10 The Emergence Paradigm

The problems which [the social sciences] try to answer arise only in so far as the conscious action of many men produce undesigned results, in so far as regularities are observed which are not the result of anybody's design. If social phenomena showed no order except in so far as they were consciously designed, there would indeed be no room for theoretical sciences of society and there would be, as is often argued, only problems of psychology.

F. A. von Hayek

Social emergence is the central phenomenon of the social sciences. The science of social emergence is the basic science underlying all of the social sciences, because social emergence is foundational to all of them. Political science, economics, education, history, and sociology study phenomena that socially emerge from complex systems of individuals in interaction. In this concluding chapter, I argue that sociology should become the basic science of social emergence, and I outline a theoretical framework to guide this study. This new sociology would be as Comte and Durkheim originally envisioned: By concerning itself with the foundational processes of social emergence, sociology would be at the core of the social sciences.

But this is not the sociology we see today; few sociologists study social emergence. In the second half of the twentieth century, economics has made the best case for being the foundational social science, by making social emergence central to its theory and practice. Perhaps the most important strength of the neoclassical economic approach is that it has rigorous formalisms for modeling the ways that individual action generates aggregate outcomes at the level of an entire population (Bowles 2001; Durlauf and Young 2001). Because social emergence is the central phenomenon of the social sciences, and economics has developed the most successful model of social emergence, this has naturally led to "economic imperialism," with neoclassical economists beginning to analyze noneconomic phenomena traditionally associated with sociology (Boudling 1969, 8; Hirshleifer 1985; Radnitzky and Bernholz 1987;
Tullock (1972). These imperialists argue that economics is "the universal grammar of social science" (Hirshleifer 1985, 53) and that it simply represents "straight thinking" applied to social science (Radnitzky 1992, 15). And in fact microeconomics has been the only game in town for those interested in studying social emergence.

However, there are many problems with the models of social emergence dominant in microeconomics. Critics such as the "New Economic Sociologists" (see Krier 1999; Zafirovsky 1999) claim that the microeconomic account of social emergence is empirically unfounded, is methodologically individualist, neglects the social embeddedness of actors, neglects the importance of institutions and social networks, and neglects the unavoidable inefficiencies introduced by institutions, power, and path dependence. Joining these critics, I focus on the argument that microeconomics radically simplifies important elements of social emergence. My account of social emergence emphasizes the key role played by symbolic communication; as we learned in Chapter 9, different communication languages change the processes of social emergence. This leads to a new critique of rational choice models: Such models of social emergence have a radically simplified account of human interaction.

At the end of this chapter, I argue that as sociology reformulates itself as the science of social emergence, and as microeconomics begins to develop more empirically grounded and theoretically sophisticated models of social emergence, research into social emergence currently conducted by microeconomists should migrate into the discipline of sociology. Until this disciplinary reconfiguration occurs, microeconomics will continue to operate with inadequate models of social emergence, and the social sciences will continue without an adequate foundation.

Unfortunately, twentieth-century sociology did not focus on social emergence. Sociology as a discipline has failed to recognize the importance of social emergence to the foundational issues facing the discipline (Coleman 1987; Saam 1999; see Chapter 5). In some cases, an expressed interest in emergence is seen as synonymous with

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1 The term "economic imperialism" was coined by Souter (1933), although it is often attributed to Boulding (1969). Souter wrote that economic imperialism "invades the territories of its neighbors, not to enslave or to swallow them up, but to aid and enrich them and promote their autonomous growth" (p. 94n91).

2 Some attempts have been made to include the strength of the interaction as a factor in the utility equation (Blume and Durlauf 2001; Brock and Durlauf 2001; Durlauf 2001), although this is a minority position and most economists believe that actors' social relations are nothing more than "a frictional drag that impedes competitive markets" (Granovetter 1985, 484). And in any case these formalisms do not attempt to represent the symbolic nature of communication.
methodological individualism because it is primarily methodological individualists who have emphasized the importance of emergence to sociology. For example, Coleman's emphasis on "foundations" was an attempt to address the failure of sociologists to develop models of social emergence (Coleman 1987, 171), and social mechanists have also proposed methodologically individualist versions of emergence (see Sawyer 2004a).

If sociology becomes the science of social emergence, it will be different from the sociology that we have today. The study of social emergence requires a simultaneous focus on three levels of analysis: individuals, their interactional dynamics, and the socially emergent macroproperties of the group. In this final chapter, I present a brief history that explains why sociology has not yet combined these levels into an integrated study of social emergence, I describe what the new sociology of social emergence would look like, I explain how this new sociology would relate to past sociological theory and practice, and I outline how this reformulated sociology could transform the disciplinary boundaries of the social sciences, with a particularly strong impact on economics.

I begin the chapter by presenting a narrative account of twentieth-century sociology from the perspective of social emergence (see Table 10.1). I describe this history using a simple dialectic: the thesis of the Structure Paradigm, followed by the antithesis of the Interaction Paradigm. I show how each is an inadequate theory of society because each fails to develop an adequate account of social emergence. Then in the bulk of the chapter, I describe a synthesis of these two paradigms that I call the Emergence Paradigm.

The Structure Paradigm focuses on the relations between individuals and societies. Parsonsian structural-functionalism is the canonical approach of the Structure Paradigm; this version of the Structure Paradigm was dominant in the 1950s and 1960s, and other forms of the...
Structure Paradigm continue today. The Structure Paradigm was followed by the Interaction Paradigm. The Interaction Paradigm rejected almost everything central to the Structure Paradigm and proposed a new alternative not considered within the Structure Paradigm: that communicative interaction, not the structure nor the individual, was central to sociological explanation.

The Emergence Paradigm is a classic synthesis: the inherent tensions of the Interaction Paradigm drive theory’s movement toward it, and it combines the central elements of both the Structure Paradigm and the Interaction Paradigm. The Emergence Paradigm emphasizes both individual-society relations and communicative interaction, arguing that the individual-society relation cannot be explained without recourse to sophisticated theories of communication and of emergence from communication.

The Structure Paradigm

The Structure Paradigm focuses on the relations between two distinct levels of analysis: the individual and the social (see Figure 10.1). Structure Paradigm theories tend to fall into one of three types:

- **Structural determinism.** Social structure is foundational, and the individual is socioculturally determined. Structure is the driving causal force in social life, determining even properties of the individual such as consciousness, rationality, and cognitive capacities. In Figure 10.1, the critical causal arrow points downward from social structure to the individual. Structural determinism is characteristic of Marxism, French structuralism, structural sociology, and many forms of social constructivism.

- **Methodological individualism.** Methodological individualism posits that properties of the individual – actions, behaviors, mental states, beliefs, intentions – are primary and that properties of individuals determine social structure. In Figure 10.1, the critical causal arrow points upward from the individual to social structure. This is the notion of...
emergence found in neoclassical microeconomics and in rational choice approaches more generally, in social mechanistic approaches, and in many theories of collective action.

- **Hybrid theories.** Both individual and structure have autonomous reality, and sociology must explain both upward and downward causal force. Hybrid theories include Parsonsian structural-functionalism, Archer's morphogenetic social realism, and Alexander's neo-functionalism.

There is some disagreement about whether individualism or structuralism is currently dominant in sociology. Mayhew (1980, 339) claimed that most U.S. sociologists were individualist, whether concerned with the subjective or objective aspects of human behavior. However, King (1999b) and Porpora (1987) disagreed. For example, Porpora claimed, "Structural Sociology has become a dominant perspective in the discipline; some people even label it 'Standard American Sociology'" (p. 12). I believe that this disagreement reflects a confusion about the definition of "structure" that originates in sociology's neglect of social emergence.

I examine each of these three variants of the Structure Paradigm and conclude that each fails because it cannot explain emergence processes and dynamics. Ultimately, the Structure Paradigm cannot explain social emergence because it has no theory of communicative interaction and its role in emergence processes.

**Structural determinism**

*Sociological reductionism* can be defined as the arbitrary reduction of all social phenomena to the level of structure. It assigns ontological preference to structure and maintains, by definition, that any nonstructural phenomenon is not social. (DiTomaso 1982, 15)

Structural determinists argue that the primary ontological phenomenon is society and that everything else about social life is caused by social properties. Of the classic sociological traditions, Marxism perhaps makes the strongest claim that human nature derives from social structures: "This sum of productive forces, capital funds and social forms of intercourse...is the real basis of what the philosophers have conceived as 'substance' and 'essence of man'" (Marx 1978, 165). In the 1930s, the Frankfurt School extended these notions by arguing that knowledge itself is socially constructed; in the 1960s, French structuralists such as Levi-Strauss, Barthes, and Foucault argued that even our concept of the "individual" had been a byproduct of a certain period in capitalism. Much of Marxist theory and debate has been devoted to identifying
the exact mechanisms for these downward causal processes. For example, Althusser’s structuralist Marxism explained determination from the structural level by introducing a theory of ideology and its relation to both material conditions and to consciousness.

Structural determinism is also a focus of the structural sociologists (Black 2000; Blau 1970b, 1977; Mayhew 1980, 1981; Porpora 1993). Structuralists argue that social phenomena can be studied objectively and scientifically without a concern for individual-level properties. As Blau wrote in a critique of Homans’s psychological reductionism, “the behavior of organized aggregates follows its own principles, and the discovery of these explanatory principles does not require detailed knowledge of the principles that govern the behavior of sub-units” (1970a, 338). Blau rejected the methodologically individualist study of social emergence, arguing that “there is no reason to assume that empirical relationships between variables that characterize collectivities are more likely to be deducible from a limited number of general psychological propositions, which refer to connections between properties of individuals and their behavior, than from a set of general sociological propositions, which refer to connections between various aspects of the organization of collectivities and their consequences” (1970a, 339). And Mayhew (1980) rejected hybrid theories that examined the relation between individual and structure: “[Q]uestions about the relationship between ‘the individual’ and ‘society’ . . . are not central to sociology” (p. 358).

Many structuralists emphasize the explanatory power of networks. The idea is that “a concrete social structure is a network of relations among social entities” (Fararo and Skvoretz 1986, 591) and that “social systems are bundles of interconnected social relations” (p. 592). The metaphor is that of a wiring diagram; social systems are sets of pairwise relationships between members of the population.

Network theory is often presented as reductionist. Ritzer (2000) grouped network theory with exchange theory and rational choice theory, both of which are explicitly reductionist. In fact, some scholars have advocated a hybrid known as “network exchange theory” (e.g., Cook 1987; Cook and Whitmeyer 1992). Granovetter (1990) noted that “network analysis often takes the individual as a fundamental unit of analysis [and] it is methodologically more individualist than some other sociological traditions” (p. 95).

Yet many network theorists affiliate with complexity theory and reject reductionist explanation. Granovetter (1990) continued, “But the underlying conception of network arguments lends itself to a fundamental critique of the atomized conception of action in neoclassical theory” (p. 95). For example, Wellman (1983) held that network theorists “dismiss as
non-structural any explanation that treats social processes as the sum of individual actors' personal attributes and internalized norms” (p. 162).

For network theory to avoid being a sophisticated version of methodological individualism, it will have to develop a theory of social emergence. Social emergence is not a central part of contemporary network theory; networks may or may not manifest emergent properties, and whether they do has not been a central question in network theory. And networks themselves are generally not analyzed as emergent phenomena. As a result, studies of social networks rarely focus on dynamics and change (cf. Latané, Nowak, and Liu 1994, 18).

Structuralist theories are a part of the Structure Paradigm because they lack a sufficient level of sophistication in their theory of node-to-node communication. Structuralist theories have not incorporated a theory of communication, nor have they developed a theory of social emergence.

*Methodological individualism*

The methodological individualist holds that the primary ontological phenomenon is the individual and that all properties of social groups are derivative from properties of individuals in combination. This position is associated with social mechanist approaches and with rational choice theory.

The doctrine of methodological individualism is rooted in Smith, Hobbes, and Mill and was elaborated by the Austrian economists Mises and von Hayek. Watkins (1957) stated the canonical version of methodological individualism: “[T]he ultimate constituents of the social world are individual people…. Every complex social configuration or event is the result of a particular configuration of individuals, their dispositions, situations, beliefs” (p. 106). Methodological individualists invert the causal arrow of the structural determinists: Instead of top-down causation, they focus on bottom-up causation, which they often refer to as “emergence.” Everything about society is determined by properties of individuals, whether human nature, the nature of consciousness or subjective experience, or the predetermined cognitive structures of the brain.

Coleman (1990) was an influential advocate of methodological individualism in sociology. Coleman argued that rational choice theory provided a microlevel base for the explanation of macrophenomena, and he considered emergence to be central to the project. Rational choice theorists are the prototypical methodological individualists. They model each individual’s behavior and then run a model that aggregates many individuals acting in similar fashion. Coleman argued that the aggregation
mechanisms proposed by neoclassical microeconomists were overly simplistic, and he attempted to introduce some sociological sophistication into rational choice models of social emergence.

Several sociological theorists have advocated social mechanistic approaches as a way to move beyond the deductive-nomological covering law model associated with logical empiricism (see Hedström and Swedberg 1998; Pickel 2004). Rather than explanation in terms of laws and regularities, mechanists provide explanations by postulating the processes constituted by the operation of mechanisms that generate the observed phenomena. Social mechanists are methodological individualists in that they do not consider the possibility that emergent social properties are real (Abbott 1996, 3; Sawyer 2004a).³

**Hybrid theories**

Hybrid theories hold that both the individual and structure have ontological autonomy and that their mutual causal relations must be explained. Toward the end of the twentieth century, there was renewed interest in hybrid theories of the micro-macro link (e.g., J. C. Alexander et al. 1987; Knorr-Cetina and Cicourel 1981) and of the structure-agency link (Archer 1995). Increasingly since the 1980s, sociologists working within the Structure Paradigm have developed hybrid theories that incorporate both the microlevel and the macrolevel; the development of these theories has been called a “third phase” of postwar sociology (Alexander and Colomy 1990, 43), and several theorists believe it is the central focus of contemporary sociology (J. C. Alexander and Giesen 1987; Archer 1995). The micro-macro debate tends to focus on relations between the microsociological study of interaction and the macrosociological study of structure, and the structure-agency debate tends to focus on the relation between subjectively conceived agents and the objectivity of social structure. These debates are sometimes construed as manifestations of the same theoretical divide, but I argue below that these two have very little in common; theories that incorporate microinteraction represent a shift to the Interaction Paradigm, whereas theories that relate structure and agency belong in the Structure Paradigm.

Some sociological theorists have realized that the Structure Paradigm is inadequate and have argued that the problem is the paradigm’s objectivity and positivism. They attempt to fix sociological theory by introducing

³ Some social theorists (Bhaskar [1975] 1997; Bunge 1997) focus on the generating mechanisms underlying social reality, but they reject methodological individualism. For a discussion of these issues, see Sawyer 2004a.
subjectivity and agency (Ritzer 2000). Yet this solution still falls within the Structure Paradigm, and most structure-agency theories fail because they have no theory of the mechanisms of social emergence that connect these two levels of analysis. Lacking a theory of social emergence, there is no theory of how individual agency could have causal effects on the structural level. This problem is evidenced by the fact that many agency theorists allow groups to possess agency but do not provide a theory of how individual agencies combine to result in the emergence of group agency (among others, this move is taken by Coleman 1990; Giddens 1984, 25; Ritzer 1996, 558). Groups could not have agency unless that property emerged from the agency of the constituent individuals, and structure-agency theorists rarely theorize this emergence. An account of emergence requires an account of the interactional mechanisms that give rise to processes of emergence; structure-agency theories are subject to the same criticism that the Interaction Paradigm makes against the Structure Paradigm (see “The Interaction Paradigm”).

*Problems with the Structure Paradigm*

The Structure Paradigm cannot explain social emergence because it does not incorporate theories of process, mechanism, and interaction. Consequently, it cannot explain

- The emergence of structure. Either no mechanism is proposed for the emergence of structure from individual actions, or the proposed mechanism is overly simplistic.
- Emergent processes of maintenance, reproduction, change, and conflict.
- Symbolic interaction and the joint construction of social reality.
- Social causation. Of course, social causation is assumed in many variants of the Structure Paradigm; however, the causal vector operates directly on the individual, resulting in theories of socialization and internalization. Yet such theories are susceptible to methodologically individualist explanation as well (see Granovetter 1985). And such theories are susceptible to Giddens’s critique that social constraint could not work unless agents were aware of it. When interaction is added to the mix, social causation is mediated by communication in ways that agents are not aware of (as in the improvisation examples in Chapter 9).

The Structure Paradigm fails because it is missing a critical mediating link: interactions between individuals (cf. Rawls 1987; Ritzer and Gindoff 1992; Wiley 1988). In the 1960s, an important alternative to the Structure Paradigm began to emerge: the Interaction Paradigm. The
Interaction Paradigm represented a fundamental break; it focused on the processes and mechanisms of interaction neglected by the Structure Paradigm. After summarizing the Interaction Paradigm, I ultimately conclude that it too results in inadequate theory because it also neglects emergence, although for a very different set of reasons.

The Interaction Paradigm

The level of interaction, then, is one of the thorniest problems in social theory, largely because so many theorists have omitted or misconceived this level. (Wiley 1988, 258)

Like the Structure Paradigm, the Interaction Paradigm directly addresses the fundamental problem of sociology: the relation between the social and the individual. Its defining feature is the addition of a third level of analysis in between the individual and the social: interaction (see Figure 10.2). The properties of interaction are not derivable from the individual actions or agency of the members of the group, nor can they be derived from social structure; interaction is an ontologically distinct level of analysis.

The Interaction Paradigm holds that there are fundamental properties and laws of interaction – based, for example, on semiotics, cybernetics, or communication theory – that are not reducible either to individual properties or structural characteristics. Because interaction is not reducible to individuals or structure, it is an autonomous level of analysis. Structure Paradigm theorists tend to conceive of “levels” in terms of the size of the group and the degree of complexity of its internal structure (e.g., Ritzer 2000, 499). That is partly why theorists working within the Structure Paradigm generally do not recognize interaction to be a level of analysis: because interaction is a level of reality but not a level of organization. The claim that interaction is a level of analysis with ontological status implies
that it possesses properties that participate in causal relations, with causal
effects on both structure and individuals.

Interaction is at the center of an old sociological tradition associated
with Simmel, Cooley, Mead, and the Chicago School of symbolic inter-
actionism. Simmel famously explained social life in terms of interaction:
“The large systems and the super-individual organizations that custom-
arily come to mind when we think of society, are nothing but immediate
interactions that occur among men constantly every minute” (1950, 10).
Beginning in the 1960s and 1970s, symbolic communication became
central to a remarkably wide range of theories. Interaction Paradigm theo-
rists have taken different positions on the relationship between inter-
action, individuals, and structure; what unifies them is that, in con-
trast to Structure Paradigm theorists (who believed that interaction was
epiphenomenal), they give symbolic communication a prominent role.
The prototype of the Interaction Paradigm is the microsociology asso-
ciated with late twentieth century U.S. sociology, including symbolic
interactionism, ethnmethodology, and conversation analysis. Interaction
Paradigm theories in Europe include Bourdieu’s notion of habitus
([1972] 1977), Foucault’s discussions of discourse ([1969] 1972), and
Habermas’s theory of communicative action (1987). In both Europe and
the United States, the Interaction Paradigm emerged at about the same
time, in both cases as a response to the inherent tensions of the Structure
Paradigm. It is an antithesis to the Structure Paradigm because it rejects
exactly what the Structure Paradigm views as central: the autonomous
causal power of structure in social life, or the reducibility of social life
to individuals. Instead, the Interaction Paradigm argues that interac-
tion is central and even that structure can be explained in terms of
interaction.

The Interaction Paradigm represents the most significant theoretical
attempt to address the most commonly noted problems with the Structure
Paradigm: that it generates models that are too static and thus neglect
history, models that are unable to deal effectively with processes of social
change, and models that are unable to deal with conflict. Interaction
Paradigm theorists all agree that the Structure Paradigm is inadequate to
fully capture social behavior in groups and to account for the relationship
between the individual and the social.

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4 Few social theorists have formulated twentieth-century theoretical developments in this
way (see Lawler, Ridgeway, and Markovsky 1993 for an exception). In many canonical
accounts of twentieth-century sociology, 1960s era conflict theory is often considered
to be the antithesis to structural-functionalism; but in my account, conflict theory also
belongs to the Structure Paradigm.
Within the Interaction Paradigm, theories tend to take one of two forms:

- **Interactional reductionism.** All phenomena at the level of structure and the level of the individual are derivative from interaction; interaction is the foundational social reality (Mead, Blumer, Collins; symbolic interactionism, ethnomethodology, conversation analysis).
- **Hybrid theories.** As with the Structure Paradigm, hybrid theories are those that hold that each of the three levels has ontological autonomy and that sociology must theorize all three levels and their relations (Althusser, Foucault, Habermas, Pêcheux; critical discourse analysis).

The Interaction Paradigm denies that the social world has an objective, irreducible structure that constrains individuals in interaction. Macrolevel concepts such as social structure and culture are considered to be abstractions that “only describe what men do in generalized terms” but do not really exist nor have any causal force over individuals (Shibutani 1961, 175). Social reality can only be ascribed to concrete interactional processes, and it can only be studied in terms of the participating individuals’ interpretations of it (Blumer 1962, 190). The symbolic interactionist Herbert Blumer was explicit in contrasting this stance with the Structure Paradigm (1962, 1966). Rather than structure, symbolic interactional processes are the fundamental units of social life: “[T]he essence of society lies in an ongoing process of action – not in a posited structure of relations” (Blumer 1966, 541). Macrostructural forces never operate directly on individuals but are mediated through their interpretation by those individuals.

Ethnomethodology was closely related to symbolic interactionism (see Fine 1990; Wallace 1969, 35n152). Like symbolic interactionism, ethnomethodology defined itself in opposition to the then dominant Structure Paradigm approach of structural-functionalism. It argued that social reality could only exist in participants’ perceptions of it and observable orientations toward it. In developing this theoretical orientation, ethnomethodology was heavily influenced by the phenomenological sociology of Schutz (1967) and the interpretivism of Winch (1958), Berger and Luckmann (1966), and others. Ethnomethodology rejected social realism and countered that the analyst could only understand social phenomena by studying their meanings to the participants and the situated practices which individuals engaged in. The ethnomethodological approach of conversation analysis emphasized the study of individual creativity and situated social practice. Social life was seen to be collaboratively improvised, a joint accomplishment of shared meaning in interaction. Shared orientations to the situation emerge from meaningful interaction;
these orientations include mutual understandings of the roles participants enact and the rules according to which they interact.

Many sociocultural psychologists (see Chapter 7) fall into the Interaction Paradigm in their emphasis on the close microgenetic study of small-group interaction. Their rejection of "social influence" models of behavior constitutes a rejection of the Structure Paradigm (Rogoff 1998). Sociocultural psychology was foundationally influenced by several strands of Interaction Paradigm theory: American pragmatism, linguistic anthropology, and the interwar Soviet psychology of Vygotsky and Bakhtin.

The Interaction Paradigm was a necessary intellectual development because it enabled researchers to undertake the close empirical study of the interactional processes of social life – an advance over Structure Paradigm studies of interaction, as represented by Robert Bales, with their observational coding of interactional moves based on the structural functions they served (Bales 1950). These interactional processes had not been studied by the Structure Paradigm; a static synchronic focus led them to neglect the dynamic contingency of situated discourse. Thus, the rejection of structuralist approaches enabled the close empirical study of creativity in naturally occurring discourse.

However, in making this antithetical move, the Interaction Paradigm was left with a problematic orientation toward emergent frames and structures. The Interaction Paradigm is uncomfortable with the idea that social phenomena might be irreducibly emergent. For example, the interactional frame remains undertheorized because a theory of the frame is necessarily partially collectivist and partially structuralist, and consequently any theory of the frame seems to suffer from the same problems as the Structure Paradigm (Sawyer 2003d). This assumption has made it difficult for the Interaction Paradigm to study several aspects of social emergence, including how individual participants are constrained by macrosocial forces extending far beyond the encounter and how individual actions collectively result in the emergence of macrosocial phenomena (cf. Blommaert 2001; Duranti 1997, 267-70; Hanks 1996, 142).5

*Interactional reductionism*

The Structure Paradigm recognizes two forms of reduction: reduction to structure and reduction to individuals. The Interaction Paradigm introduces a third possible form: reduction to interaction.

5 And of course those sociologists who focus on macrosociological concerns have long claimed that microanalytic approaches like conversation analysis are insufficient to explain large-scale institutional and enduring macrosocial patterns (e.g., J. C. Alexander and Giesen 1987, 27-8).
The early twentieth century Chicago School of sociology introduced the groundwork for interactional reductionism. The philosopher George Herbert Mead, for example, argued that interaction was primary and that the self and the mind derived from interaction: “The process out of which the self arises is a social process which implies interaction of individuals in the group” (1934, 164).

Robert Bales had been deeply influenced by the Chicago interactionist tradition before arriving at Harvard to study with Talcott Parsons. Like Mead, Bales was an interactional reductionist; he argued that the “interaction system” is the key theoretical starting point and that from it can be derived personality, social system, and culture. The social structure of a group is “a system of solutions to the functional problems of interaction which become institutionalized in order to reduce the tensions growing out of uncertainty and unpredictability in the actions of others” (1950, 65–6). Following Cooley, Mead, James, and Peirce (see Archer 2003), Bales held that properties of the individual reduce to interaction:

[W]hat we usually regard as individual problem-solving, or the process of individual thought, is essentially in form and in genesis a social process; thinking is a re-enactment by the individual of the problem-solving process as he originally went through it with other individuals. It can probably be maintained with considerable success that the best model we have for understanding what goes on inside the individual personality is the model of what goes on between individuals in the problem-solving process. The component parts—acts in a system of action—are identical. (1950, 62)

Today, this line of thought is common among socioculturalists and is sometimes called “Vygotskian,” even though its foundations are American pragmatism as much as Vygotsky’s Soviet psychology (also see Chapter 7).

Within contemporary sociology, interactional reductionism is found in the various strands of what Collins (1981) called “radical microsociology”—particularly in ethnomethodology and conversation analysis. Interactional reductionists are perhaps the prototypical theorists of the Interaction Paradigm because of the purity of their rejection of sociological realism: “[M]acrophenomena are made up of aggregations and repetitions of many similar microevents” (Collins 1981, 988); social patterns and institutions “do not do anything” (p. 989). Sociologists should explain social structures by reducing them to “interaction ritual chains” (p. 985).6

6 Such ethnomethodologically inspired ideas were common through the 1970s; for an example, see Hawes’s 1974 review of texts on organizational behavior, which argued that “a social collectivity is patterned communicative behavior; communicative behavior does not occur within a network of relationships but is that network” (p. 500).
Perhaps the best-known argument for reducing social structure to interaction is the *demonstrable relevance* argument of the conversation analysts. Following ethnomethodology's rejection of the Structure Paradigm, conversation analysts argue that the causal effects of macrosocial forces are not analytically distinct but can only be understood by analyzing participants' orientations toward them as revealed in the talk itself. Schegloff (1992, 195–6) referred to this distinction as that between "external context" and "discourse context" and made the standard conversation-analytic argument that the researcher can treat all context as discourse context because the external context is only important to the extent that it is "demonstrably relevant to participants" (1992, 215; also see Schegloff 1991). This was in part a rejection of positivism and in part a claim for the methodological efficiency of interactional study: The best way to study the influence of structural properties on individuals is to look for conversational evidence of that influence.

Interactional reductionists focus primarily on small-group encounters and do not directly address the micro-macro link. Many interactional reductionists are committed to a process ontology and are resistant to theorizing emergence processes because that seems to involve ontological commitments to both component individuals and emergent social structures (Chapter 7).

*Hybrid theories*

Interactional reductionists do not engage with the Structure Paradigm; instead they reject it entirely: Only interaction is real, and both structure and individuals derive from it. Hybrid theorists cannot avoid a more substantial engagement with the Structure Paradigm because they accept the ontological independence of all three levels. They argue that the relation between individuals and structure cannot be properly theorized nor empirically studied without incorporating an intermediate level of symbolic communication. Communication has causal influences both on individuals (it mediates the downward causal effects of social structure) and on social structure (it mediates the upward emergence of social structure from the collective actions of individuals).

Although interactional reductionism is the dominant form of the Interaction Paradigm, there are a few hybrid theorists who have attempted to analyze both interaction and structure and their mutual relations. Hybrid theories within the Interaction Paradigm are important because they recognize the theoretical tensions driving the dialectic toward the Emergence Paradigm. However, lacking a theory of social emergence, hybrid interaction theories are unstable and tend to migrate toward interactional reductionism.
Various contemporary sociologists have argued that interaction mediates between individual action and macrosocial structure (Collins 1981; Ellis 1999; Lawler, Ridgeway, and Markovsky 1993; Rawls 1987, 1990; Ritzer and Gindoff 1992). Stryker (1980) advocated the incorporation of macrostructure into studies of symbolic interaction, emphasizing the causal and constraining role that structure exerts over interaction. Lawler, Ridgeway, and Markovsky (1993) argued that the micro-macro problem can only be solved by considering encounters between individuals. They argued that microsociology has always been fundamentally concerned with the emergence of social structure from individual action (p. 269), and their account of the emergence of microstructures within a macrosocial network is compatible with the local neighborhoods that emerge in many artificial societies (Chapter 8). However, in fact most microsociology along these lines—including symbolic interactionism and conversation analysis—has emphasized that social structures emerge from the joint actions of actors in symbolic encounters, while deemphasizing the causal constraint of such emergent structures over action (cf. Sawyer 2003d). Ritzer and Gindoff (1992) termed their own position *methodological relationism* because it approaches the micro-macro link by examining relations among individuals.

In Germany, Habermas (1987) developed a hybrid interaction theory, the theory of *communicative action*. Communicative action was a level of analysis distinct from individual agency: “[T]he acts of reaching understanding, which link the teleologically structured plans of action of different participants and thereby first combine individual acts into an interacting complex, cannot themselves be reduced to teleological actions” (vol. 1, 288). In introducing communicative action, Habermas partially resolved the tensions within the Structure Paradigm and the Interaction Paradigm. However, he did not provide an account of the processes of social emergence. Although such processes are implicit in his account—for example, he referred to “linking” and “combining” individual acts “into an interacting complex” (p. 288)–he never provided an emergence account of how these links and combinations occur, nor of how they result in macrostructural phenomena.

The concept of *discourse* has been central to many hybrid interaction theories. It originated in 1970s French discourse analysis, then was integrated into British cultural studies theory, and today is found primarily in critical discourse analysis (Sawyer 2002a). During the 1970s, French discourse analysts such as Paul Henry and Michel Pêcheux developed Althusser’s concept of ideology into a theory of discourse. Pêcheux ([1975] 1982) explored the relations that discourses have with ideologies; discourses, like ideologies, develop out of clashes with one
another, and there is always a political dimension to writing and speech. Pêcheux explored the relationship between discursive formations and ideological formations; for Pêcheux, the discursive formation was the key concept that provided the causal link between social structures and individual consciousness: "Individuals are 'interpellated' as speaking-subjects (as subjects of their discourse) by the discursive formations which represent 'in language' the ideological formations that correspond to them" (p. 112). Discourse is a level of analysis that intermediates structure and individual. However, Althussrian discourse theory did not explore how structures emerge from interaction; rather, it emphasized that interaction is determined by structure.

Beginning in the 1990s, a type of analysis known as "critical discourse analysis" emerged from British cultural studies, building on these 1970s notions of discourse and ideology (Fairclough 1995). Critical discourse analysis shares with Althussrian discourse analysis the attempt to simultaneously study both interaction and social structure, considering each to be an autonomous level of social reality. But by the 1990s, agency and individual creativity were more central concerns in social theory than in the 1970s, and compared with 1970s discourse analysis, critical discourse analysis is more concerned with the agency and potential freedom of action of individual speakers.

However, in practice, critical discourse analysis has rarely documented or explained specific cases in which structural phenomena emerge from interaction. In most cases, the empirical studies of critical discourse analysis demonstrate how social structures reproduce themselves through interaction. These studies often demonstrate the mechanisms of class reproduction—a traditional Marxian concern—in spite of (or with the unwitting participation of) the creative agency of individuals. Critical discourse analysis has not proposed a theory of social emergence.

**Problems with the Interaction Paradigm**

The Structure Paradigm failed because it did not theorize the processes and mechanisms of social emergence, and these are necessary components of any explanation of the relation between individuals and social structure. The Interaction Paradigm is a necessary first step toward a science of social emergence because it emphasizes interaction, process, and mechanism. But it is limited by internal theoretical contradictions that prevent it from fully explaining social emergence.

**Problem 1: No mechanism proposed between social structure and interaction** The interactional reductionists deny that social structure has
any autonomous reality, so they reject the possibility that interaction is constrained by social phenomena. In contrast, the hybrid theories of the critical discourse analysts and the cultural studies theorists examined how interaction itself might be causally constrained by social structure. But they have not explained the mechanisms by which macrosocial phenomena causally influence interaction. For example, this was where Pêcheux’s discourse theory came up short; he never identified the mechanisms of the causal relations between ideological frameworks and discursive frameworks.

More important, the Interaction Paradigm does not explain how interaction could causally influence social structure; what is required is a theory of social emergence focused on explaining how interactional processes result in the emergence of social properties. Without a well-developed account of how interactional processes result in social emergence, Interaction Paradigm theorists have been unable to convince other sociologists that communication is central to sociological theory. Although a few hybrid interaction theorists have argued for the need to incorporate communication into micro-macro theories, none has sufficiently articulated the role of communication in social emergence.

**Problem 2: No mechanism proposed between the individual and interaction** Interactional reductionists hold that the individual is constituted by and through interaction, and they deny that the individual has autonomous existence prior to and apart from interaction. Hybrid interactionists introduce the theoretical possibility of examining how interaction causally constrains individuals. Yet, in practice, hybrid interactionists rarely consider the individual; rather, they focus on relations between interaction and social structure. Sociocultural psychologists have made the most empirical progress in this area, with their close studies of cultural practices and socialization processes.

**Problem 3: No theory of social emergence** The Structure Paradigm ultimately fails to explain social emergence because it has no theory of interaction. After the antithesis of the Interaction Paradigm, it is no longer possible to deny the importance of symbolic interaction. The unresolved tension in the Interaction Paradigm is how to bring social structure back into sociological theory.

- The Interaction Paradigm rejects the necessity of examining individuals (the realm of psychology) and macrosocial structures (the realm of macrosociology). Thus it seems that no concept of emergence is necessary.
The Emergence Paradigm

- The Interaction Paradigm lacks ontological depth; its conception of reality has a narrow scope around the interaction level, and it neglects the causally autonomous properties of both structures and individuals.
- The Interaction Paradigm has not theorized social constraint; in fact, interactional reductionists reject the existence of such constraint.

In sum, the Interaction Paradigm has no theory of social emergence — no explanation of how stable structures emerge from the joint collective actions of individuals engaged in social interaction. Accounting for causal relations between structure, interaction, and individual is a central goal of the Emergence Paradigm.

An aside: Interpretivism and agency

Intent is too intimate a thing to be more than approximately interpreted by another. It even escapes self-observation. ... An act cannot be defined by the end sought by the actor, for an identical system of behavior may be adjustable to too many different ends without altering its nature. (Durkheim [1897] 1951, 43)

Before describing the Emergence Paradigm, I here discuss the place of agency theory in the history of the two paradigms reviewed in the preceding sections. Agency theory requires an aside because it does not fit comfortably into either the Structure Paradigm or the Interaction Paradigm, and its uncomfortable position results from theoretical confusion within agency theory. Many sociologists consider microsociology to include both agency theories and interaction theories. The usual result has been that the autonomous properties of interaction are neglected because interaction is conflated with agency. For example, in Ritzer's (1996) scheme, “micro” sociology includes both patterns of interaction and subjective mental states: “Depending on who is offering the definition, the micro level can range from psychological phenomena to individuals to interaction patterns among individuals” (p. 493). And Wiley (1988) wrote, “I will use ‘micro’ to refer to the bottom two levels, self and interaction” (p. 255).

The conflation of agency and interaction is a serious error. When many agentive individuals begin interacting, socially emergent phenomena occur; but when a single agent acts in isolation, there is no social emergence. Interaction can be studied objectively within the positivist tradition, whereas agency is a subjectivist, interpretivist notion. In the Interaction Paradigm, interactional regularities are properties of interaction qua interaction, not reducible to participants' agency or intentions.

Some interaction theorists and agency theorists have unwittingly encouraged this confusion by themselves conflating agency and interaction.
These *interpretivists* include many scholars who reject positivism and objectivism, such as phenomenological and subjectivist social scientists. Conversation analysts, for example, believe that what emerges during an encounter can only be explained in terms of the strategic actions taken by individuals and the demonstrated interpretations held by individuals in successive turns of an encounter. Interpretivists believe that macrostructural forces never constrain individuals directly; rather, social causation is always mediated by the interpretations that individuals hold.

Giddens (1984) is one of the best-known contemporary advocates of interpretivism: “Structural constraints, in other words, always operate via agents’ motives and reasons” (p. 310). Giddens’s account of interpretivism is a variant of 1960s phenomenology and ethnomethodology, developed in the context of 1960s and 1970s British Marxist thought. Many Marxists at that time developed hybrid interpretations of Marx that combined the subjectivity of consciousness with the objectivity of economic and social relations. One of the first such interpretations of Marx was that of Peter Berger and colleagues (Berger and Luckmann 1966; Berger and Pullberg 1965), who noted that the world “must be constructed and re-constructed over and over again” (Berger and Pullberg 1965, 201). Berger and Pullberg (1965) called this process *structuration*: Social structure is “a medium for the production of a world, while at the same time it is itself a produced moment of that world. Clearly, the relationship just described is a dialectical one. That is, social structure is produced by man and in turn produces him” (p. 202). Various combinations of Marxist theory and phenomenology focused on routines, habitualized action, temporality, the ontological dependence of social order on human activity, and the dialectic between the individual and the social world (Berger and Luckmann 1966; Bourdieu [1972] 1977; Garfinkel 1967; Giddens 1984).

Giddens attempted to retain the theoretical benefits of structure with his notion of the *social system*: “reproduced relations between actors or collectivities organized as regular social practices” (1984, 25). This concept of the social system requires a theory of interaction (“relations between actors”) and a theory of how collectivities emerge (else they could not be entities capable of having relations); yet no theories of interaction or

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7 Many of Giddens’ readers talk as if he is a theorist of social emergence, when they refer to the process of structuration as a process of individuals co-creating structures that then constrain and enable their further course of action. However, this is a misreading of Giddens; Giddens explicitly rejected any form of social emergence. He explicitly rejected that social emergents are real, and argued that they have no autonomous causal power (see Chapters 5 and 7).
emergence appear in Giddens's writings. In Giddens's theory, situated
social practice is central. Although he never made clear whether "situated
social practice" is a theory of agency or a theory of interaction, in practice
he remained focused on individual agency and never outlined a theory of
interaction.

Interpretivists are opposed to atomist reductionism and methodological
individualism. The philosopher Charles Taylor (1985) presented
a prototypical argument that meaning and interpretation cannot be
reduced to physical-level explanations. However, like most interpretivists,
Taylor did not base his argument against physicalism on emergence;
rather, he made an argument based on the irreducibly subjective nature
of consciousness. In the context of systems theory, interpretivists use
a "special case" argument against reductionism of the individual level --
they argue that human subjectivity is the one special natural phenomenon
that will not submit to natural science analysis. And in making this move,
interpretivism finesses social emergence, denying that objective social
phenomena exist apart from subjective orientations toward them and
interpretations of them.

Agency theorists like Taylor and Giddens are ultimately focused on
individuals; they hold that subjective interpretation explains social life
and that there is no need for an autonomous science of society. If interpr-
etivists are correct, then the social level of analysis does not exist. Interpr-
etivists have the same attitude about social phenomena as methodological
individualists: Social phenomena do not exist, they are mere epiphenom-
ena of human action (and humans in interaction). As Granovetter (1985)
noted, in such an oversocialized conception of actors, "Social influences
are all contained inside an individual's head" (p. 486), and the ultimate
effect is that these individuals can be considered to be "as atomized as
any Homo economicus" (p. 486).

Contemporary interpretivism is a strange and unstable combination
of subjectivist agency theories (e.g., Giddens) and objectivist empirical
studies of interaction (e.g., conversation analysis). Interpretivism is
unstable because it overlaps both agency theory (part of the Structure
Paradigm) and interactionism (part of the Interaction Paradigm). This
has had unfortunate implications for sociological theory. It has allowed
many sociologists to mistakenly conflate agency theories and interaction
theories and to group theories of the individual and theories of com-
munication into "micro" sociology, when in fact they have very little
in common. It has obscured the need for symbolic communication in
sociological theory. Its anti-objectivism has distracted sociology from its
primary task: to be the science of social emergence.
The Emergence Paradigm

The Interaction Paradigm is a necessary antithesis to the Structure Paradigm. It emphasizes critical features of social emergence that have no place in the Structure Paradigm: process, interaction, symbolic communication, and social mechanism. However, the Interaction Paradigm is also incomplete because it either rejects the structural level of analysis (in the case of interactional reductionists) or fails to theorize emergence (in the case of hybrid theorists). Ultimately, both paradigms fail because neither provides an account of social emergence.

As a result of inverted neglects – the Structure Paradigm neglecting symbolic interaction, the Interaction Paradigm neglecting structural properties – there has not been any sustained study of the role that symbolic interaction plays in social emergence. This is unfortunate, because if structural properties can be said to emerge from collective microfoundations of action, then that emergence must be the result of interaction among individuals; without interaction among elements in a complex system of dynamic connections, there can be no emergence. It is time for sociology to reconcile the best features of these two paradigms, time to synthesize the thesis of the Structure Paradigm and the antithesis of the Interaction Paradigm. In the rest of this chapter, I propose a synthesis: the Emergence Paradigm.

The micro-macro issue in sociology is a theoretical issue regarding how to relate two paradigms in sociological research that have, for the most part, remained independent. One paradigm, microsociology – which studies interactions between individuals – includes ethnomethodology, symbolic interactionism, conversation analysis, and, to some extent, sociolinguistics. The other paradigm, macrosociology, studies large-scale social phenomena such as institutions (schools, governments, economies, corporations, markets) and roles and statuses (social class, gender, race). Recent attempts to bridge the micro-macro divide are driven by the dialectic that I described earlier, and the Emergence Paradigm continues this late twentieth century endeavor.

The Emergence Paradigm introduces two additional levels of social reality: stable emergents and ephemeral emergents (see Figure 10.3). In any social situation, there is a continuing dialectic: social emergence, where individuals are co-creating and co-maintaining ephemeral and stable emergents, and downward causation from those emergents. The new, modified versions of the emergents at Levels C and D continually constrain the flow of the interaction. During conversational encounters, interactional frames emerge, and these are collective social facts that can be characterized independently of individuals’ interpretations of them. Once
### The Emergence Paradigm

<table>
<thead>
<tr>
<th>Social Structure (Level E)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Written texts (procedures, laws, regulations); material systems and infrastructure</td>
<td></td>
</tr>
<tr>
<td>(architecture, urban design, communication and transportation networks)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stable emergents (Level D)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Group subcultures, group slang and catchphrases, conversational routines, shared social practices, collective memory</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Ephemeral emergents (Level C)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic, context, interactional frame, participation structure; relative role and status assignments</td>
<td></td>
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</tbody>
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<table>
<thead>
<tr>
<th>Interaction (Level B)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Discourse patterns, symbolic interaction, collaboration, negotiation</td>
<td></td>
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<table>
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<tr>
<th>Individual (Level A)</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Intention, agency, memory, personality, cognitive processes</td>
<td></td>
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</tbody>
</table>

Figure 10.3. The Emergence Paradigm.

A frame has emerged, it constrains the possibilities for action. Although the frame is created by participating individuals through their collective action, it is analytically independent of those individuals, and it has causal power over them. I refer to this process as **collaborative emergence** (Sawyer 2003d) to distinguish it from models of emergence that fail to adequately theorize interactional processes and emergence mechanisms. The Emergence Paradigm emphasizes the identification of the mechanisms of collaborative emergence that lead to ephemeral and stable emergents. By introducing these intermediate levels and the corresponding notion of collaborative emergence, my goal is to move beyond various undeveloped conceptions of emergence in sociology, which try to make too large a jump from the individual to the structural level.

In hybrid variants of the Interaction Paradigm, the theorized relations between structure and interaction conflate three distinct processes of social emergence; Levels C, D, and E are all considered to be part of the structure level. Likewise in the Structure Paradigm, emergents at Levels C and D are considered to be part of social structure. For both sociological paradigms, collaboratively emergent phenomena are incorrectly associated with the structural level and are thus perceived as being overly static rather than dynamic and processually emergent.
In much of traditional sociological theory, lower levels represent smaller groups of people, and higher levels represent larger groups. The emergents at Levels C and D are not structures in the traditional sociological sense of organizations and networks. They are emergent properties of sociological events and have an existence independent of any particular configuration of individuals. Although Levels C and D are at lower levels than social structure, they do not necessarily correspond to smaller groups. Rather, they represent emergent properties of groups of any size.

The Interaction Paradigm and the Structure Paradigm have complementary strengths in their approaches to social emergence. Whereas the Interaction Paradigm is known for its empirically rigorous approaches, in general it has not demonstrated how these methods could be applied to broader theoretical concerns. In contrast, Structure Paradigm treatments of emergence have been almost exclusively theoretical (Ritzer 1990, 363). The synthesis of the Interaction Paradigm and the Structure Paradigm provides an empirical method to study the micro-macro link; after all, this link must be mediated by successive interactions among individuals. Thus the Emergence Paradigm takes from the Interaction Paradigm the close empirical focus on processes of symbolic interaction, and it takes from the Structure Paradigm the belief that emergent social phenomena are ontologically distinct and have autonomous causal influence on individuals.8

The Emergence Paradigm accepts an important role for methodological individualism in sociology; it can play an important role in identifying the mechanisms and processes of social emergence in specific token instances. But methodological individualism is incomplete because, unlike the Emergence Paradigm, it does not support a social realism in which emergents have autonomous causal powers (as argued in Chapter 5). Due to social emergence, social life cannot be fully explained by analyzing the actions or mental states of the participant individuals and

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8 Compare Layder (1981), who outlined a similar conflict between theories of structure and of interaction and who made a similar critique of Interaction Paradigm theories as "interactive determinism" (p. 75): They reduce the social world to "the notion of the 'accomplishments' of active subjects" (p. 116) and thus cannot account for structural constraints on interaction. Despite Giddens's and Bourdieu's attempts to incorporate some notion of structure, Layder argued that both ultimately are "on the same terrain as the ethnomethodologists and the phenomenologists" because social structure for them "is nothing other than the ephemeral constructions and reality negotiations of situated actors" (p. 75). Layder proposed to distinguish interaction structure (emergent anew in each encounter) from contextual structure (objective, preconstituted structure; see the figure on p. 108). Although his proposed relation is subtly different from the Emergence Paradigm, there is much overlap.
then analyzing the interactions of these individuals, working “upward” to an explanation of the emergents. This sort of analysis can partially explain the collaborative emergence of ephemeral interactional frames but cannot adequately represent the analytic independence of emergents and the ways that they causally constrain and enable participants.

The Emergence Paradigm is a positivist, objectivist, scientific approach, and consequently it rejects subjectivism and interpretivism. It argues that the causal power of emergents cannot be explained solely in terms of individuals’ representations of them, their demonstrated orientations to them, or their subjective interpretations of them. Properties at higher levels have autonomous causal force. They are unintended emergent effects, and they are causal even when individuals have no knowledge of them. Of course, in many cases individuals do have some knowledge of these emergents, and individuals’ perceptions can have socially relevant effects. But in the Emergence Paradigm, most of the explanatory power comes from emergent properties and their processes of emergence, and individuals’ subjective interpretations of emergents are generally not necessary in social explanation.

The Emergence Paradigm attempts to explain the causal forces that originate in an emergent that was created by the participants. Emergence Paradigm research focuses on the micro-interactional mechanisms by which shared social phenomena emerge and on how those emergents constrain those mechanisms.

**Level C: Ephemeral emergents**

In order that there may be a social fact, several individuals, at the very least, must have contributed their action; and in this joint activity is the origin of a new fact. (Durkheim [1895] 1964, lvi)

Level C includes the interactional frames of conversation analysis. In conversation, an interactional frame emerges from collective action and then constrains and enables collective action. These two processes are always simultaneous and inseparable. They are not distinct stages of a sequential process – emergence at one moment and then constraint in the next; rather, each action contributes to a continuing process of collaborative emergence at the same time that it is constrained by the shared emergent frame that exists at that moment. The emergent frame is a dynamic structure that changes with each action. No one can stop the encounter at any one point and identify with certainty what the frame’s structure is. It is always subject to continuing negotiation, and because of its irreducible ambiguity, there will always be intersubjectivity issues,
with different participants having different interpretations of the frame’s constraints and affordances.

The collaborative emergence of frames has been studied by several researchers in interactional sociolinguistics and conversation analysis, including Deborah Tannen, Alessandro Duranti, and Charles Goodwin (Duranti and Goodwin 1992; Tannen 1993). This tradition represents an Interaction Paradigm antithesis to the linguistic tradition of pragmatics, which presumes the prior existence of a context within which individuals engage in conversation – analogous to Structure Paradigm conceptions of social structure. In most of pragmatics, context is presumed to influence an individual’s conversational behavior in a given turn, but individuals are not considered to be participating in the creation of that context.

The Interaction Paradigm shifted the focus to how participants collectively create their context. However, due to the interpretivist theoretical foundations of most Interaction Paradigm researchers, they have been resistant to arguments that the emergent frame is a real social phenomenon with autonomous social properties. Rather, the frame is considered to exist only to the extent that it is “demonstrably relevant” (Schegloff, 1992) to participants, a classic interpretivist stance. Due to these interpretivist assumptions, the Interaction Paradigm fails to explain social emergence.

**Level D: Stable emergents**

The second form of collaborative emergence is from Level B to Level D, with a complicated mediation through Level C. Level D represents the shared, collective history of a group. Stable emergents of small groups include group learning (Hertz-Lazarowitz and Miller 1992), group development (Frey 1994), peer culture (Corsaro 1985), and collective memory (Wertsch 2002). Stable emergents of an entire society include its culture and its language; their collaborative emergence has been studied by cultural and linguistic anthropology.

The line between stable and ephemeral emergents is a fine one; for purposes of definition, I consider an emergent to be stable if it lasts across more than one encounter. Stable emergents have different degrees of stability; some are stable over generations, and others are stable only for weeks or months. From most to least stable, examples of stable emergents include language, catchphrases, trends and tastes, cohort private jokes and stories, and the ensemble feel of a theater group during a month-long run of a play. The issue of how stable emergents are related to ephemeral emergents is still unresolved within social science. In different ways, the issue is central to folkloristics, ethnomusicology, popular culture studies,
the study of peer cultures and subcultures, and collective behavior studies of rumors and fads.

Ephemeral emergence occurs within a single encounter. Most sociological discussions of emergence have focused on the broader macrostructures that emerge and how those emergent patterns constrain future interaction. Yet these studies have not had much success in tracing the exact details of the moment-to-moment emergence processes whereby macrostructures are collectively created. In contrast, the Interaction Paradigm has focused exactly on the moment-to-moment details of how ephemeral emergents result from interaction. However, in shifting their focus to interactional process, they have tended to neglect the nature of what emerges and of what perdures across repeated encounters.

The collaborative emergence of stable emergents is the concern of the field known as "collective behavior," the study of phenomena such as mob actions, riots, mass delusions, crazes, fads, and fashions. Park and Burgess (1921) first noted a special kind of behavior that they called "collective behavior." Lang and Lang (1961) called it "collective dynamics": "Those patterns of social action that are spontaneous and unstructured inasmuch as they are not organized and are not reducible to social structure" (p. 4, original italics). They were also concerned with how collective action transforms into stable emergents, and during the 1960s, this became the concern of social movements researchers (Evans 1969, 10).

But these classic theories of collective behavior went from the individual to the emergents directly, without an examination of the mechanisms of interaction. These theorists used extremely simplistic notions of interaction such as "social contagion" (Blumer 1939) or "milling" (Park and Burgess 1921); historically, this is because these writings on collective behavior predated the development of sophisticated methodologies for analyzing interaction. The sociology of collective behavior never made connections to the study of how stable emergents are created over time—oral culture, ritual change, and related subjects from linguistic anthropology. It is time to revisit these phenomena of collective behavior with the additional sophistication provided by the Emergence Paradigm.

I agree with Coleman's (1990) critique of this line of research: It assumes that people transform into unreflective, irrational beings when grouped into certain unstructured social forms. Collective behavior researchers essentially studied any behavior that was not institutionalized. This is a historical artifact of the fact that the Structure Paradigm was dominant at the time, and the Structure Paradigm had no way to study creative social emergence; the collective behavior researchers chose to avoid this limitation by claiming they were studying an altogether different sort of social behavior, behavior that did not occur within the
constraints of institutions and norms. But in the Emergence Paradigm, social emergence is found in all social interaction, regardless of the degree of formalization or institutionalization.

Several social theorists have recognized the theoretical benefits of introducing stable emergents as a mediator between individuals and macrostructure. These include Collins’s (1981) repetitive patterns of behavior, Giddens’ (1984) situated social practices, and Lawler, Ridgeway, and Markovsky’s (1993) microstructures. For Lawler, Ridgeway, and Markovsky, microstructures “emerge from and organize particular encounters” (1993, 272). Stable emergents are symbolic phenomena that have a degree of intersubjective sharing among some (more or less stable) group of individuals.

Some network analysts have argued that in many cases institutions are crystallizations of emergent activity patterns and personal networks. Granovetter (1990) cited two historical examples of such institutional emergence: the development of the electrical utility industry in the United States between 1880 and 1930 and the professionalization of psychiatric practice. In both cases, the original institutions were “accretions of activity patterns around personal networks” (p. 105). Empirical and historical study suggests that these economic institutions emerged from the same processes as other social institutions. This sort of historical analysis of institutional emergence demonstrates that institutions are contingent and are socially constructed; the processes of their emergence must be studied empirically, and they cannot be predicted from neoclassical economic theory. As Granovetter (1990) concluded, explanations of institutions that do not incorporate the contingencies of social emergence “fail to identify causal mechanisms; they do not make an adequate connection between micro and macro levels, and so explain poorly when historical circumstances vary from the ones under which they were formulated” (p. 106).

**Downward causation and the bidirectional dialectic**

The central theoretical problems [of sociology are] how the purposive actions of the actors combine to bring about system-level behavior, and how those purposive actions are in turn shaped by constraints that result from the behavior of the system. (Coleman 1986, 1312)

As [interactions] crystallize, they attain their own existence and their own laws, and may even confront or oppose spontaneous interaction itself. (Simmel 1950, 10)

As levels of reality, stable and ephemeral emergents have an independent ontological status, and they have causal powers. These causal powers
result in constraining and enabling effects on individuals. For example, in a conversation, once an interactional frame has emerged, it then constrains the future interaction of the participants, constraining interaction (at Level B) by acting directly on the interactional semiotics of the interaction and also constraining individuals directly (at Level A). Numerous examples of both forms of causation are documented in my 2003 book Improvised Dialogues.

Influence of emergents on the individual Participants are constrained by stable and ephemeral emergents. For example, the strategic options that the ephemeral emergent frame makes available are limited, and the limiting of the selection set is a form of constraint, although not a strictly deterministic one. Social encounters are often improvisational, and in improvisational encounters there is always contingency and actions are never fully constrained.

There are four distinct types of downward causation operating on individuals:

- Structures constraining individuals (E → A)
- Stable emergents constraining individuals (D → A)
- Ephemeral emergents constraining individuals (C → A)
- Properties of interaction constraining individuals (B → A)

Interpretivists are correct to note that complex social systems have a unique feature not held by any other complex system: Individuals are aware of the social products that emerge from their encounters. In no other complex system do the components internalize representations of the emergents that they participated in creating. When sociologists have considered social causation, they have largely limited their analysis to this form of “interpretivist” downward causation.

However, many complex systems manifest downward causation (Andersen et al. 2000); for example, philosophers of mind generally accept that mental states are emergent from the physical brain and yet have causal powers over the physical brain. Note that this downward causation does not require that neurons have awareness or agency; by analogy, there is no reason why individuals could not be constrained even when they are not aware of it.

The Structure Paradigm does not recognize interaction as an autonomous level of reality, and the first three forms of downward causation are conflated within the Structure Paradigm, which places Levels C and D at the structural level. Because the Structure Paradigm does not distinguish these types of emergents, it has difficulty accounting for the mechanisms whereby emergent properties constrain individuals.
Within the Interaction Paradigm, interactional reductionists do not recognize downward causation because they deny that levels C, D, and E have ontological status apart from interaction. Hybrid theorists within this paradigm have not theorized stable and ephemeral emergents, although critical discourse analysis has made contributions to our understanding of how structures and interaction constrain individuals (E → A and B → A).

Anthropologists – both French structuralist anthropologists of the 1960s and Chicago-style symbolic anthropologists of the 1970s – have argued that cultures provide emblems or ready-mades to individuals and that these combine to form a shared system of knowledge that individual actors can then use in interaction. This is a downward causal force from the stable emergents that make up culture. These emblems and ready-mades are stable emergents from prior interaction. Anthropologists have not adequately examined the historical processes of collaborative emergence, typically considering that the symbolic structures of the culture are relatively stable and preexist any given encounter.  

*Influence of the emergents on interaction* Because interaction is an autonomous level of analysis, there is downward causation onto Level B that is not mediated through individual representations at Level A:

- Structures constrain interaction (E → B) (this was a focus of Althusserian discourse analysis).
- Stable emergents constrain interaction (D → B) (the focus of much of linguistic anthropology).
- Ephemeral emergents constrain interaction (C → B) (the focus of Sawyer 2003d).

Emergents constrain the kinds of discursive patterns that can occur, and this is a strictly semiotic, interactional phenomenon, independent of human agency. Linguistic anthropologists and sociolinguists have demonstrated a wide range of situations where interaction patterns are directly constrained by the situation, even in cases where that situation has been collaboratively negotiated by the participants. This causal arrow is analytically distinct from any participating individuals – their strategic intentions or agency – because it operates directly on interaction processes themselves. Examples include studies of politeness and formality (Brown and Levinson 1978), strategic register switches (Friedrich 1971), greeting rituals (Irvine 1974), and collaborative joke-telling (Brenneis 1984).

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9 There are some exceptions: The “invention of tradition” theories of Hobsbawm and Ranger (1983) and the creativity and anthropology approach represented by Lavie, Narayan, and Rosaldo (1993).
Accounting for the dialectic between emergence and downward causation requires a semiotic argument about the nature of interaction (e.g., Sawyer 2003c).

Within the Structure Paradigm, there is no recognition that interaction itself can be constrained because interaction is not theorized as a distinct level of analysis. The only notion of downward causation is the social force that operates on the individual. This is why agency, subjectivity, and interaction are so frequently conflated in the Structure Paradigm. Within the Interaction Paradigm, most theorists are interactional reductionists who reject the autonomous existence of Levels C, D, and E. Those hybrid theorists that accept the autonomous existence of social structures—such as the critical discourse analysts—have made some progress at understanding the ways that interaction is itself constrained by social structure, but they have conflated Levels D and E and have generally failed to theorize Level C.

**The circle of emergence**

The Emergence Paradigm is a vision of sociology as the foundational social science. The basic science of social emergence has the explanatory scope inscribed by the circle in Figure 10.4. The Emergence Paradigm cannot explain everything of interest to the social sciences—only the phenomena within the circle of emergence. Most of the phenomena outside of the circle should be studied by disciplines other than sociology, because they are not foundational.

**Level E: Structure**

Level E represents stable emergents that have become fixed in objective material form. These include the technological and material systems of a society—communication networks, systems of highways and rail lines, residential population distributions, urban architecture, physical locations of goods and services, distribution networks for goods and services, and many other such features (Collins 1981, 994–5). Level E also includes those stable emergents that have become codified externally through writing technology: schedules, project plans, organizational charts, procedural and operations manuals, audit procedures, legal codes, constitutions.  

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10 Some theorists would argue that all of these elements I choose to place at Level E, including both the material and the documentary, are not objective because they only take on meaning once interpreted and used in some concrete encounter between individuals. This position is part of the subjectivist interpretivism that I have already rejected.
Social Structure (Level E)
Written texts (procedures, laws, regulations); material systems and infrastructure
(architecture, urban design, communication and transportation networks)

Stable emergents (Level D)
Group subcultures, group slang and catchphrases, conversational routines, shared
social practices, collective memory

Ephemeral emergents (Level C)
Topic, context, interactional frame, participation structure; relative role and status
assignments

Interaction (Level B)
Discourse patterns, symbolic interaction, collaboration, negotiation

Individual (Level A)
Intention, agency, memory, personality, cognitive processes

Figure 10.4. The circle of emergence.

Many Level E phenomena are already the purview of other social sciences:

- Political systems are fixed by the documents and records that support
  institutions. These systems are studied by political science.
- Economic systems are fixed by patterns and technologies of distribution
  of goods, the status of contemporary technology (the means of
  production), locations of factories, and financial communication technolo-
  gies that make possible international interbank transfers and letters
  of credit, which in turn make international trade possible. These sys-
  tems are studied by economics.
- Educational systems are fixed by the locations of schools, by their class-
  room architectures, by the documents and records that support the
  institutions of schooling, and by the textbooks that encode knowledge.
  These systems are studied by education researchers.

Durkheim recognized a distinction between stable emergents and fixed
structures. He referred to emergents at the lower end of Level D as “cur-
rents” and used the term “crystallized currents” to refer to currents with
a higher degree of stability: “All sorts of currents come, go, circulate
everywhere, cross and mingle in a thousand different ways, and just
because they are constantly mobile are never crystallized in an objective form” ([1897] 1951, 315). Durkheim’s examples of social currents include joyous confidence, individualism, philanthropy, and cosmopolitanism. When a current takes on an objective material form, Durkheim called it a materialized social fact (see Chapter 6). In his time, there was no technology available to study the emergence of social currents – that would require videotape and audiotape records. His only empirical option was the study of materialized currents – and in this category Durkheim included databases, bureaucratic records, and demographic statistics. Perhaps owing to these methodological limitations, Durkheim claimed that materialized currents and crystallized currents were not significantly different from the (noncrystallized) currents they originated in: “There is thus a whole series of degrees without a break in continuity between the facts of the most articulated structure and those free currents of social life which are not yet definitely molded. The differences between them are, therefore, only differences in the degree of consolidation they present. Both are simply life, more or less crystallized” ([1895] 1964, 12).

In responding to the claim that society includes only individuals, Durkheim referred to these “materialized” aspects of society: “It is not true that society is made up only of individuals; it also includes material things, which play an essential role in the common life. The social fact is sometimes so far materialized as to become an element of the external world” ([1897] 1951, 313). His examples include types of architecture, networks of communication and transportation, technologies of production, and written language techniques.

The physical world is fixed in a way that stable emergents are not. Level E phenomena are not subject to normal social emergence, and they fall outside of the scope of the Emergence Paradigm as outlined here – with its emphasis on symbolic interaction – because their emergence from interaction is lost to history and their continued existence does not depend on interactional phenomena at Level B. For the most part, these material phenomena are resistant to explanation in terms of social emergence. Level E phenomena always socially emerge from historical processes, although their emergence is often too distant in the historical past to be of empirical interest to sociologists, and as a result they are usually studied by historians rather than sociologists.

Modern transportation infrastructures are examples of Level E phenomena. Before the industrial era in the United States, shipping and travel tended to follow inland waterways. In the nineteenth century, rail lines – materialized social emergents – increasingly influenced the development of the United States. They influenced the settlement patterns of
the American West and determined the rise and fall of many midwestern cities. Once established, these transportation networks had causal power over individuals. In the second half of the twentieth century, another complex set of materialized social facts emerged: the automobile, interstate highways, and cheap fossil fuel. Generally it is historians, rather than sociologists, who explain these historical cases of emergence. The Emergence Paradigm could be combined with social history to help us explain the emergence of Level E structures through historical time. But questions within the circle of emergence are more central to sociology, and sociology proper should focus on the empirical study of social emergence.\textsuperscript{11}

Sociologists often conflate Levels C, D, and E into the “macrostructure” and Levels A and B into the “microlevel.” Introducing the distinction between Levels D and E results in a rethinking of the notion of social structure because many conceptions of structure include Level D phenomena. From the perspective of the Emergence Paradigm, it is critical to clarify the divide between levels D and E because Level D phenomena fall under the purview of the Emergence Paradigm whereas Level E phenomena do not.

**Level A: Individuals**

The lower limit of the circle of emergence occurs within Level A. To the extent that the individual can be studied outside of the circle of emergence, the individual will be the subject of the discipline of psychology. This psychology will be much more limited in scope than the current discipline because much of what we think of as “the individual” is subject to emergence processes, and these aspects of the individual must be studied via social emergence.

Individual brains have properties that are not subject to downward causation from the upper levels, and the task of psychology is to identify those properties of individual brains that are universal across sociocultural contexts and across individuals. These properties include such things as memory capacity, processing speed, abilities to multitask, factors of personality, and cognitive developmental pathways. All of these things may,
at least in principle, be ultimately tied to the genotype of the organism and to its expression during development. To that extent, they are not subject to downward causal forces and consequently would fall outside the realm of social emergence.\textsuperscript{12}

The Emergence Paradigm is of interest whenever properties of Levels B, C, or D begin to influence or constrain the way individuals think, solve problems, or behave. Social causation is significant during socialization; contemporary sociocultural research has found that a large part of the child's development depends on social and cultural context. Social causation also plays a significant role throughout adult life when situations influence individual behavior; many such cases have been documented by both social psychologists and sociologists.

To the extent that individuals are influenced and constituted by their social situation, the study of the individual will be a part of the Emergence Paradigm. For example, to the extent that developing individuals can change during development to reflect the society or culture that they are in, the study of individual development would fall within the Emergence Paradigm. This study is currently the purview of psychologists, but only of psychologists of a certain persuasion – sometimes known as "cultural psychologists" or "sociocultural psychologists"; the mainstream of psychology is still focused on those universal, biologically based behavioral phenomena that are constant across situations.

The Emergence Paradigm reveals that the discipline of psychology as it is currently configured is unstable: The circle of emergence slices directly through the center of contemporary psychology. If the Emergence Paradigm takes hold, then psychology will split into two distinct disciplines. The first, the study of biologically based universal properties of human brains, will increasingly merge with neuroscience. The second, which studies those phenomena that cannot be explained by reduction to neuroscience, will migrate to the new sociology of social emergence. Alternatively, as the universalist elements of psychology merge with neuroscience, the discipline of psychology may give itself new life by reformulating itself as emergence psychology, a psychology broken free from its reductionist theoretical assumptions.\textsuperscript{13}

\textsuperscript{12} I consider the existence of such properties to be well documented by decades of psychological and neuroscientific research. Although a few die-hard social constructivists may still wish to argue that everything about the individual is malleable and socially constructed, I believe this extreme stance is fading from serious consideration within the social sciences.

\textsuperscript{13} Similar observations have led many social theorists to deny that psychology is a distinct discipline, beginning famously with Comte.
Toward a new social science

The Emergence Paradigm addresses the critical weaknesses of both the Structure Paradigm and the Interaction Paradigm, acting as a synthesis of the central features of both – a synthesis designed to reformulate sociology as the foundational science of social emergence. If sociology indeed becomes the science of social emergence, there are ramifications for many other social sciences as well, because the science of social emergence would provide the foundation for all of the social sciences.

First, the Emergence Paradigm addresses several of the inadequacies of the Structure Paradigm. The first weakness is that, within the Structure Paradigm, Levels C and D are assumed to be a part of social structure. Some theorists consider them to be distinct, but even those theorists generally consider them to be largely determined by Level E. Perhaps the one exception is cultural anthropology, which is particularly invested in a symbolic cultural sphere autonomous from material conditions and which consequently emphasizes stable emergents (Level D) and largely neglects Level E. The second weakness is that the Structure Paradigm does not recognize interaction as a mediator between individuals and structure. It does not account for how interaction itself can be constrained by structure, nor how interaction can have causal effects on social structure (via social emergence) and on individuals (via downward causation). The failure to account for interaction results in the fundamental weakness of the Structure Paradigm: There is no way to account for the mechanisms and processes of social emergence.

Second, the Emergence Paradigm shows that the Interaction Paradigm did not go far enough in addressing the failings of the Structure Paradigm. For example, even within hybrid variants of the Interaction Paradigm, levels C, D, and E are conflated, just as in the Structure Paradigm. The Interaction Paradigm tends toward one of two positions, neither of them capable of accounting for social emergence: either interactional reductionism (such as conversation analysis) or a social determinism that views interaction as a mediating but not a causally independent level (such as Althusserian discourse analysis and critical discourse analysis). The fundamental failing of the Interaction Paradigm is that, in its desire to reject the structural determinism of the Structure Paradigm, it went too far in denying the autonomous causal reality of emergent social phenomena.

Although sociology has failed to explain social emergence, its recent history – thesis followed by antithesis – has led us to an important point: As a result of the findings of the Interaction Paradigm, it is no longer possible to deny that the foundations of the social sciences must centrally incorporate symbolic communication. No social theory can be complete
without a consideration of the intermediate levels of interaction and emergents because these levels mediate structure and agency, society and the individual.

The Emergence Paradigm suggests that the social sciences are currently misconfigured in three ways that result from the failure of sociology to define itself as the foundational study of social emergence. First, much of what is currently considered to be part of psychology should be located in the discipline of sociology. Second, sociology has an important role to play in explaining collective symbolic products, such as those studied by cultural anthropology, folkloristics, and popular culture studies. These disciplines study stable emergents, yet none has adequate theoretical foundations for explaining how its objects of study emerge, maintain themselves, and change over time. Sociology has always had an uncertain relationship with cultural phenomena; note the interesting theoretical discussions in the “sociology of culture” and “cultural sociology.” A sociology centered on social emergence would provide these social sciences with theoretical foundations.

The relation between economics and sociology

And third, the microeconomic study of social emergence should be located in the discipline of sociology. My argument here is consistent with a long line of scholars who have argued that economics is a subdiscipline of sociology because the economic system is part of the social system (scholars making such an argument include Comte, Weber, Mises, and other Austrian School economists).

Since the 1980s, there has been increasing discussion about the relation between economics and sociology. Economic sociologists (e.g., Smelser and Swedberg 1994) and social economists (e.g., Durlauf and Young 2001) disagree about what the new division of labor between economics and sociology should be. I add to this debate my proposal that the sociology of social emergence is the foundational, basic science and that economics is one of the applied social sciences. Economics is the science of economic institutions, but the study of how they emerge is a question for sociology.

The Emergence Paradigm is consistent with the foundational assumptions of economic sociology: Economic action is a form of social action, economic action is socially situated, and economic institutions are social institutions (Granovetter and Swedberg 1992). Both economic sociology and the Emergence Paradigm are positivist and reject interpretivism (Krier 1999). I accept the criticisms of neoclassical microeconomics made by the economic sociologists: the rejection of neoclassical assumptions
regarding market efficiency and individual optimization or utility maximization (Etzioni 1991). The social emergence of economic institutions is no different from the social emergence of any other institution (Granovetter and Swedberg 1992); all social phenomena emerge from individual collective action, and there is no reason to believe that there are different emergence processes for different social phenomena. Economic action is a form of social action, and economic institutions are social institutions. Economists who import rational choice models into sociological problems agree with this but assume that rational economic action is the fundamental form of social action. However, empirical evidence has made this assumption increasingly difficult to maintain. Empirically grounded, theoretically rich sociological models of action simulated using multi-agent systems will result in models of social emergence that will then become foundational to economics, replacing the mathematical formalisms of rational choice.

If the Emergence Paradigm takes hold, then academic departments are currently configured in a theoretically unstable fashion, because microeconomics should be a part of sociology to the extent that it studies emergence processes in general and how they give rise to stable emergents. This disciplinary reconfiguration leaves to economics the study of emergent economic phenomena, just as it leaves to political science the study of emergent political systems, to education the study of emergent educational systems, and so on. However, it removes a chunk of microeconomics as currently practiced: the use of rational choice models of individuals, combined with simple aggregation assumptions, to develop microexplanations of macroeconomic phenomena. The study of social emergence has taken place largely in microeconomics because sociology has not been receptive to studies of social emergence; those scholars interested in it have had no choice but to affiliate with microeconomics. But its models of social emergence are simplistic, are empirically ungrounded, and have largely failed (see the critiques of Granovetter 1985 and Etzioni 1991). They persist in the face of such problems because social science needs a foundation in social emergence, and at present microeconomics has the only one.

It is frequently observed that microeconomics has a radically simplified theory of both the individual and of the social. The neoclassical microeconomics model of the individual is a *homo economicus* who has complete, certain information and rationally maximizes exchange value, and only this simplified model of the individual has allowed the study of social emergence to operate within economics. However, toward the end of the twentieth century, experimental economists and behavioral economists began to challenge the assumptions of rationality, certainty,
and complete information, drawing on experimental findings from psychology that show that individuals operate with bounded rationality, bounded willpower, and bounded self-interest. Social economists (Durlauf and Young 2001) have introduced heterogeneity in individuals, direct interaction as well as interaction mediated by market prices (peer groups, social networks, and role models), individual preferences that are influenced by these interactions, and the use of dynamical systems theory and models. As these challenges continue and expand, it will become increasingly obvious that the study of social emergence belongs within sociology.

Sociologists have focused their critiques of microeconomics on its inadequate model of the individual rather than on its simplistic approach to interaction and aggregation—exchange of goods, price, and the interaction between demand and supply. Rather than focus my critique on its assumptions of rational action, I think economics has a more significant weakness vis-à-vis sociology: The forms of symbolic interaction that give rise to the emergence of social phenomena are not amenable to study using economic concepts. As Coleman (1986) observed, sociologists have not realized that “the major theoretical obstacle to social theory built on a theory of action is not the proper refinement of the action theory itself, but the means by which purposive actions of individuals combine to produce a social outcome” (p. 1321). Before the approaches to social emergence found in neoclassical microeconomics can expand to incorporate an empirically valid theory of interaction and emergence, they will have to merge into sociology’s trajectory through the Interaction Paradigm into the Emergence Paradigm. Although communication has been neglected in micro-macro sociological theory—because such theory has remained within the Structure Paradigm—it is not even a part of the vocabulary in economics.  

Unlike economics, sociology has a long history of studying situated symbolic interaction. For economics to model social emergence as I have described it, economics would have to import whole subdisciplines of sociological theory and practice, subdisciplines whose object of study has no obvious relation to rational economic action—conversation analysis,

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14 The seminal reference is to Simon (1955). Particularly influential work has been done by Daniel Kahneman and Amos Tversky (resulting in a Nobel prize in 2002 for Kahneman) and Richard Thaler (for an overview of behavioral economics, see Mullainathan and Thaler 2001).

15 Birner and Ege (1999) showed that Hayek’s writings acknowledge the importance of “communication structure,” but they noted that this is “very unusual” in economics (p. 761). Hayek argued that efficient markets require a perfect communication structure and that such a structure could not exist in reality.
symbolic interaction, and interactional sociolinguistics. Such a disciplinary redefinition would make no sense for economics. Yet for sociology, the redefinition required to incorporate the study of social emergence is a natural development, a synthesis of the two dominant twentieth-century sociological paradigms.

The microeconomic study of social emergence has held fast to the methodological individualism of rational choice theory; it has firmly rejected social realism. Of course, this is also true of individualist emergentists within sociology, but the discipline has collectively realized that social emergence is compatible with both social realism and methodological individualism (see Chapter 5). To the extent that the realist components of social emergence hold true, the study of social emergence cannot be reductively individualist but must also incorporate irreducibly causal, emergent macro-social properties. Even some economists have begun to realize that strict forms of methodological individualism cannot be maintained. Economist Kenneth Arrow (1994) argued that economics must use social categories, because they are “irreducible,” not just “figures of speech” (p. 1), and that “social variables, not attached to particular individuals, are essential in studying the economy or any other social system and that, in particular, knowledge and technical information have an irremovable social component, of increasing importance over time” (p. 8). And several economists have noted that the market mechanism, required to coordinate and communicate prices, is not explained by neoclassical theory and yet is a macro-social institution that must exist before rational choice models can work.

If sociology begins to reformulate itself as the foundational study of social emergence, and if microeconomists who study social emergence increasingly modify their models to incorporate interaction and emergence mechanisms, the two strands of social emergence study will begin to converge. And as microeconomists increasingly address the flaws in their models of social emergence, they will find it increasingly inappropriate to be housed in departments of economics – because economic institutions emerge from the same human actions and through the same emergence processes as all other social institutions. Sophisticated models of emergence from communicative interaction are not likely to rest comfortably in a department of economics.

It is a historical accident that many studies of social emergence are now conducted by economists. Eventually, such studies will be grouped in a single discipline, and that discipline will be sociology. The emergence of macrophenomena cannot be explained with a narrow focus on maximizing utility – not even the emergence of macro-economic phenomena can be explained this way.
This reconfiguration will happen only after many years, perhaps decades: after sociology reconfigures itself as the basic science of social emergence, and after microeconomics revamps its models to incorporate socially embedded individuals interacting using complex communication systems. This new unified discipline will study ephemeral and stable emergents as symbolic emergents of interaction, combining empirical rigor and theoretical foundations.

One claim microeconomics makes vis-à-vis sociology is the rigor of its mathematical method. The claim is that without mathematics sociology is not a science because it can only provide discursive accounts of phenomena one by one: That is, it is historicism or storytelling rather than a lawful science of regularities. But the sociology of social emergence now has an equally powerful and equally rigorous methodology: multiagent-based simulation. The power and rigor of sociology’s new methodology will replace the mathematics of utility maximization because those formalisms cannot be expanded to model symbolic communication and emergence mechanisms.

Conclusion

Social emergence is a return to the big questions that helped to found sociology over a hundred years ago. Yet the Emergence Paradigm is not a grand theory in the Parsonsian sense because it does not theorize any specific, concrete social phenomena. Instead, the Emergence Paradigm is a metatheory of middle-range theories, combined with a proposed methodology for studying middle-range phenomena.\(^{16}\) This methodology combines the close focus on interaction associated with conversation analysis with the independent analysis of the ephemeral and stable emergents that result. A case study of such a methodology can be found in my 2003 book *Improvised Dialogues*. The Emergence Paradigm does not propose any definite answers to long-standing sociological questions, but it has significant implications for how sociological theory and methodology should proceed.

The Emergence Paradigm shows that we cannot answer the fundamental question of the Structure Paradigm – How do individuals and collectivities mutually make each other up? – without close analysis of the bidirectional mechanisms interacting between these three intermediate

\(^{16}\) Thus following Merton’s (1968) recommendation that sociologists should pursue middle-range theories of social mechanism to unify micro- and macrotheories, and Swedberg’s (1987) recommendation that the best way to respond to economic imperialism is to develop a middle-range economic sociology.
levels. The micro-macro debate largely neglects the most important components of the mechanism – the phenomena at the center of the circle of emergence.

The Emergence Paradigm shows that we cannot answer the key question raised by the Interaction Paradigm – What is the relation between interaction and both social structure and the individual? – without a theory of social emergence. Social emergence is the process linking interaction with stable and ephemeral emergents. The link between interaction and the structures of Level E is just at the limits of the Emergence Paradigm, but most of what sociologists consider to be structure falls at Level D and participates in emergence processes.

In his 1937 book, Parsons documented the phenomenon of theoretical convergence – his claim that four different theorists working in different disciplines and in different countries, without significant influence on one another, developed essentially the same “voluntaristic theory of action” and rejected utilitarian and positivistic theories of action. He claimed that this convergence itself provided an argument for the validity of the theory ([1937] 1949, 722–6). The review that I have presented in this book can be viewed in a similar light: Because social emergence has been advocated by theorists in many disciplines, it represents a form of theoretical convergence. Social emergence is compatible with individualism and yet holds that reductionist methodology does not necessarily work for social phenomena. We do not know whether reductionism will ultimately be successful at explaining all complex natural systems, including the human mind and complex societies. Yet social emergence provides a scientifically plausible account of why reductionist explanation may not be possible for certain classes of complex social systems. The best way to determine which social properties are real, to determine the proper relation between individual action and social structure, to determine the role of symbolic interaction in the micro-macro link, and to identify the full complexity of the mechanisms of social emergence is to combine the empirical study of socially embedded communication with richly constructed artificial society models.