is quite clearly a fraught endeavour, as one is unable to make a *factual* judgement about its particular value. As Laudan (1977) argues, research traditions do not present us with *empirical* claims, whose truth can be found in some particular mass of data; rather they offer us *philosophical* claims, *conceptual* claims, claims about the ontology of social objects and the methods by which one should examine them. The assessment of traditions – and particularly of progress in traditions – must therefore rely on more indistinct criteria, such as the "problem-solving effectiveness" of the specific theories they house, or whether they have, "in the course

of time, increased or decreased the problem solving-capacity of [their] components" (Laudan 1977, 106, 107).

The salient question is, then, whether the functionalist model of differentiation solves problems, or whether the functionalist tradition has, over time, refined the utility of the differentiation concept. One must, furthermore, consider whether the functionalist model of differentiation solves *more* problems than can its various conceptual competitors: those found, for instance, in the historicist tradition of Weber and Dilthey, or in the contemporary tradition of field theory. I cannot, as stated in the initial introduction, make general conclusions in this area; instead, the reader must consider their particular view of the discipline, and the particular problems with which they are therefore concerned. I can, however, speak directly to the specific problems of the empirical scientist, whose primary ambitions have, in this project, been taken as our own. As Hempel (1958, 78) has well noted, the pervasive concern of empirical science is to develop a system of concepts in which empirical import converges with theoretical significance. My ultimate conclusion is that the functionalist tradition has been unable to provide us with a concept of differentiation that suits this objective. It seems past time, for those who wish to preserve some aspects of 'differentiation theory', or who believe, with whatever intuition, that its insights warrant further development, to turn their attention elsewhere.

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