

CHAPTER 31

Exchange and Power

Issues of Structure and Agency

KAREN S. COOK AND ERIC R. W. RICE

INTRODUCTION

Social exchange theory has a long and venerable history in sociology dating back to the 1950s when various theorists in the social sciences came up with the idea of focusing on the world of interpersonal relations from a “scientific” perspective. For Homans this meant taking the small group as the laboratory in which social processes such as power and the exercise of influence, the emergence of stratified rights and privileges, cooperation and competition, social disruption, and anger and feelings of fairness could be examined under the microscope to provide insights into these same processes as they were played out in larger social contexts. Blau took a similar tack, more aggressively trying to formulate the principles operating at the microlevel that informed social processes at more macrolevels of social organization. Others joined the enterprise in sociology, most notably, Emerson, and in the 1970s and 1980s, Cook, Molm, Yamagishi, Willer, Markovsky, Skvoretz, Stolte, Bonacich, Bienenstock, Friedkin, and their collaborators. In this chapter we examine briefly the roots of exchange theory in related disciplines as well as in sociology and then comment more fully on topics of central concern to exchange theorists today. We reserve a major part of the text for a discussion of the most recent work covering topics only briefly researched up until now and we link this work to developments in related subfields in sociology, most prominently, what is now called economic sociology.

THE ROOTS OF THE EXCHANGE TRADITION

Social exchange theory derives from several lines of work in the social sciences, including utilitarianism, functionalism, and social behaviorism (Turner, 1986). George C. Homans (1974), Peter M. Blau (1964, 1986), and Richard M. Emerson (1962, 1972) generally are

KAREN S. COOK AND ERIC R. W. RICE • Department of Sociology, Stanford University, Stanford, California 94305.
Handbook of Sociological Theory, edited by Jonathan H. Turner. Kluwer Academic/Plenum Publishers, New York, 2002.

thought of as the major developers of the exchange perspective within sociology. But psychology, anthropology, and economics also made significant contributions. Thibaut and Kelley (1959) and Kelley and Thibaut (1978) in psychology, for example, developed a theoretical framework that emphasized the interdependence of actors and the social implications of different forms of interdependence. Though focused primarily on dyadic interaction, this framework had much in common with subsequent developments in social exchange theory.

The anthropologists, Malinowski (1922), Mauss (1925), Schneider (1974), and Levi-Strauss (1969), have contributed to the emergence of this theoretical perspective (see Ekeh, 1974) in the social sciences though the anthropological work focused on a broader range of systems of exchange, such as kinship systems, gift exchange, and systems of generalized exchange. As Heath (1976) argues, the basic foundation of microeconomics has much in common with some variants of social exchange theory. This affinity is clearest in Blau's (1964) book, *Exchange and Power in Social Life*, though it also is reflected in some of the more recent work in sociology (e.g., Cook & Emerson, 1978; Coleman, 1990, Yamaguchi, 1996). A more thorough treatment of the contributions of Homans, Blau, and Emerson will set the stage for a discussion of the current research in this field.

HOMANS: ELEMENTARY FORMS OF BEHAVIOR

Homans introduced a new theoretical orientation into mainstream sociology with the publication of his classic, "Social Behavior as Exchange," in 1958. This perspective was elaborated further in the subsequent volume *Social Behavior: Its Elementary Forms* (1974, originally published 1961). The use of operant psychology as the behavioral basis of the theory created much of the early controversy surrounding the utility of this work for sociologists. Homans' bold claim that the laws of social behavior could be "reduced to" the basic underlying principles of psychological behaviorism generated intense debate (e.g., Deutsch, 1964). Even though Homans took a reductionistic approach, he explicitly defined his major theoretical task as the explanation of social phenomena, not individual behavior. The emphasis on social behavior and the social structures generated and altered by human social interaction has been the main focus of exchange theory in sociology despite Homans' efforts to ground the theory in a psychology of operant behavior.

Homans' (1974) theoretical formulation portrayed human behavior as a function of its payoffs, the consequent rewards and punishments. The first proposition, the "success proposition" states that behavior that generates positive consequences is likely to be repeated. The "stimulus proposition" states that behavior that has been rewarded on such occasions in the past will be performed in similar situations. The "value proposition" specifies that the more valuable the result of an action is to the actor, the more likely that action is to be performed. The "deprivation-satiation" proposition, which follows, qualifies the stimulus proposition introducing the general ideal of diminishing marginal utility: the more often a person has recently received a particular reward for an action, the less valuable is an additional unit of that reward. Thus some rewards become less effective over time in eliciting specific actions. The fifth theoretical proposition in Homans' (1974, p. 37) basic framework specifies when individuals will react emotionally to different reward situations. People will become angry and aggressive when they do not receive what they anticipate (see the frustration-aggression hypothesis in Miller and Dollard, 1941). Those who receive more than they expect or do not

receive anticipated punishments will be happy and will behave approvingly. These propositions represent the core of Homans's version of social exchange theory and they provide one microlevel theoretical foundation for predictions concerning exchange processes.

Using this set of theoretical ideas, Homans (1974) developed explanations for a wide range of phenomena including cooperation, conformity, and competition, structures of sentiment and interaction, status and influence, satisfaction and productivity, leadership, the exercise of power and authority, distributive justice, and the emergence of stratification. He focused on the nature of the interpersonal relations involved, emphasizing "elementary" forms of behavior. By studying such forms of behavior he hoped to illuminate the informal "subinstitutional" bases of more complex social behavior, typically more formal and often institutionalized. A major goal of Homans' work was to explicate the microfoundations of social structures and social change. Other theorists have attempted to offer coherent views of microlevel interaction that form the basis of macrosocial processes and structures. A notable effort quite different from the work of Homans, was Collins' (1981) attempt to treat interaction ritual chains as the primary basis for macrosocial processes. Blau's work on exchange and power provided a more comprehensive framework.

BLAU: EMERGENT PROCESSES AND A NON-REDUCTIONISTIC VIEW OF SOCIAL EXCHANGE

Whereas Homans focused on elementary forms of behavior and the subinstitutional level of analysis, Blau (1964, 1986) moved beyond the microlevel to the institutional level, dealing with authority and power, conflict, and change in the context of institutionalized systems of exchange. Reacting against Homans' reductionistic strategy, Blau (1986, p. ix) claimed that his own "theory is rooted in the peculiarly social nature of exchange, which implies that it cannot be reduced to or derived from psychological principles that govern the motives of individuals, as Homans aims to do." Rejecting reductionism, Blau asserted that social structures had "emergent" properties that could not be explained by characteristics or processes involving only the subunits.

Blau's work can be distinguished from Homans' in two major ways. First, his framework was not based on principles of behavioral psychology; instead, he introduced some microeconomic reasoning into the analysis of distinctly social exchange. Second, he explicitly introduced the notion of emergent processes into his theoretical treatise, not only rejecting reductionism, but also expanding the theory to extend far beyond what Homans referred to as its subinstitutional base. We discuss both of these key features of Blau's perspective before moving to more recent theoretical contributions.

Blau's analysis relied on the assumption of rational actors who act to maximize their utility in exchanges with others, unlike Homans, who based his theory of exchange explicitly on principles of operant psychology. This early rational choice approach, derived from microeconomics, focused on exchange rates and the quantities exchanged when two actors who are in possession of unique socially desirable resources engage in trade. But Blau was aware that all dyadic exchanges are embedded in a set of alternative opportunities. Because certain social resources are more scarcely distributed in a population than others (i.e., valuable advice), exchange for these goods often comes at the price of subordination on the part of those in need of a good to those in possession of the good:

Exchange processes proliferate from bilateral monopolies into wider circles not only as a result of the search for more profitable opportunities but also because of limitations of resources. A person can obtain a service in return for either another service or compliance, that is, subordination. (Blau, 1986, p. 177).

Blau thus offers a rudimentary explanation for the emergence of inequality in social relations.

Blau carefully distinguished between what he considered to be the properties of social exchanges and those of economic exchange. Social exchange, he claimed, involves unspecified obligations and the reciprocal return of favors, unlike economic exchanges, which depend on specific negotiations over the terms of trade: "Social exchange, in contrast [to economic exchange] involved the principle that one person does another a favor, and while there is a general expectation of some future return, its exact nature is definitely not stipulated in advance" (Blau, 1986, p. 93). Since there is no way to ensure that others "discharge" their obligations and return favors, trusting relationships may emerge from ongoing relations of social exchange, something not characteristic of economic exchanges according to Blau. Moreover, the benefits people acquire in social exchange are not subject to quantification in terms of a price because there is no easy equivalent to money as a medium of exchange in social relations. Finally, economic relations generate value that can and often is extrinsic to the specific relation in which a good is acquired. Social exchange relations, however, often generate intrinsic value insofar as social exchange becomes a part of the process of sociability not simply the acquisition of resources. In this sense the resources become nonfungible.

For Blau, many aspects of social relations are emergent properties of interactions. Actors become involved in social exchange with others because each possesses social resources that the other cannot acquire alone (e.g., advice and deference). For example, people exchange these resources in the form of favors. The successful "discharging" of obligations created by the giving and receiving of such favors creates the reciprocal relations that characterize ongoing relations of social exchange. While some generalized expectations for reciprocity may exist in societies, reciprocity as action is an emergent phenomenon. Inequalities can result from exchange because some actors possess more socially valuable resources than others do. As a result they may incur social debts that can be most effectively discharged through the subordination of these others. It is the emergence of such relations of subordination and domination and their self-perpetuating character that Blau believed was the basis for power inequality "more evident in the class structure of entire societies than in the differentiation of status in small groups (Blau, 1986, p. 197).

Macrostructures and Microprocesses

Blau (1964) developed a general framework for analyzing macrostructures and processes based on an extension of his microlevel theory of social exchange. Developing a coherent framework that linked levels of analysis was one of Blau's primary goals. Drawing on Simmel's understanding of social life he explained the general structure of social associations rooted in psychological processes like attraction, approval, reciprocation, and rational conduct. Group formation, cohesion, and social integration as well as processes of opposition, conflict, and dissolution were all explained in terms of social exchange. The forms of social association generated by exchange processes over time come to constitute very complex social structures (and substructures). Blau examined these more complex social structures as they are created and changed by power processes and the dynamics of legitimization and political opposition. Common values mediate and make possible indirect exchanges, and thus the

coordination of action in large collectivities. They also “legitimate the social order.” Blau compares social exchange processes in simple structures with those in more complex social structures and institutions.

At the end of *Exchange and Power in Social Life*, Blau provides a provocative sketch of a more complete theory for linking micro- and macrostructures through processes of social exchange. Blau argued that societies are composed of substructures that contain individuals or groups that together combine to form the macrostructure of a society. Moreover, there are universalistic values that are shared by all members of a society that act to differentiate and stratify actors within substructures, while particularistic values unite actors within substructures and stratify across substructures within a society. The mobility of individuals between positions in these structures helps to shape the macrostructural level, while the tension between particularistic and individualistic values helps to promote and/or constrain this mobility. In his discussion, Blau became particularly concerned with how these values constitute constraints as well as opportunities for change and how the movement of people between substructures could affect the macrostructures present in society. These ideas have yet to be fully explored.

The strategy of building a theory of macrostructure and processes on an explicitly microlevel theory was a distinguishing feature of Blau’s (1964) original work that also became the focus of a major stream of theoretical work in sociology on the “micro–macro link” in the 1980s and 1990s. Ironically, Blau (1986) himself challenged the utility of his approach in his subsequent writings (see also Blau, 1987) fueling the debate. In his introduction to the second printing of his book on exchange and power, he argued that microsociological and macro-sociological theories “require different approaches and conceptual schemes though their distinct perspectives enrich each other” (1986, p. xv). This theoretical debate continues as scholars work out the ways in which theories at distinct levels of analysis inform one another.

Blau (1964), and subsequently Emerson (1962, 1972), made power the central focus of analysis as have most of the current exchange theorists. Power, authority, opposition and legitimization were all viewed as major topics in Blau’s (1964) discussion of microprocesses, macrostructures, and the dynamics of structural change. Emerson’s approach to power also was developed primarily to explain structural change.

EMERSON: HOMANS’ ACTOR, BLAU’S EMPHASIS

Emerson’s (1962) theory of power-dependence relations was partially incorporated into Blau’s (1964) treatment of power imbalance and the strategies for maintaining social independence. For Emerson (1962) these strategies were power-balancing mechanisms. The central proposition in Emerson’s (1962) citation classic was that power, defined in relational terms, was a function of the dependence of one actor on another. In a two-party exchange relation, the power of one party (A) over another party (B) is a function of the dependence of B on A. Dependence is a function of the value one actor places on the resources (or valued behavior) mediated by the other and the availability of those resources from alternate sources: the greater the availability of these resources from other actors (i.e., or alternative sources), the lower one actor’s dependence on another. Two features of this approach to power are important: (1) it treats power as relational, a feature of a social relation and not simply a property of an actor, and (2) it treats power as potential power; that is, it may or may not be exercised. This relational conception of power became the basis for most of the subsequent work on exchange

and power. It is even the basis for much of the more recent structural work on power since network approaches are inherently relational.

Emerson (1972) expanded his treatment of power and dependence to form a more extensive exchange theory of social relations. In many ways his work was a composite of the approaches of Homans (1974) and Blau (1964). In the original formulation Emerson (1972) adopted the language and principles of behavioral psychology to form a theory of social relations. However, he moved quickly beyond behavioral principles to the formation of more complex propositions regarding the emergence of various kinds of social structures. Here the theory adopts the Simmelian focus of Blau's work as well as the concern with emergent properties and complex social structures. Emerson (1972), like Blau (1964, 1986), viewed the major task of exchange theory as the creation of a framework in which the primary dependent variable was social structure and structural change. This major task was eminently sociological, not psychological.

Early debates about the value of exchange theory in the social sciences focused on the role of rationality, tautology, and reductionism (see Emerson, 1976). These debates gave way during the last two decades to more sophisticated arguments in the field concerning theoretical strategy and the best ways to develop microlevel models of exchange that inform macrolevel processes. More complex theoretical formulations emerged during the 1980s and 1990s based on the results of careful empirical work, much of it experimental, testing the fundamental propositions derived from exchange theory. Emerson's formulation provided the impetus for much of this empirical work primarily because he formalized the theory to make it more precise and therefore testable. Subsequent formulations adopted a similar theoretical strategy, though there is variation in the underlying conceptions of the process of exchange and its structural determinants as well as in the specific ways in which the theory has been formalized (e.g., Markovsky, Willer & Patton, 1988; Bonacich, 1998; Bienenstock & Bonacich, 1992; Friedkin, 1992; Skvoretz & Willer, 1993; Yamaguchi, 1996).

EXCHANGE RELATIONS AND THE NETWORKS THEY FORM

Exchange theory, though originally dyadic in focus, has been extended over the past three decades to apply to the analysis of exchange networks. The definition of exchange relations as "connected" in various ways to form network structures was a key development in the theory. Emerson defined two major types of connections between exchange relations: negative and positive connections. (Subsequent theorists included "null" connection as a third category referring to the lack of a connection between exchange relations.) Two relations are negatively connected if the amount or frequency of exchange in one is negatively correlated with the magnitude or frequency of exchange in the other relation. In essence the two relations are strictly alternatives. If a buyer gets parts in an exchange with one vendor, then she or he does not need the same parts from another supplier. Negatively connected relations thus are competitive in nature. Two suppliers in such a case compete for access to the same buyer or market. In contrast, when two relations are positively connected, exchange in one relation enhances exchange in the other. For example, the resources one party gets in exchange with one supplier can be used to obtain needed goods from another supplier. In this case a positive connection exists and the two exchange relations are positively correlated. Such exchange relations are more cooperative in nature than competitive and they form the basis for some types of division of labor and specialization within exchange networks. Subsequent theorists

(e.g., Willer, Markovsky, Bonacich, & Yamaguchi) have developed other ways of classifying types of exchange connections. Willer, for example, speaks of inclusive and exclusive exchange relations, while Yamaguchi refers to complementary and substitutable sources in exchange networks (see the discussion below on related formulations). These formulations are quite similar to Emerson's formulation.

INEQUALITY IN EXCHANGE AND POWER

A key concept in Emerson's exchange theory of power is the idea that exchange relations can be balanced or imbalanced. A power inequality results from an imbalance in power relations between two or more actors. An exchange relation is balanced if both parties are equally dependent on each other for exchange (or resources of value). If they are equally dependent, they have equal power. The central idea that power is based on dependence allows for the specification of ways in which dependencies can be altered to affect the balance of power in the exchange relation and in the network of connected exchange relations.

Structurally induced power inequalities and the behavioral consequences of such inequalities have been the most enduring theme in power-dependence research (e.g., Cook & Emerson, 1978; Cook, Emerson, Gillmore, & Yamagishi, 1983; Yamagishi, Gillmore, & Cook, 1988; Bienenstock & Bonacich, 1992). This focus began with Emerson's (1972) introduction of social network concepts explicitly into the framework of social exchange. The move from theorizing about dyadic relations to more complex networks of interdependent actors shifted the focus of power-dependence theory from a theory concerned with power balance to a theory primarily interested in explaining the creation and maintenance of imbalanced power structures, that is, structures of inequality.

Dyadic exchange relationships, Emerson (1972, 1981) argued, have a tendency to move toward a balance of power. Reciprocity is inherent in any enduring dyadic relation, since without it exchange is not likely to continue. "Reciprocity as such is not a variable attribute of exchange relations, and, once recognized, it is of little theoretical interest" (Emerson 1972, p. 62). But once exchange relations become embedded in more complex network structures, despite the existence of reciprocity, power imbalance can occur for a number of reasons. Emerson argued these imbalanced relations have a tendency to move toward a state of power balance (but see Molm, 1997a). "The use of a power advantage reduces the power advantage across time. In short, exchange relations tend to change toward balance" (Emerson 1972, p. 66). Power imbalance when it does exist, he argued, must be explained by forces exogenous to the particular imbalanced relation and is an anomaly which theory must explain. To quote Emerson again, "imbalance stems from events outside the relation, and its 'survival' is a problem to be explained when it occurs" (Emerson 1972, p. 67). Subsequent research clearly demonstrates that in network structures imbalance often persists. Thus more recent work clarifies the nature of the embeddedness of dyadic relations and the concomitant constraints on power-balancing processes within dyads.

Emerson proposed four alternative balancing operations that can reduce power imbalance in dyads and networks of exchange relations. If the dependence of actor A on actor B for some good y is greater than the dependence of B on A for another good x ($D_{AB} > D_{BA}$), the four following operations are possible. First, there can be a decrease in the value of good y for A, which he calls "withdrawal." Second, there can be an increase in the value of x for B, called "status-giving." These two processes can occur in dyadic or network relations. Third, there can be an increase in the number of alternatives open to A that can provide good y , which he

referred to as “network extension.” Finally, a reduction in alternatives open to B can occur, called “coalition formation” by A (presumably with another structurally similar actor). Notice that the first two mechanisms stress change in the values actors attach to social goods (hence, they can operate in dyads), while the second two mechanisms stress a change in the structure of the social network to balance power (hence, they can only occur in networks of exchange opportunities). But what happens if such changes are not possible?

When the value of goods exchanged is stable over time and the network of alternative exchange partners is static, power imbalance can be an enduring feature of social exchange relations (Cook & Emerson, 1978; Cook et al., 1983; Yamagishi et al., 1988). When Cook and Emerson moved the study of exchange into the experimental laboratory, the focus of exchange theory shifted from Emerson’s earlier discussions of the dynamic properties of imbalanced exchange relations to explanations of the emergence of power imbalance within networks of exchange opportunities. Several findings characterize this early empirical work. The use of power by actors can be structurally induced (Cook & Emerson, 1978; Cook et al., 1983; Yamagishi et al., 1988). The power of a particular position depends on its location in the network of alternative exchange partners. Thus power imbalance is a function of differential opportunities for exchange across a social network (Cook & Emerson, 1978; Cook et al., 1983). The location of powerful positions in a social network is contingent on the kind of connections (negative or positive) that characterize the exchanges (Yamagishi et al., 1988) and power is a function of one’s position in the network of exchanges (Cook et al., 1983). Powerful positions cannot simply be reduced to the points of highest network centrality (or some other purely graph theoretic principle), but depend on an actor’s own alternatives, as well as the alternatives available to the alternatives (Cook et al., 1983).

Comparatively little research has been conducted on how power imbalances in social networks may cause changes to those structures and no research has been conducted on the effects of changes in values (but see Emerson, 1987). The important exception to this trend was the work done by Cook and Gillmore (1984) on the process of coalition formation. They found that power imbalance does indeed promote coalition formation. Coalitions that incorporate all weak actors in a social network against a strong actor balance power in a network. Those coalitions that do not include all of the power-disadvantaged actors in a coalition do not create balanced structures. Coalitions that produce balanced power structures tend to be the most stable over time, while those that do not create balance tend to decline in frequency over time. Moreover, as relations become increasingly competitive, the formation of coalitions becomes increasingly difficult as actors have a harder time aligning their interests to achieve the common goal of coalition formation and maintenance (see also Simpson & Macy, 2001, for a new treatment of coalitions in exchange networks).

Other mechanisms besides coalition formation among actors can alter the fundamental power distribution in the network of exchange relations. Division of labor, or specialization within the network, may operate as a power-balancing mechanism, since it can result in changes in the distribution of power in a network through modifications in the distribution of resources and the structure of the alternative exchange opportunities. For example, two suppliers of the same resource who had been competitors may decide to specialize and offer different services in a way that makes them no longer competitive with each other in a particular network. Network extension also can alter the balance of power in a network, as new exchange partners become available. In addition, when other strategies are not available actors can devalue what it is they obtain from a more powerful actor as a way of reducing their dependence on the relation. This strategy may be a precursor to exit from the relation in many instances. Various theorists have continued this line of work, specifying the principles that

predict the distribution of power in different exchange structures and processes that modify it (e.g., Cook et al., 1983; Cook, Gillmore, & Yamagishi, 1986; Bonacich, 1998; Yamaguchi, 1996).

EXCHANGE NETWORKS: RELATED FORMULATIONS

Theorists have offered related and sometimes conflicting accounts of the determinants of power in networks of exchange. The works of Homans, Blau, and Emerson explicitly influenced some; others attempted to derive new theoretical formulations drawing in distinct ways from varied sources of the core ideas in exchange theory. Most notable among these efforts was the work of Willer and Anderson in the early 1980s, which was subsequently developed more fully by Willer and his colleagues over the years, including Markovsky, Skvoretz, Patton, and Lovaglia, among others.

Elementary Theory

Willer and Anderson (1981), for example, proposed the “elementary theory” as an explicit alternative to power-dependence theory. Their intent was to create a general theory of the relationship between social structure and actor behavior that would be broader in its scope than exchange theory. Exchange phenomena were thus a subset of behaviors that could be explained by their theory.¹ Like Blau, they rejected operant psychology as a reasonable basis for a theory of exchange, arguing instead that elementary theory had the capacity to explain exchange from a purely structural basis. Values, they argued, were epiphenomenal and unnecessary for the development of a rigorous theory of exchange relations. Here they also parted company with Emerson’s work. Instead, they viewed actors as having “interests” in achieving their first-ranked “system state,” a set of ideas conceptually similar to the rank-ordering of preferences and utility maximization common in microeconomic theory. Like microeconomists, they tended to view the transaction as the primary unit of analysis rather than the exchange relation, the central focus of Emerson’s theoretical endeavors. Until the early 1990s, this distinction clearly differentiated the work of Willer and his collaborators from the theoretical and empirical work of those who based their research on Emerson’s theory of exchange.

The exchange theory derived from the “elementary theory,” developed by Willer and Anderson, was premised first on the idea that social structures are a concrete aspect of social phenomena. The actors who occupy positions in social structures transmit and receive positive and/or negative sanctions from other actors in different positions in the social structure.² Exchange, they argue, can be “defined as a network in which only positive sanctions are potential” (Willer & Anderson, 1981, p. 26). This focus on social structure as the primary determinant of exchange behavior complemented nicely the developments of power-dependence

¹From its inception, the elementary theory was highly formal and mathematical, taking advantage of the mechanics of graph theory in particular.

²The explicit use of coercion, in the form of negative sanctions, set elementary theory apart from many other early exchange theories that were concerned exclusively (or at least primarily) with social exchange processes as the distribution of rewards. Subsequently, Molm (e.g., 1987, 1989, 1997a,b) has written extensively about coercion and the use of punishment power in social exchange relations.

theory by Cook and Emerson (1978) who also had moved to an increasingly structural explanation for exchange behaviors with their focus on relative positions in networks as determinants of the distribution of power in social structures. Despite the explicit differences delineated by Willer and Anderson (1981), in practice, elementary theory manifested many parallels to developments in power-dependence theory.

Friedkin (1992, 1995) and Bienenstock and Bonacich (1992, 1993, 1997) have developed other alternative formulations in the intervening years. Friedkin developed a more general formal theory of social influence in networks that he applied in various ways to the analysis of exchange and power in network structures. Bonacich and Bienenstock produced a game theoretic analysis of the distribution of power in different types of network structures. In addition, they provide an interesting formal analysis of coalitions in exchange networks from a game theoretic point of view. Further development of game theoretic analyses of the outcomes of exchange processes in various networks will be a very useful addition to the empirical work on exchange and may help bridge the gap between the different theoretical formulations.

Extensions of Power-Dependence Exchange Network Formulations

Subsequent extensions of the exchange theory originally developed by Emerson (1972, 1976) have focused on the links between structure and process and on other bases of power. In a major research program extending over a 10-year period, for example, Molm (1997a) investigated the role of coercive power in social exchange. Emerson's work and that of most of the exchange theorists focused almost exclusively on reward power or the control over positively valued goods and services. Coercive power is the ability to control negative events (e.g., to withhold rewards) or to inflict punishment on another in an exchange relation. Unlike reward power, coercive power is used less often in exchange relations especially by those in power-advantaged positions, who seem to understand that it may be viewed as unjustified in many circumstances. The fear of retaliation also is a deterrent to the use of coercive reward power. The use of coercive power is more costly, since it imposes losses on the exchange partner in addition to the opportunity costs involved. Molm's major accomplishment was to expand the treatment of power in the classic power-dependence formulation to include forms of coercion. Since exchange relations often involve control over things we value and as well as things we wish to avoid this is a significant extension of the theory.

Strategy and Structure: The Dynamics of Power Use

Developments in the theory of exchange during the last decade include the formulation of explicit propositions concerning the use of power in different types of exchange network structures and specification of some of the determinants of power use. These factors include concern over the fairness of the distribution of outcomes, uncertainty, and the commitments that emerge between actors (e.g., Yamagishi, Cook, & Watabe, 1998; Lawler & Yoon, 1996), the formation of coalitions, particular strategies of action, and whether or not the power is reward power or punishment power, as noted above. Developments over the past decade also focus attention on methods for specifying more precisely the distribution of power in complex network structures (e.g., Lovaglia, Skvoretz, Willer, & Markovsky, 1995; Markovsky, 1987, 1995; Markovsky, Skvoretz, Willer, Lovaglia, & Erger, 1993; Markovsky et al., 1988; Skvoretz & Lovaglia, 1995; Willer, 1987, 1992). Interest in this topic, in part, is driven by the potential

for synthesizing exchange theoretic conceptions of power with network models of social structure (see Cook, 1987; Cook & Whitmeyer, 1992; Whitmeyer 1994, 1999), and more recently game theoretic formalizations (e.g., Bienenstock & Bonacich, 1993).

A topic of continued interest is the specification of dynamic models of power use and structural change that include more sophisticated models of the actors involved and the strategies they adopt in their attempts to obtain resources and services of value (e.g., Molm, 1997b; Whitmeyer, 1994). A major effort is now underway to study the cognitive and affective components of exchange such as emotion, cohesion, risk, uncertainty, and trust, factors that received less attention while theorists were concentrating on the structural determinants of exchange processes and outcomes.

EMOTION, AFFECT, AND RELATIONAL COHESION IN EXCHANGE RELATIONS

In recent work, Lawler and Yoon (1993, 1996, 1998) have developed a theory of how affect oriented toward specific exchange relations is a proximal mechanism, intervening between structural factors and the outcomes of exchange. Relational cohesion theory, as they refer to it, specifies the effects of a set of endogenous affective mechanisms on exchange processes. Structural power affects exchange frequency, which in turn positively affects the creation of positive, everyday emotions, which then positively affect relational cohesion, and cohesion positively affects commitment behaviors (Lawler & Yoon, 1996, 1998). Explicit in this theory is the argument that each of these effects is dependent on the previous effects. The variables in this causal chain affect commitment behaviors through relational cohesion, the only variable that is expected to manifest direct effects on commitment (but see Lawler, Thye, & Yoon, 2000).

Lawler and Yoon have found substantial empirical support for the basic premise that affect mediates the effects of structural power on commitment to particular exchange relations. That relational cohesion, in particular, is a proximal mechanism in the manner described by the theory has received empirical support. But two caveats need to be added. First, their 1996 study found that perceptions of uncertainty and frequency of exchange still manifested independent effects on relational cohesion and commitment, despite the claims of the theory. While they found support for their contention that relational cohesion is a proximal mechanism, they could not rule out the existence of uncertainty reduction as an alternative.

Second, with the expansion of their experimental design to include network structures, reported in Lawler and Yoon (1998), the effect of relational cohesion becomes more complicated than they originally anticipated. In egalitarian relationships relational cohesion did affect commitment behaviors as they theorize. Exploitative relations, however, are not as cohesive. The relational cohesion expressed by exploiting actors had a positive effect on their commitment behaviors, whereas the relational cohesion expressed by exploited actors had a negative effect, a result that violates the relation-specific nature of the theory. This finding is consistent with some earlier research that suggests that power-advantaged actors view their exchange relations differently than do power-disadvantaged actors (see Cook, Hegtvedt, & Yamagishi, 1988; Stolte 1993) in terms of fairness and legitimacy of the inequality.

This line of research presents an important development in exchange theory, just as much for its novelty as for its connection to classical themes in exchange theory. The work of Lawler and Yoon reminds modern exchange theorists that even within the context of negotiated exchanges, exchange relations have emergent properties. The focus on affect, in particular, as

such an emergent property mirrors Blau's concern with explaining how exchange relations are closely related to the process of sociability and over time develop an intrinsic value to the participants. People often come to care about the relationship for its own sake not just for the extrinsic benefits they can obtain through their exchanges. Emerson (1972, 1981) also argued for similar emergent phenomena. Trust, liking, and commitment could all potentially emerge out of ongoing exchange relationships. Through the development of relational cohesion theory, Lawler and Yoon have returned to these older themes in exchange theory and have given them new life, adding theoretical and empirical rigor.

The research on affect, cohesion, and commitment offers an explicit step beyond the power and position theories that were popular in the late 1980s and early 1990s. Lawler and Yoon, along with a handful of other researchers (Molm, 1997a; Molm, Peterson, & Takahashi, 1999; Molm, Takahashi, & Peterson, 2000; Kollock, 1994; Yamagishi et al., 1998) have moved beyond theorizing only about the distribution of power and rewards in social exchange networks toward theorizing about other important exchange outcomes, namely, commitment behavior. An explicit return to the relation as the focus of analysis has facilitated the delineation of what they believe to be important proximal causes for exchange outcomes. They have made explicit how aspects of the exchange process endogenous to the actors in a relation can affect outcomes, not just exogenous structural forces. This move presents the potential to make more explicit the mechanisms by which microlevel interactions can affect macrolevel structures.

Structural power is generated by the contingencies of alternative exchange relations within an opportunity structure of potential relations. Such structural aspects of exchange relations are typically thought to lie outside the control of actors within particular opportunity structures. This structurally generated power, however, affects the ways actors orient themselves toward particular relations, inducing positive affect and relational cohesion in recurring, successful exchange partnerships. This relational cohesion in turn affects commitment behaviors. If commitment behaviors are strongly affected, potential exchange relations within the opportunity structure of relations may fall away as actors increasingly favor those exchange relations toward which they have developed feelings of relational cohesion. As certain relations within the opportunity structure atrophy, the patterns of exchange relations and the connections among them may be altered, perhaps radically. In this way, the theory proposed by Lawler and Yoon (1993, 1996, 1998) may provide a powerful lens through which we can begin to view structural changes and the impact that processes endogenous to relations may have on these structural outcomes.

EMOTION AS AN OUTCOME OF EXCHANGE: AN ALTERNATIVE APPROACH

Molm et al. (2000) are also interested in delineating the connections between exchange behaviors and emotion. Their conceptual model, however, is quite different from the one proposed by Lawler and Yoon (1993, 1996, 1998). Whereas Lawler and Yoon's (1993, 1996, 1998) relational cohesion theory posits emotion directed toward exchange relations, as a proximal mechanism intervening between factors that influence structural cohesion and commitment behaviors, Molm and colleagues (2000) argue that affect is an outcome in its own right, one affected by commitment behaviors. Molm et al. (2000) argue that structural arrangements, not emotional responses, are largely responsible for differences in commitment

behaviors that can be observed across different social structures. They argue that affect toward one's exchange partners is driven simultaneously by the form of exchange (i.e., negotiated or reciprocal) and the level of behavioral commitment induced by the structure of available alternatives in the network of exchange relations.

Molm and collaborators stress the existence of two distinct aspects to commitment. First, there is a purely behavioral outcome, which they define as "patterns of exchange in which pairs of actors choose to exchange repeatedly with one another rather than with alternative partners" (Molm et al., 2000, p. 1405). Second, there is an affective component to commitment, which they define as "bonds that develop from repeated experiences with successful exchanges between the same partners" (Molm et al., 2000, p. 1405). They are careful to point out that their conception of the affective component of commitment differs from that of Lawler and Yoon's (1993, 1996, 1998) in so far as they orient their discussion of affect as directed toward a particular partner, not the relation as a whole, as in relational cohesion theory. The relationship between these two alternative conceptions needs exploration. Both may be significantly involved in the emergence of commitment. That is, affect may be endogenously involved as well as an important outcome of exchange processes. Furthermore, in the end it may be difficult for people to clearly differentiate their emotions toward their partners from their emotional orientations to their relationships with these partners.

Each of these two aspects of commitment is argued to be affected by different social psychological mechanisms. Behavioral commitment, as we have already mentioned, is largely determined by the structure of the exchange relations. In networks where there is a large power imbalance, commitments tend to be lower, relative to those networks in which the power imbalance between positions is lower. These lowered levels of commitment are the result of the greater availability of alternative partners to power-advantaged positions in networks in which the power imbalance is greater, as compared to networks with a greater balance of power, in which alternative partners tend to be less available to those in power-advantaged positions.

Affective commitment, however, is the joint function of two simultaneous influences, the form of the exchange and the level of behavioral commitment. Molm and her collaborators argue that the form of exchange, whether the relationship can be characterized as negotiated or reciprocal exchange, affects actors' feelings of trust and their positive evaluations of their partners. Because rewards from exchange are not guaranteed in reciprocal exchanges, this form of exchange allows actors to establish their trustworthiness in their continued reciprocation of valued resources. Relative to negotiated exchange environments, in which rewards are more often assured due to the binding nature of such agreements, positive evaluations of one's exchange partners are higher in reciprocated exchange. Moreover, they argue that as the level of behavioral commitment goes up in exchange relations, actor's positive evaluations of their partners will likewise increase. Frequent exchanges enhance positive feelings (as Lawler and Yoon also argue) and affective commitment increases.

The work of Molm and colleagues (2000) calls into question the specific connection between commitment behaviors and affect proposed by Lawler and Yoon (1993, 1996, 1998). These differences appear to be due, at least partly, to Molm and collaborators' conviction that commitment can be broken into two component parts: an affective and a behavioral dimension. But this difference seems to reflect a deeper division over the extent to which structural factors are the dominating force determining the level of behavioral commitments. For Molm et al. (2000), affect comes last in the causal chain that links structure, behavior, and emotion. The removal of affect as an endogenous process and proximal mechanism in the formation of

commitments limits the extent to which their theoretical work can generate the sort of connections between microlevel interactions and macrolevel structural changes that Lawler and Yoon's (1993, 1996, 1998) research suggests.

Yamagishi et al. (1998) provide experimental evidence that one of the key factors driving commitment behaviors is the degree of uncertainty in the exchange setting. The uncertainty they study is uncertainty over the possible exploitative behavior of an exchange partner rather than uncertainty over the quality of the goods to be traded, the primary form of uncertainty in the Kollock (1994) study. Uncertainty, however, of both types appears to foster the formation of committed relations as a mechanism for reducing uncertainty. This factor, as suggested above, remains significant as a determinant of commitment formation even when other factors are taken into account (e.g., the emergence of positive affect between successful exchange partners). We return to this finding in our discussion of the integration of exchange theory and recent work in economic sociology in which uncertainty and risk play a role in fostering the embeddedness of transactions and in the emergence of various forms of social structure that facilitate exchange in uncharted territories. Risk and uncertainty also are at the center of some of the recent discussions of trust (e.g., Heimer, 2001), a topic of interest to both exchange theorists and economic sociologists. Before examining this literature we comment briefly on other applications of exchange theory to related subfields in sociology.

APPLICATIONS OF EXCHANGE THEORY: BEYOND THE LABORATORY

The application of exchange theory to a variety of social phenomena "outside the laboratory" has increased over the past three decades as exchange concepts and propositions have been used in various subfields in sociology including organizational behavior, life course analysis, aging, family, medical sociology, international relations, and economic sociology. For example, early work in social psychology focused on the explanation of the initiation and termination of personal relations such as romantic involvements and social relations in the workplace. Topics of interest to researchers included conceptions of fairness in social exchange relations and its link to satisfaction and relationship dissolution (e.g., Sprecher, 1988). Power also was an important topic as investigators attempted to apply the work on power-dependence relations and the structural determinants of power in exchange networks to an understanding of power processes in family and work settings. Studying the abuse of power, particularly in relations of extreme dependence, and examining the use of control over both rewards and costs (or the withdrawal or withholding of rewards) in exchange relations expanded as investigators found the exchange approach to provide useful insights into both the processes involved and the outcomes in various settings. In particular, Molm's work on the use of coercive power in exchange relations has made new applications in this arena possible. Extreme dependence often invites the abuse of power in social relations, since the power disadvantaged view themselves as having few alternatives.

Beyond the application to family and work settings, the theory also has been applied in many different contexts to the study of organizations and interorganizational relations. Similar applications exist at the level of international relations as well. Since organizations typically require resources from other entities much of their time is devoted to the strategic management of these dependencies. The resource-dependence perspective (Pfeffer & Salancik, 1978) in the field of organizations is a straightforward application of exchange reasoning to the strategic actions of organizations and their subunits (e.g., at the divisional level). The developing field

of economic sociology also is now drawing to some extent on ideas derived from exchange theory to explain the emergence of network forms of organization and the nature of the power processes that emerge in such networks. Network effects on labor practices, informal influence among organizations, the organization of business groups, and the formation of international linkages that cross traditional national boundaries of economic and productive activity are central topics of inquiry in economic sociology. Some of these efforts involve understanding the effects of network location on outcomes and the various strategies actors use to enhance bargaining power and influence. These efforts derive, in part, from power-dependence reasoning first introduced by Emerson and Blau into exchange theorizing. We comment in more detail on the close linkages between exchange theory and some of the current developments in economic sociology below.

Other applications of exchange theory in fields like medical sociology include broad efforts to investigate the balance of power in the health care industry, the strategic role of insurance companies in the era of managed care, and the response of physicians to the loss of power and autonomy. In addition, several researchers have attempted to analyze the nature of physician referrals in network exchange terms and to characterize the nature of the physician–patient interaction as an exchange relation in which power is asymmetric (or imbalanced) and in which trust plays a key role in “balancing” this power differential. The patient must place her fate in the hands of a more competent, more informed actor and trust that the physician will “do no harm.” The research on these topics is expanding as the health care system undergoes severe economic pressures and new legal challenges. Applications of the exchange model of interaction and of network exchange in other domains in the future will help to clarify and extend the underlying theoretical framework. In the concluding section of our chapter we comment in greater detail on the developing links between exchange theory and several important subfields of sociology including economic sociology and the emerging work on the sociology of Internet exchanges.

EXCHANGE THEORY AND ECONOMIC SOCIOLOGY

Exchange theory and economic sociology (e.g., Granovetter, 1985; Uzzi, 1996; White, 1981; Burt, 1992; Fligstein, 1996) share more in common substantively and theoretically than either subfield recognizes. With rare exceptions (e.g., Kollock, 1994; Lawler & Yoon, 1996) these two streams of work have developed in relative isolation despite the centrality of social networks and transactions to theory and methods in each tradition. Similarities between the two bodies of work, however, extend far deeper to the core of each group’s theoretical concerns and explanatory accounts. Swedberg and Granovetter (1992) explicitly lay out what they believe to be the three central propositions of economic sociology: (1) economic action is a form of social action; (2) economic action is socially situated; and (3) economic institutions are social constructions. The first two propositions share a great deal of intellectual, common ground with modern versions of exchange theory.

In explaining the first proposition, Swedberg and Granovetter stress that while economic action is not devoid of instrumental behavior and market dynamics (i.e., the pull of supply and demand on price), a sociological analysis of economic action must concern itself with structural and social issues: “From a sociological perspective, it is clear that economic action cannot, in principle, be separated from the quest for approval, status, sociability, and power” (Swedberg & Granovetter, 1992, p. 7). Exchange theory, likewise, not only maintains the

integrity of the instrumental aspects of transactions, but also attempts to explain how transactions are tied to other noninstrumental, social processes (e.g., trust in exchange). How the relations between transacting partners produce power and how differences in power affect exchange behaviors and the distribution of rewards have long been a concern of exchange theory. Moreover, the recent work on affect in exchange (Lawler & Yoon, 1996, 1998; Molm et al., 2000), described briefly above, provides insights into how outcomes from transactions influence sociability and affect in exchange relations.

Issues of power and dependence have taken on an increasingly central role in economic sociology over the past decade. Baker (1990), for example, argues that corporate actors engage in tactics to increase interorganizational power, not merely profit maximization. In his study of corporate dealings with investment banks he makes this argument quite explicit: "The central problem for corporations is how to manage their relations with investment banks to reduce their dependence *and* exploit power advantages. The observed configuration of market ties is the revealed result of efforts to do so [*italics in original*]" (Baker, 1990, p. 592). This stream of research within economic sociology shares an obvious concern for power and dependence with classical and experimental research on exchange theory. Economic sociologists, in particular Baker (1990), Burt (1992), and Leiffer (1991), argue that economic actors strategically manipulate power within the context of network structures, altering these structures along the way. Although exchange theorists often stress the stability of structure and its effects on the distribution of power among actors, as we have already discussed, Emerson's (1962, 1972) early theoretical work emphasizes the ways in which relations and structures can be modified to alter the nature of the power differences among the actors. In addition, more recent experimental research in the exchange tradition has begun to examine more fully the role of actor strategy in altering the structure of the exchange relations in a network, and thus the nature of the distribution of power.

Swedberg and Granovetter (1992) claim that reference to individual motives alone (or the mere aggregation of individually motivated acts) cannot explain economic action, according to economic sociology. Economic action is situated in social networks of ongoing personal relations. This last point is perhaps the primary insight and the main area of theoretical development within economic sociology. This issue is the central focus of Granovetter's (1985) "embeddedness" argument. It is here that the similarity to exchange theory is most easily conveyed. One of the core methodological as well as theoretical agendas of each field is to explain how concrete social structures, in the form of social networks, affect the instrumental behaviors pursued by social actors in transactions with one another. Both reject the primacy of individualist motivations favored by economics and focus instead on how social relations and social networks mediate and shape the outcomes of exchanges.

The research conducted under the umbrella of "embeddedness" shares an enormous intellectual common ground with recent developments in exchange theory. Uzzi (1996) argues that "embeddedness" has profound behavioral consequences, affecting the shape of economic relations and the success of firms, which rely on ongoing exchange relations across a relatively stable set of alternative partners. As Uzzi states: "A key behavioral consequence of embeddedness is that it becomes separate from the narrow economic goals that originally constituted the exchange and generates outcomes that are independent of the narrow economic interests of the relationship" (Uzzi, 1996, p. 681). The recent research conducted by Lawler and Yoon (1996, 1998) on emotions and relational cohesion in exchange networks reflects a similar theoretical orientation. They argue that actors who develop feelings of relational cohesion directed toward ongoing exchange relationships are more likely to engage in a host of behaviors not easily explained in strictly economic terms, such as gift giving, forming new

joint ventures across old ties, and staying in relations despite the presence of new, potentially more profitable partners (see the previous discussion on relational cohesion for more detail on this and related research in exchange theory).

That these two subfields have developed in relative isolation from one another is likely the result of several key factors. First, the old notion that exchange theory is concerned only with the explanation of the dynamics of social and not economic exchanges still lingers in the discipline. When one considers the convergence of theoretical concerns just discussed, the usefulness of this distinction becomes suspect.³ Second, and more important, the two subfields tend to adopt quite distinct styles of research and theorizing. Exchange theory often has been associated with rational choice theory (e.g., Blau, 1964; Coleman, 1972; Marsden, 1983) and economic sociology often uses rational choice theory as a theoretical foil. Moreover, even when exchange theory does not rely on rational choice assumptions, opting for operant mechanisms instead, these theories are still focused primarily on predicting behaviors from relations. Economic sociologists, on the other hand, tend to prefer *ex post* explanations of empirically observed phenomenon. Moreover, exchange theorists frequently have collected data primarily in the laboratory on constructed exchange systems, while economic sociologists have tended to be resolute about the collection of data from naturally occurring economic phenomena.

These theoretical and methodological divergences, however, are what make a marriage of exchange theory and economic sociology so promising. Each has tools and insights from which the other can benefit. Primarily, economic sociology can benefit from the predictive nature of exchange theory and the explicit mechanisms proposed by exchange theory for explaining transaction behaviors and the structures in which they are embedded. Moreover, exchange theory has delineated a set of interesting dependent variables, such as the distribution of power and the cohesiveness of relations that economic sociology at times ignores in favor of explaining how economic action deviates from “maximizing” behaviors. Exchange theory gains from this marriage the richness and complexity inherent in the analysis of more macrolevel phenomenon outside the laboratory. Exchange theorists in mid-century, particularly Homans (1958, 1974) and Blau (1964) were not as divorced from such an endeavor as are modern practitioners. An engagement with “real-world” economic phenomena presents the possibility of new venues in which to test the predictions of exchange theory as well as the impetus to explore new problems and mechanisms that such an endeavor would necessarily encourage. In conclusion we discuss briefly one example of such an endeavor.

EXCHANGE RELATIONS AND ONLINE MARKETS: THE STUDY OF EMERGENT PHENOMENA

Online markets and auction houses (e.g., eBay) present such a context for new sociological research in which the marriage of economic sociology and exchange theory may be particularly fruitful. Although some initial work (e.g., Kollock, 1999) has begun to tackle the complicated sociological issues to be found in these emerging markets, there certainly is ample

³It must be acknowledged that not all exchange theorists are so catholic in their visions of economic and social transactions. Molm and colleagues (1999, 2000) have reaffirmed the importance of such an analytic division between economic and social exchange. They make a clear distinction between reciprocal (i.e., nonnegotiated) exchanges and negotiated exchanges, viewing the former as a more accurate representation of social exchange and the latter as more reflective of strictly economic exchange.

room for more theory and research. Economic sociology has a long-standing interest in the social construction of markets (e.g., White, 1981; Granovetter, 1985; Fligstein, 1996). The focus of much of this theorizing has been on how the formation of market structures represents social "solutions" to complex social problems surrounding the distribution and control of resources. As Fligstein (1996) puts it, "The creation of markets implies societal solutions to the problems of property rights, governance structures, conceptions of control and rules of exchange" (p. 670). Such insights are taken quite seriously, although only implicitly, by Kollock (1999) in his recent work on the emergence of trust in online markets. He points to the emergence of reputation systems as a solution to the problem of trust in this new economic arena. Online environments, according to Kollock, represent particularly risky environments for exchange. Enforcement by third parties (i.e., the government) is difficult, firsthand knowledge of one's trading partners is rare, and the field of potential exchange relations often literally spans the globe.

Online market participants have created a host of endogenous solutions to these uncertainties in their exchanges. The most prominent and effective solution appears to be the creation of reputation systems, in which market participants create public biographies, focused on their history of exchanges as an attempt to establish themselves as trustworthy exchange partners. Actors involved in these exchanges have various mechanisms for contributing to the information base on which reputations are formed. Kollock suggests that such reputation systems not only help transactions proceed smoothly with a minimum of opportunism, but the development of a strong reputation may enhance the value of one's goods placed on the market (see Kollock, 1999, for more discussion on these points).

Both economic sociologists and exchange theorists have abundant reason to begin researching this new phenomenon. First, both groups of researchers have a long-standing interest in the formation and outcomes of exchange relations. Online markets certainly provide a wealth of potential exchanges to study. Second, both groups theorize about the formation or emergence of social structures, such as markets and exchange networks. The relative infancy of online markets presents an opportunity for both sets of researchers to study the formation of such structures in an extremely public domain. Finally, online markets present special problems for economic sociologists as well as exchange theorists, because this "real world" of exchange partners tends to exist outside the bounds of traditional conceptions of social networks.

Both sets of theorists have devoted an enormous amount of time and energy to theorizing about the effects that concrete social structures have on the outcomes of economic and social exchange. In the world of online markets, transactions take place not in an anonymous world, but in a world that exists without network ties in the traditional sense. It is a social world in which identity is part of the constitution of the market itself and reputations are built up and torn down through the exchanges they are intended to facilitate. As difficult as theorizing about this arena may appear on first examination, the work of economic sociology on the social construction of markets (e.g., White, 1981; Granovetter, 1985; Fligstein, 1996) and the recent work in exchange theory on solutions to uncertainty in social exchange settings (Kollock, 1994, 1999; Molm et al., 2000; Yamagishi et al., 1998) present promising starting points for the creation of a rigorous sociological theory of online transactions and the new forms of social structure they create, even if some would view them as "virtual social structures."

At the more microlevel, reputation systems serve to foster trust in both the specific social relations in which the transactions actually occur and in the institutions that are emerging to maintain and monitor the store of knowledge on which the reputations are based. The latter focuses attention more on matters of credibility and legitimacy both of which are critical in

any emergent social system. In fact, to the extent that the transactions are embedded in networks that are monitored and where defection or cheating is sanctioned through reputational mechanisms, the need for “pure” trust based interactions is reduced. The initial offerings, however, in many circumstances require some form of risk taking or trust, often viewed as more of a “leap of faith” in one’s fellow human being (see Yamagishi & Yamagishi, 1994). Beyond trust and reputational mechanisms, future research also may draw on the developing work on the role of affect in exchange systems. Does it emerge in online systems of exchange as anecdotal evidence implies or do online relations serve the role of an alternative to affective attachments in the real world of social encounters? Many interesting questions remain unanswered at the microlevel as well as at more macrolevels regarding the development of new systems of exchange anchored as much in cyberspace as in the traditional realms of economic and social exchange. In fact, the distinction between economic and social exchange may become blurred over time in such a context. Both exchange theory and economic sociology are likely to contribute a great deal in the future to our understanding of these newest forms of exchange and the structures that emerge to facilitate them.

REFERENCES

- Bienenstock, E. J., & Bonacich, P. (1992). The core as a solution to exclusionary networks. *Social Networks*, *14*, 231–243.
- Bienenstock, E., & Bonacich, P. (1993). Game-theory models for exchange networks: Experimental results. *Sociological Perspectives*, *36*, 117–135.
- Bienenstock, E., & Bonacich, P. (1997). Network exchange as a cooperative game. *Rationality and Society*, *9*, 937–965.
- Baker, W. (1990). Market networks and corporate behavior. *American Journal of Sociology*, *96*, 589–625.
- Blau, P. M. (1964). *Exchange and power in social life*. New York: Wiley.
- Blau, P. M. (1986). *Exchange and power in social life*, 2nd printing. New Brunswick, NJ: Transaction Books.
- Blau, P. M. (1987). Microprocess and macrostructure. In K. S. Cook, (Ed.), *Social exchange theory* (pp. 83–100). Newbury Park, CA: Sage.
- Blau, P. M. (1998). Behavioral foundation for a structural theory of power in exchange networks. *Social Psychology Quarterly*, *61*, 185–198.
- Burt, R. (1992). *Structural holes: The social structure of competition*. Cambridge, MA: Harvard University Press.
- Coleman, J. S. (1990). *Foundations of social theory*. Cambridge, MA: Harvard University Press.
- Coleman, J. S. (1972). Systems of social exchange. *Journal of Mathematical Sociology*, *2*, 145–163.
- Collins, R. (1981). On the microfoundations of microsociology. *American Journal of Sociology*, *86*, 984–1014.
- Cook, K. S. (Ed.) (1987). *Social exchange theory*. Newbury Park, CA: Sage.
- Cook, K. S., & Emerson, R. M. (1978). Power, equity and commitment in exchange networks. *American Sociological Review*, *43*, 712–39.
- Cook, K. S., & Gillmore, M. (1984). Power, dependence, and coalitions. In E. J. Lawler (Ed.), *Advances in group processes*, Vol. 1 (pp. 27–58). Greenwich, CT: JAI Press.
- Cook, K. S., & Whitmeyer, J. M. (1992). Two approaches to social structure: Exchange theory and network analysis. *Annual Review of Sociology*, *18*, 109–127.
- Cook, K. S., Emerson, R. M., Gillmore, M. R., & Yamagishi, T. (1983). The distribution of power in exchange networks: Theory and experimental results. *American Journal of Sociology*, *89*, 275–305.
- Cook, K. S., Gillmore, M. R., & Yamagishi, T. (1986). Point and line vulnerability as bases for predicting the distribution of power in exchange networks: Reply to Willer. *American Journal of Sociology*, *92*, 445–448.
- Cook, K., Hegtvedt, K. A., & Yamagishi, T. (1988). Structural inequality, legitimation, and reactions to inequities in exchange networks. In M. Webster & M. Foschi (Eds.), *Status generalization: New theory and reason* (pp. 291–308). Stanford, CA: Stanford University Press.
- Deutsch, M. (1964). Homans in the skinner box. *Sociological Inquiry*, *34*, 156–165.
- Ekeh, P. P. (1974). *Social exchange theory: The two traditions*. Cambridge, MA: Harvard University Press.
- Emerson, R. M. (1962). Power-dependence relations. *American Sociological Review*, *27*, 31–41.

- Emergson, R. M. (1972). Exchange theory, part I and II. In J. Berger, M. Zelditch Jr., & B. Anderson (Eds.), *Sociological theories in progress*, Vol. 2 (pp. 38–87). Boston: Houghton Mifflin.
- Emerson, R. M. (1987). Toward a theory of value in social exchange. In K. S. Cook (Eds.), *Social exchange theory* (pp. 11–46). Newbury Park, CA: Sage.
- Emerson, R. M. (1976). Social exchange theory. *Annual Review of Sociology*, 2, 335–362.
- Emerson, R. M. (1981). Social exchange theory. In M. Rosenberg & R. Turner (Eds.), *Social psychology: Sociological perspectives* (pp. 30–65). New York: Basic Books.
- Fligstein, N. (1996). Market politics: A political-cultural approach to market institutions. *American Sociological Review*, 61, 656–673.
- Friedkin, N. E. (1992). An expected value model of social power: Predictions for selected exchange networks. *Social Networks*, 14, 213–229.
- Friedkin, N. E. (1995). The incidence of exchange networks. *Social Psychology Quarterly*, 58, 213–222.
- Granovetter, M. (1985). Economic action and social structure: The problem of embeddedness. *American Journal of Sociology*, 91, 481–510.
- Heimer, C. (2001). Solving the problem of trust. In K. S. Cook (Ed.), *Trust in society* (pp. 40–48). New York: Russell Sage Foundation.
- Homans, G. C. (1958). Social behavior as exchange. *American Journal of Sociology*, 62, 597–606.
- Homans, G. C. (1974). *Social behavior: Its elementary forms*, 2nd ed. New York: Harcourt, Brace & World. (Original publication 1961)
- Kelley, H. H., & Thibaut, J. (1978). *Interpersonal relations: A theory of interdependence*. New York: John Wiley.
- Kollock, P. (1994). The emergence of exchange structures: An experimental study of uncertainty, commitment and trust. *American Journal of Sociology*, 100, 313–345.
- Kollock, P. (1999). The production of trust in online markets. In E. J. Lawler et al. (Eds.), *Advances in group process* (pp. 99–123). Greenwich, CT: JAI Press.
- Lawler, E. J., & Yoon, J. (1993). Power and the emergence of commitment Behavior in negotiated exchange. *American Sociological Review*, 58, 465–481.
- Lawler, E. J., & Yoon, J. (1996). Commitment in exchange relations: A test of a theory of relational cohesion. *American Sociological Review*, 61, 89–108.
- Lawler, E. J., & Yoon, J. (1998). Network structure and emotion in exchange relations. *American Sociological Review*, 63, 871–894.
- Lawler, E. J., Thye, S. R., & Yoon, J. (2000). Emotion and group cohesion in productive exchange. *American Journal of Sociology*, 106(3), 616–657.
- Leiffer, E. M. (1991). *Actors as observers: A theory of skill in social relationships*. New York and London: Garland.
- Lovaglia, M. J., Skvoretz, J., Willer, D., & Markovsky, B. (1995). Negotiated exchanges in social networks. *Social Forces*, 74, 123–155.
- Malinowski, B. (1922). *Argonauts of the Western Pacific*. New York: E. P. Dutton.
- Markovsky, B. (1987). Toward multilevel sociological theories: Simulations of actor and network effects. *Sociological Theory*, 5, 101–117.
- Markovsky, B. (1995). Developing an exchange network simulator. *Sociological Perspectives*, 38, 519–545.
- Markovsky, B., Willer, D., & Patton, T. (1988). Power relations in exchange networks. *American Sociological Review*, 53, 220–236.
- Markovsky, B., Skvoretz, J., Willer, D., Lovaglia, M. J., & Erger, J. (1993). The seeds of weak power: Extending network exchange theory. *American Sociological Review*, 1993, 197–209.
- Marsden, P. V. (1983). Restricted access in networks and models of power. *American Journal of Sociology*, 88, 686–717.
- Mauss, M. (1925). *Essai sur le Don en Sociologie et Anthropologie*. Paris: Presses Universitaires de France.
- Miller, N. E., & Dollard, J. (1941). *Social learning and imitation*. New Haven, CT: Yale University Press.
- Molm, L. D. (1989). Punishment power: A balancing process in power-dependence relations. *American Journal of Sociology*, 94(6), 1392–1418.
- Molm, L. D. (1987). Power-dependence theory: Power processes and negative outcomes. In E. J. Lawler & B. Markovsky (Eds.), *Advances in group processes*, Vol. 4 (pp. 171–198). Greenwich, CT: JAI Press.
- Molm, L. D. (1991). Affect and social exchange: Satisfaction in power-dependence relations. *American Sociological Review*, 56, 475–493.
- Molm, L. D. (1997a). *Coercive power in social exchange*. Cambridge, England: Cambridge University Press.
- Molm, L. D. (1997b). Risk and power use: Constraints on the use of coercion in exchange. *American Sociological Review*, 62, 113–133.
- Molm, L. D., Peterson, G., & Takahashi, N. (1999). Power in negotiated and reciprocal exchange. *American Sociological Review*, 64, 876–890.

- Molm, L. D., Takashi, N., & Peterson, G. (2000). Risk and trust in social exchange: An experimental test of a classical proposition. *American Journal of Sociology, 105*, 1396–1427.
- Pfeffer, J., & Salancik, G. R. (1978). *The external control of organizations: A resource dependence perspective*. New York: Harper & Row.
- Schneider, H. K. (1974). *Economic man: The anthropology of economics*. New York: Free Press.
- Simpson, B., & Macy, M. (2000). Collective action and power inequality coalition in exchange networks. *Social Psychology Quarterly, 64*, 88–100.
- Skvoretz, J., & Lovaglia, M. J. (1995). Who exchanges with whom: Structural determinants of exchange frequency in negotiated exchange networks. *Social Psychology Quarterly, 58*, 163–177.
- Skvoretz, J., & Willer, D. (1993). Exclusion and power: A test of four theories of power in exchange networks. *American Sociological Review, 58*, 801–818.
- Stolte, J. (1983). The legitimation of structural inequality: Reformulation and test of the self-evaluation argument. *American Sociological Review, 48*, 331–342.
- Sprecher, S. (1988). Investment model, equity, and social support determinants of relationship commitments. *Social Psychology Quarterly, 51*, 318–328.
- Swedberg, R., & Granovetter, M. (1992). Introduction. In M. Granovetter & R. Swedberg (Eds.), *The sociology of economic life* (pp. 1–26). Boulder, CO, San Francisco, Oxford: Westview Press.
- Thibaut, J. W., & Kelley, H. H. (1959). *The social psychology of groups*. New York: Wiley.
- Turner, J. (1986). *The structure of sociological theory*, 4th ed. Homewood, IL: Dorsey.
- Uzzi, B. (1996). The sources and consequences of embeddedness for the economic performance of organizations: The network effect. *American Sociological Review, 61*, 674–698.
- White, H. C. (1981). Where do markets come from? *American Journal of Sociology, 87*, 517–547.
- Whitmeyer, J. M. (1994). Social structure and the actor: The case of power in exchange networks. *Social Psychology Quarterly, 57*, 177–189.
- Whitmeyer, J. M. (1999). Interest-network structures in exchange networks. *Sociological Perspectives, 42*, 23–47.
- Willer, D. (1987). The location of power in exchange networks. *Social Networks, 14*, 187–341
- Willer, D. (1992). Predicting power in exchange networks: A brief history and introduction to the issues. *Social Networks, 14*, 187–211.
- Willer, D., & Anderson, B. (1981). *Networks, exchange and coercion: The elementary theory and its applications*. New York: Elsevier.
- Yamagishi, T., Cook, K. S., & Watabi, M. (1998). Uncertainty, trust and commitment formation in the United States and Japan. *American Journal of Sociology, 104*, 165–194.
- Yamagishi, T., & Yamagishi, M. (1994). Trust and commitment in the United States and Japan. *Motivation and Emotion, 18*, 129–166.
- Yamagishi, T., Gillmore, M. R., & Cook, K. S. (1988). Network connections and the distribution of power in exchange networks. *American Journal of Sociology, 93*, 833–851.
- Yamaguchi, K. (1996). Power in networks of substitutable and complementary exchange relations: A rational-choice model and an analysis of power centralization. *American Sociological Review, 61*, 308–332.