

CHAPTER 1

Social Theory and Systems Theory

What is the “new” social systems theory? Does social systems theory even exist in the 1990s? Yes, social systems theory does exist, as this volume clearly documents. Further, it is alive and well, and bears little resemblance to the old structural functionalist macrotheory of two decades ago that most sociologists probably still identify as social systems theory. If this is so, how can it be that it is not more visible? One answer is that in a sense this “new” systems theory is still very new. Social entropy theory (Bailey 1990) is a product of the 1990s, while autopoiesis has, prior to publication of the present volume, not been presented in a comprehensive form to American sociologists. For whatever reason, the new systems theory has been developing on a path that is largely parallel to, but different from, the path followed by major “mainstream” sociological theorists such as Alexander, Giddens, and Collins. Thus, it has had until now somewhat the status of a theoretical yeti. Theorists may have seen its footprints in the snow, or perhaps even viewed it at a distance, but have had little actual proof of its existence.

The chief question seems to be why sociological theorists have not gotten a better glimpse of the new systems theory. Perhaps part of the answer is that the new systems theory has been quietly building upon its positivistic roots, while much of contemporary sociology has been looking in some other direction. Thus, to some extent, those who wanted to see systems theory could have seen it, except that they were looking South when they should have looked North. The parallel paths taken by systems theorists and mainstream theorists are well described by Turner, who writes:

One possible scenario is that these more positivistic theorists will simply leave mainstream theory which, at present and into the foreseeable future, will have too many inhibitions and reservations about the prospects for scientific sociology. For increasingly, positivistic work simply ignores the way much theory is currently practiced in American sociology. (Turner 1990, p. 389)

This walking of parallel paths by social systems theorists and “mainstream” sociological theorists has already occurred during the last two decades. Clearly, some of it has to do with “positivism” (whatever that is). However, even though the new systems theory continues to be science based, it is certainly *not* a homogeneous entity, and variants of it differ greatly with respect to how positivistic they appear, as will be seen in this volume. It is safe to say that the new systems theory is decidedly less positivistic than the old.

Further, sociologists exhibit disagreement about the nature and role of positivism in American sociology. Turner (1990, p. 389) sees modern sociological theory as antipositivistic, with positivistic theorists constituting “a relatively small group—fifty or sixty thinkers at most.” In contrast, Alexander (1982, p. 5), while admitting that the formal methodological principles of classical positivism are eschewed by most sociologists, says, “Yet positivism in a more generic sense is, nonetheless, a persuasion that permeates contemporary social science.” This lack of agreement extends to statements about Comte’s dream. Pollner says that:

Sociology has not of late dreamt Comte’s dream. Few persons entertain the thought . . . that sociology is or could become the Queen of the Social Sciences. Indeed, for some, sociology’s claim to presence in the court, let alone any sort of title, often seems precarious. (Pollner 1987, p. 1)

Turner (1990, p. 389) asserts that “Comte’s original dream is alive and well.”

Actually these positions are probably not as contradictory as they might at first appear. It is indisputable that American sociology is “permeated” with positivistic principles, and so I agree with Alexander. But Turner is also correct in being able to discern an antipositivistic attitude among many American social theorists. And again, Pollner and Turner are both correct. Relatively few still dream Comte’s dream, but those few of us that exist do keep it “alive and well.”

Interestingly and perhaps ironically, this mixed view of how American social theorists assess the degree of positivism in their midst extends as well to the new systems theory. Those who have a preconceived notion of systems theory as positivistic based on classical systems theory of twenty years ago will find that the new

systems theory is considerably less positivistic (or a “gentler” positivism if you will). This could lead to a grudging acceptance even from antipositivists. On the other hand, strict positivists might find some parts of the new systems theory too nonpositivistic for their purist sentiments.

Alexander (1982, pp. 5–7) posits four postulates central to the “positivistic persuasion”: (1) a distinction between the empirical and nonempirical; (2) exclusion of philosophical and nonempirical issues; (3) assumption of a scientific self-consciousness; and (4) theoretical issues dealt with only in relation to empirical observation. I will show that living systems theory (chapters 5 and 7) exhibits all of these characteristics of positivism to some degree. Even in this case the degree of positivism is more apparent than real. Miller (1978) advocates all four, but a reading of his book indicates a relative degree of nonempirical content. The other major approaches in the new systems theory—social entropy theory and autopoietic theory—are much less positivistic by Alexander’s criteria.

In examining social entropy theory and autopoietic theory, the reader will be struck by the degree to which they *do not* distinguish the empirical from the philosophical. Even Miller grudgingly acknowledges the useful role of systems philosophy for a fledgling systems theory, but he expects a more mature systems theory to “grow out” of the philosophical phase into an empirical, formal, operationalized (and more clearly positivistic) phase.

In contrast, social entropy theory and autopoietic theory are both explicitly epistemological. Both autopoietic theory and the “new sociocybernetics” (see Geyer and van der Zouwen 1978) offer a sophisticated analysis of the relationship between observer and observed which transcends simplistic classical notions of “empirical observation” in positivism. Autopoietic theory, in fact, incorporates the notion of the observer with the model in a very sophisticated way. Rather than excluding philosophical issues, autopoietic theory often emphasizes them.

Social entropy theory also approaches Alexander’s empirical-nonempirical distinction in a much more sophisticated (and I hope innovative) fashion than did classical approaches. I (Bailey 1990) recognize three levels—conceptual, empirical, and operational (indicator). Ironically, many of the fundamental principles of science, such as verification and replication, cannot easily be defined as

strictly the empirical level in the three-level model. Rather, they involve a dialectical interaction between all three levels, and this is a diachronic process. That is, the scientist forms a perception (conceptual level) from observation (empirical level), then codes and recodes the data (indicator level) and repeats the whole process. Social entropy theory does not divide the empirical and nonempirical levels and exclude the latter, but rather emphasizes the dialectical interaction over time, among all three levels—the conceptual, empirical, and indicator. In this sense, social entropy theory is *not* positivistic, as it fails Alexander's initial fundamental criterion of positivism. However, as I share Comte's dream of a sociology which recognizes that humans are biological individuals in a physical world, I accept the label of positivist. I strive for a humanistic positivism (not as much of a contradiction as some think), or as I call it in this volume, a "positive positivism." It is certainly a positivism that transcends the simpler descriptions of some classical positivistic models, and should not be judged by them.

However, there is no question that the new systems theory is more methodological than traditional sociological theory. As Ritzer (1990b, p. 363) says, "There is a need for more methodologists and empirical researchers to address the micro-macro issue which to this time has been largely dominated by theorists. Some welcome signs in these areas are Bailey's (1987) work on micro-macro methods . . ." Thus, the issue of the degree of positivism aside, the new systems theory does add a needed methodological dimension to the analysis of the micro-macro issue as well as other issues. In fact, one of my long-range goals is to also further theory-method integration, a linkage that has been widely neglected by theorists. One can search almost in vain for equations or methodological discussion in theoretical treatises, and this volume on the new systems theory serves as a step toward theory-method integration by showing that social theory can be written in a methodologically informed fashion, just as scientific theory is. After all, we should never forget that although classical theorists such as Weber and Durkheim are known for their theoretical achievements, they both wrote books on methodology (Durkheim 1982; Weber 1949).

Why should sociologists study systems theory? There are many reasons, and the case is made in chapter 2. However, there is a need in this initial chapter for a discussion which frames systems theory

in the larger context of extant sociological theory. I said earlier that social systems theory and mainstream sociological theory seem to be on parallel paths. This is fortuitous because parallel paths lead in the same direction. It is disquieting because one of the basic tenets of the systems movement is the need to integrate separate approaches, especially those which have some elements in common (as do systems theory and mainstream theory, as I will show shortly). Also, ironically, the new systems theory is sufficiently diverse that it is itself in need of synthesis, and that is one of the chief goals of this monograph.

One major reason that sociologists, and others, should study the new systems theory is because it deals with important societal processes more effectively than other approaches. These processes include entropy, autopoiesis, matter-energy processing, information processing, and control processes (sociocybernetics). While classical sociology and systems theory dealt extensively with equilibrium, the new systems theory emphasizes nonequilibrium approaches, framed largely in terms of entropy processes. All living systems must deal with entropy processes, including social systems, and sociologists can neglect study of this important topic only at their peril. Equally important is the notion of autopoiesis, or self-reproduction. The notion of autopoietic recursive systems is becoming increasingly emphasized in sociology, and systems theorists have taken the lead in its study. In addition to entropy and autopoiesis, energy and information processing are central processes in society that demand integrative theoretical attention. No sociological approach has accomplished this to the degree that the new systems theory, specifically living systems theory, has.

These important processes are crucial to complex society, as I will show in later chapters, yet they receive only scant attention in sociological theory. I believe that the best vehicle for their study is a newly synthesized systems approach. This new synthesis can most effectively deal with these processes, and for this reason alone deserves careful attention.

The goal of this volume is to construct a theoretical monograph which presents and synthesizes the new systems theory. This is done via an original conceptual framework combining the three-level model and the Q-R distinction (Bailey 1984c, 1990). This endeavor comprises chapters 2 through 9. Although this is in some sense a stand-alone endeavor, in order to affect the integration of

systems theory and social theory just proposed, it is necessary now to engage in a brief discussion of some examples of extant sociological theory.

The examples I have chosen as criteria for my comparison of systems theory are Alexander's neofunctionalism (1984, 1985; Alexander and Colomy 1990), Giddens's structuration theory (1979, 1982, 1984), and Collins's conflict theory (1975, 1988). There is no claim that these exhaust the spectrum of contemporary theory, or that I can present all facets of each approach. However, these approaches are major and significant, and represent the macro-micro spectrum. They thus serve as good points of comparison. At the end of the volume I will make some brief comments about how systems theory relates to theoretical approaches in addition to these three.

By presenting these three approaches, I can serve a number of useful purposes. For one, I can document that social theory and social systems theory are indeed on parallel paths, and have a number of points in common. Secondly, I can use these commonalities as a starting point to initiate an integration of systems theory that is maximally compatible with a mainstream sociological theory. Third, I can demonstrate the major points addressed by systems theory that contemporary sociological theory does not address. I will thus show that by addressing the issues neglected by the mainstream, systems theory not only complements the mainstream, but actually adds breadth and richness to it. Fourth, the discussions of neofunctionalism, structuration, and conflict theory simply serve as a needed frame or criterion point, or stepping-off point, that provide some familiarity for the reader in his or her introduction to the less familiar world of social systems theory. I must stress that the discussion of neofunctionalism, structuration and conflict theory is not a critique, or even an analysis, but is merely the specification of a comparison point and focal point for the analysis of the new social systems theory.

The plan of the book is a simple one. I will sketch these three theories (neofunctionalism, structuration, and conflict) as the *point*, meaning the point of reference, or point at which social theory now stands (bearing in mind that other important perspectives are being omitted for lack of space). With these theories as the point, I will end each systems chapter (chapters 2–8) with a discussion of the *counterpoint* offered by that specific systems perspec-

tive. In some cases the counterpoint may be a literal counter, or statement of opposition or contradiction to the social theories in the point. Often, though, the counterpoint will be a complementary view, or parallel endorsement of the point made by the criteria theories.

The last chapter (chapter 9) will constitute a *point-counterpoint*. It will be a synthesis of the new systems theory. As a synthesis of the approaches such as the new sociocybernetics, living systems theory, social entropy theory, and autopoietic theory, it will be a synthesis of the counterpoint to the comparison major mainstream theories (neofunctionalism, structuration, and conflict). But chapter 9 will also strive for a subsequent synthesis of the integrated systems approach with the criteria theories. Thus, it will be a synthesis of a synthesis, or a dual synthesis, involving both point (neofunctionalism-structuration-conflict) and counterpoint (new sociocybernetics—living systems theory—social entropy—theory—autopoietic theory). While it may not be feasible at this point in time to totally bring the new systems theory into the “mainstream” of sociological theory, it is feasible to synthesize this new systems theory in a way that is maximally comparable to extant approaches, and thus is maximally accessible to sociologists. Analysis of the mainstream approaches will help to accomplish this. In other words, the strategy is to discover parallels between mainstream theory and systems theory, and to emphasize these parallels in the synthesis of systems theory. The end result should be a more methodologically informed contribution to the micro-macro issue as Ritzer (1990b, p. 363) has called for. It should also provide theorists an opportunity to examine systems theory “up close,” and to see the contributions that it has to offer.

The selection of the three comparison theories is admittedly arbitrary. There are many others that could have been chosen. These three are useful because they are major theories that are visible and viable, and among them they cover a considerable degree of theoretical territory, as all three are to some degree micro-macro syntheses (see Ritzer 1990b). While Collins’s approach is essentially micro and Alexander’s is essentially macro (but deals with both action and order), Giddens’s approach is intermediate, and deals extensively with the agency-structure issue. Since the reason for presenting these theories is not to critique or analyze them, but to provide comparison points from which systems theo-

ry can “bounce off,” I will simply provide skeletal descriptions by using a lot of quotes, and sticking as closely as possible to the basic texts.

Alexander's Neofunctionalism

Alexander and Colomy (1990) identify three phases of postwar sociology: structural-functionalism, microsociology, and the emerging third phase, “marked by an effort to relink theorizing about action and order, conflict and stability, structure and culture” (Alexander and Colomy 1990, p. 36). This movement back to synthesis, directed largely but not entirely at bridging the micro-macro gap, is the third phase of postwar sociology. Neofunctionalism is part of this third phase. Alexander (1985) introduced the term “neofunctionalism” in order to emphasize the double element of continuity and internal critique in Parsonian thought (the analogy is to neo-Marxism). Neofunctionalism is a prototypically synthetic theory (in the sense of synthesis). Without the flaws in Parsonian thought that led to emphasis on separate macro and micro theories, neofunctionalism can once again return to the project of synthesis. Thus:

It is not surprising, therefore, that as contemporary theorists have returned to the project of synthesis, they have often returned to some core element in Parsons' earlier thought. It is striking that this return is manifest in the work of theorists who have never had any previous association with Parsonian thought. The motive is theoretical logic, not personal desire. (Alexander and Colomy 1990, p. 39)

Further, functionalism was subject to elaboration and revision in the first theoretical phase, but was buffeted by shifts in disciplinary sensibilities in the second phase, and came near extinction. But now:

In the emerging third phase, scientific sensibility has shifted once again. . . . In response, the functionalist tradition has entered a phase of reconstruction. Neofunctionalism is the result. (Alexander and Colomy 1990, p. 43)

The result of this reconstruction of the Parsonian core is that:

A surprisingly large portion of earlier peripheral criticism has been accepted, just as the core itself is being reshaped in a responsive way. From this perspective, neofunctionalism is post-

Parsonian. Its aim is to go beyond both the first and second phase of postwar sociology and to reconstruct a new synthesis on the basis of the contributions of each. (Alexander and Colomy 1990, p. 46)

Inasmuch as this new synthesis succeeds in combining the contributions of both the first phase (macro) and the second phase (micro), it is a true micro-macro synthesis. This reconstruction has resulted in a number of significant changes in the Parsonian core program. Not all of these are central to my concerns. I will list some specific reconstructions which have parallels in systems reconstruction or which are otherwise salient to the concerns of this volume.

One salient aspect addressed by Alexander is the problem of equilibrium in Parsons's work, which is dealt with in detail later in this volume. As Alexander and Colomy (1990, p. 45) say,

When Parsons converted this model into a cybernetic system, however, he tilted toward one set of social system parts, the normative, raising it to a vertical position over another set, the material. He had great difficulty, moreover, in maintaining the analytical status of his model, often conflating the conceptualized ideal of equilibrium with the condition of an empirical society.

Alexander (1983) also attacked Parsons's idealist tendencies, and argued that they were responsible for many defects in his work, including the tendency to see change in teleological terms. The recognition of the problems with equilibrium and the emphasis on material rather than idealist factors are exceedingly important reconstructions for the new systems theory. It is crucial that neofunctionalism emphasize and maintain these features if neofunctionalism and the new social systems theory are to pursue parallel paths.

Another exceedingly important issue for systems theory, also addressed by Alexander (1988; Alexander and Colomy 1990) is the problem of order. Parsons's unnecessary conflation of equilibrium with the self-maintenance of order also is a major problem for systems theorists, as seen in detail in the following chapters of this volume. By sharply critiquing Parsons's positions on equilibrium and order, Alexander has made neofunctionalism exceedingly more attractive to the new systems theorists.

Still another reconstruction in neofunctionalism that is welcomed by systems theorists is Alexander's (1983) criticisms about

the reification of functionalist and systems reasoning, and also the criticism of the conflict between the AGIL dimensions (see chapters 6 and 9) and the empirical differentiation in contemporary society (see Alexander and Colomy 1990, p. 47).

In summary, there fortuitously seem to be parallel programs of reconstruction in both neofunctionalism and the new systems theory. This work has not been planned or coordinated consciously between the two approaches, but the similarities have doubtlessly arisen largely because both approaches have been concerned with the elaboration, revision, and reconstruction of Parsons's work. The overlap between neofunctionalism and the new systems theory stems from the fact that both have analyzed Parsons's systems writings. The two approaches will probably never meet, as neofunctionalists continue to be more normative, cultural, and voluntaristic, and decidedly less methodological (and less "positivistic") than the new systems theorists. However, the paths are parallel, and without noticeable conflict or contradiction. In fact, the two approaches are distinctly complementary, as the new systems theory welcomes the neofunctionalist analysis of micro-macro links and such other concerns as material factors, idealist factors, culture, differentiation, etc. In return, I hope that neofunctionalists can appreciate some of the contributions of the new systems theory, such as the methodological approach to micro-macro analysis, the global-mutable-immutable distinction, allocation theory, the novel approach to power, and the critique of equilibrium.

Also important for the new systems theory is Alexander's (1982) emphasis on action and order as criteria for theoretical logic in sociology. These are extremely important concepts in the new systems theory, especially in social entropy theory (Bailey 1990). Thus, these important concepts will serve as important points of comparison in my point-counterpoint comparison of systems theory and mainstream sociological theory.

Alexander mentions the systems concept occasionally (see, for example, Alexander and Colomy 1990, p. 45; Alexander 1985, p. 8). It is not a main focus, and he is certainly (as he says) not a systems theorist. Nevertheless, his attention to the concept does provide an important and welcome point of reference for the subsequent comparison of systems theory and mainstream sociological theory.

An interesting parallel between neofunctionalism and social

entropy theory (Bailey 1990) is that while Alexander describes his neofunctional approach as “post-Parsonian” (Alexander and Colomy 1990, p. 46), Bailey has described his theory much earlier as “postfunctionalism” (Bailey 1983). This indicates the degree of parallel reconstruction in both neofunctionalism and the new systems theory.

Giddens’s Structuration (and Agency/Structure)

It is interesting that while neofunctionalists such as Alexander have occasion to use the term “system” (see, for example, Alexander and Colomy 1990, pp. 45, 47), Giddens also uses the term “system” rather extensively. In fact, his discussion of the relation between systems and structure (Giddens 1979, pp. 59–81) is an important contribution to systems theory.

It has sometimes been implied that Giddens is “against” systems theory (see Archer 1985, p. 61). This probably stems from his critique of functionalism and the fact is that his structuration approach opposes morphogenetic theory in some ways (see Giddens 1979). However, it is also clear from perusing his work that Giddens accepts the notion of system as necessary, saying, “I want to suggest that *structure*, *system* and *structuration*, appropriately conceptualized, are all necessary terms in social theory” (Giddens 1979, p. 62, italics in the original). Giddens says (1979, pp. 61–62) that in functionalism, the notions of structure and system tend to dissolve into each other. This is because a structure is seen as synchronic, while a system is “functioning” over time. But when the social system ceases to function, it ceases to exist—thus structure and function dissolve into one another.

The culprit is time. “In functionalism and structuralism alike, an attempt is made to exclude time (or more accurately, time-space intersections) from social theory, by the application of the synchrony/diachrony distinction” (Giddens 1979, p. 62). But this distinction is unstable, as “time refuses to be eliminated” (Giddens 1979, p. 62). Giddens concludes that the term “social structure” thus includes two elements: (a) the patterning of interaction; and (b) the continuity of interaction in time. As Giddens (1979, p. 64) employs the term, “structure” refers to “structural property” or “structuring property,” with structuring properties “providing the ‘binding’ of time and space in social systems” (Giddens 1979, p. 64).

As formally defined by Giddens (1979, p. 66), structure refers to “rules and resources, organised as properties of social systems. Structure only exists as ‘structural properties.’” System refers to “reproduced relations between actors and collectivities, organised as regular social practices.” Structuration refers to “conditions governing the continuity or transformation of structures, and therefore the reproduction of systems” (Giddens 1979, p. 66). Giddens also defines social systems, saying:

Social systems involve regularised relations of interdependence between individuals or groups, that typically can be best analysed as *recurrent social practices*. Social systems are systems of social interaction; as such they involve the situated activities of human subjects, and exist syntagmatically in the flow of time. Systems, in this terminology, have structures, or more accurately, have structured properties; they are not structures in themselves. Structures are necessarily (logically) properties of systems or collectivities, and *are characterised by the ‘absence of a subject’*. To study the structuration of a social system is to study the ways in which that system, via the application of generative rules and resources, and in the context of unintended outcomes, is produced and reproduced in interaction. (Giddens 1979, pp. 65–66, italics in the original)

Giddens (1979, p. 74) explicitly examines the work of Bertalanffy (1968) in *General System Theory*, specifically Bertalanffy’s distinction between general systems theory, systems technology, and systems philosophy. While not finding systems philosophy of particular interest, Giddens finds systems technology to be crucial, saying:

For, understood as a series of technological advances, systems theory has already had a great practical impact upon social life, an impact whose full implications will only be felt in the future. (Giddens 1979, pp. 74–75)

But Giddens also says that it is crucial to distinguish general systems theory from systems technology (he includes information theory and cybernetics in the latter category, saying that they were created in association with technological developments).

Giddens says further:

Only by maintaining the distinction between the first and second categories is it possible to submit systems technology to ideology-critique. But sustaining this possibility, I think, also involves resisting the sort of claims that Bertalanffy and others have

made about the applicability of general systems theory to human conduct. (1979, p. 75)

Giddens goes on to say:

The reflexive monitoring of action among human actors cannot be adequately grasped in terms of principles of teleology applicable to mechanical systems. Purposive behavior is usually treated by systems theorists in terms of feed-back. I shall accept below Buckley's argument that systems involving feed-back processes are worthwhile distinguishing from the system mechanisms usually given prominence within functionalism, which are of a 'lower' kind. But I shall also want to differentiate feed-back system processes from a 'higher' order of reflexive self-regulation in social systems. (1979, p. 75)

Giddens says still further:

As employed by functionalist authors, the interdependence of system parts is usually interpreted as homeostasis. . . . But as critics of functionalism influenced by systems theory have pointed out, homeostasis is only one form or level of such interdependence: and one, borrowing from a physiological or mechanical model, where the forces involved operate most 'blindly'. It is not the same as self-regulation through feed-back, and is a more 'primitive' process. (1979, p. 78)

A few comments are in order concerning Giddens's views of systems theory. My basic conclusion is that virtually everything Giddens says is endorsed by comments independently conceived and written in subsequent chapters of this volume as well as in Bailey (1990). All of the comments referred to were written *before* reading Giddens's comments, so the parallels between the new systems theory and Giddens's approach (for example, the time-space intersections and the discussions of the relationships between structure and agency) are sometimes truly amazing. In fact, the comments that Giddens makes about homeostasis are reiterated frequently in this volume. Giddens's comments in essence form the foundation for reconstruction (in Alexander's terms), but without following through to a developed systems theory (in other words, if Giddens would follow his criticisms through with repair, he could have a systems theory). This book *does* follow through, and the exegesis of the new systems theory consists largely of these

reconstructive efforts (chapters 2–9, but especially chapters 5–8 of this volume).

These latest systems efforts, in my opinion, are generally free from the charges that Giddens makes, as they represent a reconstruction and largely are sentiments parallel to his. Thus, the parallelism between structuration theory and the new systems theory, as between neofunctionalism and the new systems theory, is striking. This is true especially for social entropy theory. To the extent that living systems theory retains the homeostatic model (a very limited extent) it may be somewhat vulnerable to some of Giddens's criticisms, but bear in mind that these were directed specifically at functionalism and not at living systems theory. As we shall see, living systems theory has very different emphases from functionalism.

The only slight disagreement that I have with Giddens is his insistence on separating holistic general systems theory (Giddens's first category) from systems technology, with which Giddens includes information theory and cybernetics. Inasmuch as general systems theory rests soundly on cybernetics and information theory, to insist upon distinguishing these seems not only vastly unfair to general systems theory, but might be impossible, as it destroys the holistic quality that general systems theory strives for. Such piecemeal separation of systems theorists' holistic efforts by non-systems theorists is not uncommon, but is a bane of the systems movement. Holistic theories must be assessed as such, and cannot be fairly assessed by dissecting out some of their elements and leaving others. However, this is a relatively minor point, all things considered, especially since Giddens's critique is basically obsolete, dealing as it does with developments that are now some two decades old (the critique itself is now over a decade old).

To summarize, I share Giddens's critique of functionalism, and have written a reconstruction of functionalist systems theory (post-functional systems theory) that is based on a similar critique. This is social entropy theory (Bailey 1990). Social entropy theory is truthfully not so much a reconstruction of functionalism as it is a totally new effort. I simply took the same complex society that functionalism was interested in explaining, but built a new model from the ground up, with entropy and without equilibrium. It is only a reconstruction in the limited sense that I critiqued functionalism methodologically, and endeavored not to repeat its mis-

takes. Social entropy theory is thus based on the premise that the flaws of functionalist systems theory are flaws of *functionalism* and not of systems theory. In other words, the flaws are not found in the *general* systems model, but in the *specific application of it (functionalism)*. For further discussion of this point see Bailey (1990 and chapters 6 and 7 of this volume).

The only part of Giddens's critique of systems theory which has current relevance for the new systems theory is his discussion of autopoiesis (Giddens 1979, pp. 75–76). This is the topic of chapter 8. In speaking of autopoiesis, Giddens (1979, p. 75) says, “. . . it is probably too early to say just how close the parallels with social theory might be. The chief point of connection is undoubtedly recursiveness, taken to characterize autopoietic organization.”

Turning more directly to structuration theory, Giddens says that:

The concept of structuration involves that of the *duality of structure*, which relates to the *fundamentally recursive character of social life, and expresses the mutual dependence of structure and agency*. (1979, p. 69, italics in the original)

Thus the structural properties of social systems constitute both medium and outcome of the practices comprising those social systems. “The theory of structuration thus formulated, rejects any differentiation of synchrony and diachrony or statics and dynamics. The identification of structure with constraint is also rejected: structure is both enabling and constraining” (Giddens 1979, p. 69).

Explicitly rejecting the “snapshot” synchronicity of functionalism, Giddens (1979, p. 202, italics in the original), says “*any patterns of interaction that exist are situated in time*; only when examined over time do they form ‘patterns’ at all. This is most clear, perhaps, in the case of individuals in face-to-face encounters.” He says further:

To study the structuration of a social system is to study the ways in which that system, via the application of generative rules and resources, and in the context of unintended outcomes, is produced and reproduced in interaction. (Giddens 1979, p. 660)

Again, the degree of parallelism between Giddens's discussion of agency-structure relations and Bailey's (1990) discussion of the relationship between process and structure is truly amazing. These are not the same formulations by any means, but the parallels are

striking. There are some clear differences. For one, Bailey's formulation is much more methodological, and his definition of structure is different from Giddens's. But essentially the two formulations reach the same conclusions: that action/process and structure are in a reciprocal relationship over time.

The difference is that Giddens has a different concept of structure. Bailey uses structure to indicate synchronic or static material components which can clearly be seen as products of diachronic action. These synchronic structures are symbolic structures in the indicator level *X''* of the three-level model (see Bailey 1990, and chapter 2 of this volume). The symbolic structure can take a number of forms, such as sets of rules in etiquette books, books of laws, the Constitution, rule books for games, dictionaries, etc. These sets of symbols are symbolic-synchronic structure. Notice, however, that this is not "snapshot" synchronicity inasmuch as it is realized that this synchronic structure only exists in relation to, and as a result of, diachronic process. Thus, the symbolic-synchronic structure has a stand-alone quality, but not a snapshot quality.

What I mean by this is that it exists and can be viewed, but *cannot reproduce* itself. It can only be produced, reproduced, and changed via diachronic action. Thus, a true interaction or dialectic exists between the diachronic process and the synchronic structures. This will be discussed in more detail later. Consider synchronic static components such as dictionaries or rule books. Thus, an actor can use a dictionary (synchronic) to guide his or her writing (diachronic process), but continuing action can, over time, change the rules in the dictionary. Thus, structure (synchronic) guides process or action (diachronic), but diachronic action also produces a *product* in the form of symbolic synchronic structure, and can also alter this structure (at a later time). Again, while the formulations and certainly the language are different, the parallels are striking, especially inasmuch as Giddens uses the terminology of generative rules (1979, p. 66), but not in the context of a synchronic marker such as a rule book or etiquette book as does Bailey (1990).

The parallel formulations were also apparently conceived at about the same time. Bailey conceived his ideas beginning in 1978, with no knowledge of Giddens's writing on this topic. He did so by purposefully *not* reading the work of Giddens and others. He was essentially inspired to reconstruct the functionalist problem via

systems theory, not by reviving or directly reconstructing functionalist tenets and principles, but by starting from the problem of how the complex social system functions, and building a new model (social entropy theory) from scratch or from the ground up. He was inspired primarily through reading Turner and Maryanski (1979) in draft form, as provided by an editor, in the winter of 1978.

The technique of constructing an approach without studying the work of others is common in art, and has clear advantages, especially if one is building an entirely new model from the ground up and wants to concentrate on internal consistency rather than on outside influences. However, it was supposedly practiced by Spencer, and is alleged to have been responsible for some of the flaws in his work (see Ritzer 1988). Thus, this insular practice obviously has pitfalls. I hope that in the case of social entropy theory this practice was justified. It led to some striking and I think valuable parallels between mainstream sociological theory and the methodological social theory of social entropy theory. The main flaw seems to be the self-imposed isolation of social entropy theory, which is being rectified in this volume. In other words, while I did not read mainstream theory while writing social entropy theory, I am correcting this now by making explicit connections between mainstream social theory and the new systems theory in this volume.

As one example, the process-structure model of Bailey (1990) is a model of diachronic-synchronic interaction. As such it is *not* subject to Giddens's criticisms of functionalism—that time is eliminated. Time and space are both used *explicitly* in both living systems theory and social entropy theory (see chapters 5 and 6). Thus, what has happened is that social systems theory has reconstructed itself in such a way as to avoid most all of the early criticisms of functionalism. It did so in relative isolation as a post-functional approach, but is now ready to reconnect to modern social theory as best it can.

The work of Giddens and Alexander provide clear anchoring points for this reconnection. The points of connection between these mainstream approaches and the new systems theory will become clearer throughout the volume. For example, Bailey's definition of structure may at this point seem much different from Giddens's, because Bailey uses the term synchronic structure, while

Giddens stresses the diachronic nature of structure. However, it will be seen that both are referring to rules. The difference is that Bailey is stressing the anchoring of symbol structure in physical markers (to be discussed later). While having synchronic qualities, these markers are used over time in a dialectic relationship with diachronic process, thus achieving the diachronic quality that Giddens stresses. Thus, the symbolic structure has a dualistic quality—it is static (until changed), but is utilized diachronically by human agents. This point is complex, and for now the reader will have to take my word that the agency-structure parallels between SET and structuration theory are very similar.

Archer (1985) has questioned Giddens's structuration approach, and explicitly compared it with morphogenetic theory (see chapter 4 of this volume). She says:

Hence Giddens's whole approach turns on overcoming the dichotomies which the morphogenetic perspective retains and utilizes—between voluntarism and determinism, between synchrony and diachrony, and between individual and society. In 'place of these dualisms, as a single conceptual move, the theory of structuration substitutes the central notion of the *duality of structure*'. (Giddens 1979, p. 5)

The body of this paper will: (a), question the capacity of this concept to transcend such dichotomies in a way which is sociologically useful; (b), defend the greater theoretical utility of *analytical dualism*, which underpins general systems theory, and, (c), seek to establish the greater theoretical utility of the morphogenetic perspective over the structuration approach. (Archer 1985, pp. 61–62, italics in the original)

My position is clearly intermediate between Archer and Giddens. I do not see any direct conflict between Giddens's structuration approach and systems theory. Rather, I view them as parallel and compatible. However, I do appreciate Archer's defense of systems theory, particularly of analytical dualism. I think this will be clear in Bailey's (1990 and chapters 6, 7, and 9 of this volume) discussion of synchronic-diachronic interaction. I agree with Archer that it is not necessary to get rid of these terms in order to meet Giddens's objective of explicating agency/structure relations. In other words, the answer is not to *eliminate* the distinction between synchrony and diachrony, but simply to show their dialectic intertwining. The flaw in functionalism was *not* that it used the

synchronic/diachronic duality, but that it did not show that these are two sides of the same coin, and did not stress their interrelationships as SET does.

Collins's Conflict Sociology

The third mainstream work to be considered is Collins's (1975) conflict sociology. Collins also discusses functionalist theory (under the heading of "ideology"), saying:

The functionalist effort to analyze human institutions as a system . . . has failed to pay off in genuine explanatory theory. This failing is due to a commitment to certain political values, which can be seen in system theorists from Comte and Durkheim through Pareto and Parsons. The commitment is to political unity. Systems theory is, in effect, a political (usually nationalist) utopia, hence the treatment of conflict is residual . . . (1975, pp. 20–21)

Collins goes on to say, "I believe that the only viable path to a comprehensive explanatory sociology is a conflict perspective" (1975, p. 21).

He says further:

Conflict theory is intrinsically more detached from value judgments than is systems theory. To be able to recognize competing interests as a matter of *fact*, without trying to squeeze some of them out of existence as unrealistic, deviant, or just plain evil, is the essence of a detached position. It is for this reason that I argue for conflict theory as the basis of a scientific sociology, precisely because it moves farthest from the implicit value judgments that underlie most other approaches. Conflict theorists have come in a variety of political shades, ranging from anarchists and revolutionary socialists through welfare-state liberals to conservative nationalists. They have hardly been adverse to arguing for their political values, but it is not so difficult to separate their value judgments from their causal analysis, and it is to the best of them—Max Weber above all—that we owe the ideal of detachment from ideology in social science. (Collins 1975, pp. 21–22, italics in original)

Although I vowed not to analyze nor critique these three mainstream comparison theories, there are a number of surprising statements in this brief quote that cry for elaboration. The following comments on conflict theory apply *only* to Collins's (1975) book,

and not to other approaches to conflict. One surprising assertion is that Max Weber is the “best” of the conflict theorists. I am not sure how Collins determined this, and whether he did so in a “value-free” manner. I would have guessed that in a poll, Marx might win the title of “best” classical conflict theorist, with Weber winning the “best” bureaucratic theorist award. More recently, Collins (1990, p. 68) seems to acknowledge this, attributing conflict theory to Marx and Engels, and “a little less obviously” to Weber. I freely admit, however, that I have no idea what constitutes the claim for “best” theorist, but I suspect it may be value laden (a cynic might suspect that Collins is basically trying to connect conflict theory to Weber’s ideal of detachment from ideology). Another surprising statement is that it is “not so difficult” to separate conflict theorists’ value judgments from their causal analysis. I for one find it very difficult, if not impossible, and think that Collins needs to elaborate more fully upon this claim.

Perhaps the reason I have difficulty understanding this latter claim is because conflict theory seems to me to be inherently value laden. When a person is lynched because of racial hatred, another is denied access to a living wage because of gender or sexual preference, and a nation declares war in the name of God, it seems obvious to me that entrenched value positions are at the base of the conflict in all cases. Yet Collins would have us believe that sociologists who study such visibly value-laden phenomena can be as detached and uninvolved as a physicist studying gas molecules. How can a sociologist keep from reacting to such value-laden issues when studying conflict? I do not understand it, and I need more evidence before I can accept the assertion that conflict theory “moves farthest from . . . implicit value judgments” (Collins 1975, p. 21).

The basic conclusion is that the subject matter of conflict theory is inherently ideological and value laden. As an example, in Collins 1975, table 1 (p. 238), the main heading is “Dominant ideology.” Now I realize the distinction between a subject matter that is value laden, and the objectivity of causal statements about that subject matter. Still, a theorist venturing into the treacherous ideological currents of conflict and proposing to remain “objective” or “value free” may run the danger of saying that “I’ll jump into the water but I won’t get wet.” I am not saying that conflict theory is *not* “farthest” from value judgments. I am simply saying

that the case for that remains to be made, and is not so self-evident as Collins asserts.

Now as to the charges that concern systems theory. Again there are two, one that the systems model treats conflict as a residual, and that systems theorists as persons are committed to certain political values. I agree with Collins implicitly that *functional* systems theory, which is the *old* unreconstructed systems theory, emphasized return to the status quo and precluded or inhibited study of conflict and change. This is discussed in detail in chapters 2 and 3 and throughout this volume. This has been thoroughly reconstructed, and is absent in social entropy theory in particular and in the new systems theory in general. Thus, it is not correct to say that the new systems theory has this flaw, but only to say that the old functionalist form of systems theory (and not systems theory in general) has it. We must be careful not to equate functionalism and systems theory, for they are two different things. Thus, the conclusion, as with Alexander and Giddens, is that this comment is true for functionalism and the old systems theory, but applies only to it, and not to the new systems theory. From the standpoint of the new nonfunctionalist or postfunctionalist systems theory, these 1975 statements are obsolete.

Further, Collins's remarks concerning the commitment to certain political values on the part of Comte, Durkheim, Pareto, and Parsons is also clearly obsolete and generally irrelevant to the new systems theory. In chapter 2, I make a claim about the political commitments of systems theorists that is similar to the claim that Collins made about the political diversity of conflict theorists. Again, this claim about systems theorists was not copied from Collins's claim, but was made independently, offering yet another example of the parallelism between mainstream theory and the new social systems theory. Like conflict theorists, systems theorists come in all ideological shades. Contemporary systems theory has adherents in both capitalist and socialist countries. The International Institute for Applied Systems Analysis (IIASA) in Laxenburg, Austria, was supported by both the USSR and the United States, among other nations: Ironically, it was the conservative Reagan administration that stopped funding for the center, while the USSR continued to fund it. The reader can draw his or her own conclusions regarding the political commitment of systems theorists.

A look at chapter 6 and at Bailey 1990 will reveal that the discussion of race and gender in social entropy theory is "liberal." In fact, with the exception of conflict theory and explicit theories of race and gender, SET may consider these factors in greater detail than most general theories. I hope that a new generation can read the new systems theory with an open mind on this issue, and not be poisoned by the idea that systems theory is "conservative" as was a whole generation before them. The problem with labeling all of systems theory as conservative (see Lilienfeld 1978) when it is not is that it is an easy way to practice "contempt prior to investigation" (in Spencer's terms), and for "liberal" sociologists to neglect the approach entirely or to approach it in a biased fashion. And again, the basic response is that Collins's specific remarks are simply obsolete, as they extended only from Comte to Parsons, and do not include any of the new systems theorists such as Geyer, van der Zouwen, Miller, Bailey, Luhmann, Maturana, Varela, and so forth. Perhaps a similar case can be made for these theorists, but I doubt it. It will certainly be more difficult to do.

The whole situation can be rectified by simply making Collins's statement refer to functionalism, and not slipping, as he did, to applying these comments to systems theorists. I propose that these ideological comments are descriptive of functionalism only, but not of systems theory as a whole. Social entropy theory is a reconstruction, or more correctly a new model, which avoids these traps. It has the advantage of being aware of these criticisms, and so being able to avoid them. As Klir (1969) says, systems theory is so general that it has few ideological presuppositions. It is only when content is "loaded in" (in the form of functionalism, for example) that problems arise. The same can probably be said of conflict theory. As Collins says, the model of conflict between competing interests is relatively value free. But it is also not very useful for explanatory purposes until specific empirical content is loaded into the model. When the empirical content is added, so is the ideological component, and the value-free status of conflict theory is at this point obviously in doubt.

Still another very interesting feature of conflict theory as espoused by Collins is that while it clearly has a micro aspect (and is both micro and macro in some regards, see Collins 1975), it also has clear systemic qualities, not in terms of functionalism, but in terms of generic systems theory as defined in chapter 2 of this

volume. Consider Collins's reliance on technology, as in "Technology and Military Organization" (Collins 1975, pp. 355–64). Technology is one of the six chief *PILOTS* (or *PISTOL*) macro variables of social entropy theory (see chapters 6 and 7 of this volume, and Bailey 1990). Further, Collins's (1975, p. 238) description of the role of social structure reveals a number of factors of interest to systems theory approaches such as SET. Not only is technology mentioned, but also stratification variables relating to level of living (component *L* in *PILOTS* or *PISTOL*). Further, by speaking of "tribal society," "stratified society," and "centralized state," Collins is not far from an explicit recognition of system boundary.

I think that Collins will find the new systems theory much more acceptable than functionalism. He says that compared to functionalist systems theory, "The conflict perspective, which grounds explanation in real people pursuing real interests, is a good deal more successful at realistic and testable explanation" (Collins 1975, p. 21). He will see in SET (Bailey 1990) real people pursuing real interests. He will also see real boundaries. As a systems theorist, one of the main problems that I have with micro conflict theory is that it often leaves the context for conflict unclear. While interpretive sociologists generally emphasize context as significant for the analysis of interaction, micro conflict theorists for some reason put less emphasis on the context for conflict as part of their general theory. It is instead introduced in specific cases (when empirical content is loaded into the general model) as when Collins (1975) writes of tribal society or American society.

The issue is important because to me, *conflict is by definition a systems problem, not an individual problem*. An individual cannot have conflict with himself or herself, except in the psychological sense of internal mental turmoil. Conflict is not defined for individuals, only for groups. Unless the boundaries for the conflict are specified, we cannot determine whether resources are scarce, what the distribution of power is, whether a zero-sum game exists, or any of the other group variables which are needed to analyze conflict. I would humbly propose that rather than rejecting the systems model as shown in SET, conflict theorists could benefit from the context it provides. It analyzes not only level of living, technology, and organization (three basic variables used by Collins) but also space, population size, and information (variables whose use has been advocated by Giddens and others). Careful analysis of

Collins's work will probably show that all of these are used to some degree (for example, "tribal society" implies lower population size than "stratified society"). The problem is that a comprehensive scheme for postulating these macro context variables is lacking, so their use can easily become inconsistent.

This leads us to one final point, the alleged "hypostatization" of systems theory. Collins (1975, p. 21) says, "'Society' or 'system' is hypostatized, made the referent around which theory is to be constructed." This is in supposed contrast to the "reality" of conflict theory which deals with "real people pursuing real interests" (Collins 1975, p. 21). If we simply use a concrete systems model (defined in subsequent chapters) that includes real boundaries in time and space, we are not only using time and space as Giddens advocates, but we are removing the alleged hypostatization. Again, Parsonian functionalist theory, prior to reconstruction, did eschew grounding by insistence on the social role as the unit of systems analysis (an "abstracted" rather than a "concrete" system in Miller's [1978] terms). The concrete system used in living systems theory and social entropy theory is *not* hypostatized, but "real," and follows Giddens' suggestions to incorporate time and space.

If I have appeared to differ with Collins to this point, it is only from a desire to stress that the remarks he makes are accurate concerning functionalism, but do not apply to the new systems approaches such as social entropy theory that have been formulated since his volume was published in 1975. A more recent and more sympathetic treatment of systems theory is found in Collins 1988 (pp. 45–76), a full chapter of which discusses general systems theory, and even one "new systems theorist" (Luhmann is discussed as Parsons's student). I do appreciate the fact that he included systems as a full chapter, rather than simply neglecting the approach. The problem would be less acute if Collins always referred to functionalism, but unfortunately he occasionally lapses into statements about "systems theory," which if quoted out of context, could be assumed to apply to all systems theory.

Further, it seems to me that his conflict theory needs systemic variables such as space, organization, and technology as context variables. Still further, it seems to me that the most general models of *both* conflict and system are both relatively value free (and actually quite complementary), but that when content is added to either, problems of ideology and value commitment quickly arise.