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Network Analysis, Culture, and the Problem of Agency¹

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Network analysis is one of the most promising currents in sociological research, and yet it has never been subjected to a theoretically informed assessment and critique. This article outlines the theoretical presuppositions of network analysis. It also distinguishes between three different (implicit) models in the network literature of the interrelations of social structure, culture, and human agency. It concludes that only a strategy for historical explanation that synthesizes social structural and cultural analysis can adequately explain the formation, reproduction, and transformation of networks themselves. The article sketches the broad contours of such a theoretical synthesis in the conclusion.

Recent years have witnessed the emergence of a powerful new approach to the study of social structure. This mode of inquiry, commonly known as "network analysis," has achieved a high degree of technical sophistication and has proven extremely useful in a strikingly wide range of substantive applications. Since the seminal work of Barnes (1954) and Bott (1971), sociological studies utilizing network analysis have appeared with increasing frequency; a veritable explosion of such work has taken place over the last 15 years, particularly with the founding of two special-

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ized journals, Social Networks and Connections, in the late 1970s. Today network analysis is one of the most promising currents in sociological research. Its practitioners include some of the most highly respected figures in the profession: Ron Breiger, Ronald Burt, Mark Granovetter, David Knoke, Peter Marsden, Barry Wellman, and Harrison White. Many other prominent sociologists, such as Claude Fischer, Edward Laumann, Doug McAdam, David Snow, and Charles Tilly, draw extensively upon network concepts. The late George Homans, in his reflections upon the last 50 years of sociology, justly described network analysis as one of the most encouraging new developments in the discipline (Homans 1986, p. xxvi).

Despite its growing prominence, however, network analysis has yet to be subjected to a theoretically informed assessment and critique. The secondary literature on this perspective has tended to restrict itself to outlining basic concepts, discussing technical procedures, and summarizing empirical research findings. There has been an unfortunate lack of interest in situating network analysis within the broader traditions of sociological theory, much less in undertaking a systematic inquiry into its underlying strengths and weaknesses. Theoretical "precursors" of network analysis have often been invoked in passing—especially Durkheim and Simmel—but network analysis, itself a constellation of diverse methodological strategies, has rarely been systematically grounded in the conceptual frameworks they elaborated. In addition, there has been a notable absence in this literature of any sustained consideration of the potential usefulness of network analysis for historical investigation. Meanwhile, social theorists and historical sociologists, for their own part, have largely ignored developments in this field; we have yet to see a sustained discussion of this approach in recent works of social theory, even in the writings of such wide-ranging thinkers as Anthony Giddens (1984, 1987) and Jeffrey Alexander (1982, 1987, 1988a) or, alternatively, in studies of recent developments in comparative and historical research (e.g., Skocpol 1984; D. Smith 1991).² In short, the task of rethinking network analysis, sociological theory, and historical sociology in light of one another has been sadly neglected.

In this essay we aspire to accomplish precisely such a task. We begin with an exposition of the underlying theoretical presuppositions and conceptual strategies of network analysis, outlining the characteristic features of this approach in relation to broader currents in social theory. Along the way, we examine several exemplary studies that investigate historical processes of social change using the tools and insights of net-

² Giddens does, however, criticize the "structuralism" of Peter Blau, which has strong affinities with network analysis (Giddens 1984, pp. 207–13).

work analysis. Upon this basis we then elaborate a critique—a fundamentally *sympathetic* critique—of the network perspective, stressing its inadequate conceptualizations of human agency on the one hand, and of culture on the other. We carefully distinguish here between three distinct models in the network literature of the relationships among culture, agency, and social structure; each of these models, in our view, conceptualizes these relationships in varying degrees of theoretical sophistication. Throughout the essay, we attempt to ground our critical arguments carefully in detailed and substantive considerations of actual works of network analysis—studies that, in our estimation, rank among the most powerful and impressive applications to date of the network perspective. Throughout this article, our primary focus is on analytical categories, not on authors. Our concern with agency and culture has implications for network analysis in general, but our focus here remains on studies that attempt to explain social change over time—including the transformation of social networks themselves—and hence on specifically historical studies.³

Our argument is that while this new mode of structuralist inquiry—in all three of its versions—offers a more powerful way of describing social interaction than do other structural perspectives that focus solely on the categorical attributes of individual and collective actors, it has yet to provide a fully adequate explanatory model for the actual formation, reproduction, and transformation of social networks themselves. Network analysis all too often denies in practice the crucial notion that social structure, culture, and human agency presuppose one another; it either neglects or inadequately conceptualizes the crucial dimension of subjective meaning and motivation—including the normative commitments of actors—and thereby fails to show exactly how it is that intentional, creative human action serves in part to constitute those very social networks that so powerfully constrain actors in turn. In its less nuanced versions, in fact, the network approach emerges as the mirror image of its interpretive and hermeneutic counterpart (Schutz 1967; Rabinow and Sullivan 1979). Whether from the standpoint of objective social structures or of subjective experience, both of these perspectives in themselves provide no more than a description of social reality; ultimately, both fail to grasp in concepts the dynamic processes that shape this reality over time. We

³ We are not interested here, it should be pointed out, in the more purely methodological and technical contributions that network analysts have produced (e.g., Boorman and White 1976; Davis 1967; Freeman 1977, 1979; Harary, Norman, and Cartwright 1965; Lorrain and White 1971; White, Boorman, and Breiger 1976). Nor are we concerned with covering all of the many important empirical studies that have been produced in recent years using network techniques and concepts. See, e.g., Fischer 1982; Laumann and Knoke 1987; and Wellman 1979.

believe, by contrast, that an adequate approach to historical explanation must encompass both social structural and cultural perspectives on social action. We demonstrate how more sophisticated versions of network analysis do approximate such a strategy, and we sketch out the broad contours of our own synthetic explanatory perspective in the concluding pages.

ANALYZING SOCIAL NETWORKS

The Priority of Relations over Categories

Network analysis is not a formal or unitary "theory" that specifies distinctive laws, propositions, or correlations, but rather a broad strategy for investigating social structure. It is not, that is, a "deductive system" in which "lower-order propositions" follow "as a logical conclusion from . . . general propositions under . . . specified given conditions" (Homans 1964, p. 812). Rather, like modernization or dependency theory in the field of economic development, it is more a "paradigm" or a "perspective"—"a loose federation of approaches" (Burt 1980a)—than a predictive "social theory." As a result of the internal diversity of network approaches, network analysts themselves debate the usefulness of alternative models of social relations and methodological strategies. Indeed, important disagreements have arisen over the very definition of its fundamental concepts. Network analysts dispute the manner in which ideas such as social structure, network centrality, distance, cohesion, and social network itself—terms used by other sociologists simply as metaphors—can be operationalized for purposes of empirical research. (We have provided a short glossary of terms commonly used by network analysts in the appendix below.)

Nevertheless, network analysis proceeds from certain basic theoretical presuppositions and premises that are acceptable to most, if not all, of its practitioners. It holds to a set of implicit assumptions about fundamental issues in sociological analysis such as the relationship between the individual and society, the relationship between "micro" and "macro," and the structuring of social action by objective, "supra-individual" patterns of social relationships. The point of departure for network analysis is what we shall call the *anticategorical imperative*. This imperative rejects all attempts to explain human behavior or social processes solely in terms of the categorical attributes of actors, whether individual or collective. Network analysis, as Barry Wellman puts it, rejects explanations of "social behavior as the result of individuals' common possession of attributes and norms rather than as the result of their involvement in structured social relations" (Wellman 1983, p. 165). In other words, one

can never simply appeal to such attributes as class membership or class consciousness, political party affiliation, age, gender, social status, religious beliefs, ethnicity, sexual orientation, psychological predispositions, and so on, in order to explain why people behave the way they do. "Network theory builds its explanations from patterns of relations," notes Ronald Burt. "It captures causal factors in the social structural bedrock of society, bypassing the spuriously significant attributes of people temporarily occupying particular positions in social structure" (Burt 1986, p. 106).⁴ In this respect, network analysis pursues the Simmelian goal of a *formalistic sociology* (Simmel 1971, chap. 3), one that directs attention exclusively to the overall structure of network ties while suppressing consideration of their substantive content (see also Bearman 1993, p. 48).⁵

Given this anticategorical imperative, network analysis emphatically rejects all varieties of culturalism, essentialism, and methodological individualism. It stands fundamentally opposed, for example, to certain of the assumptions of structural-functionalism, which stresses the normative integration of societies. Despite a common emphasis on the priority of structures over "essences"—an emphasis (deriving ultimately from the early Durkheim) that links both perspectives to tendencies in structural anthropology, linguistics, and ordinary language philosophy—network analysts "take seriously what Durkheim saw but most of his followers did not: that the organic solidarity of a social system rests not on the cognition of men, but rather on the interlock and interaction of objectively definable social relationships" (Boorman and White 1976, p. 1442). It should be pointed out, on the other hand, that network analysis does not reject all of the tenets of structural-functionalism. Many network analysts (e.g., White, Boorman, and Breiger 1976; Burt 1982) employ functionalist notions such as "role," "role set," and "status," although they reconceptualize these notions into relational or network-analytic

⁴ Thus one network analyst (Brym 1988) is able to show in his work on intellectual radicalism among the fin-de-siècle Jewish intelligentsia in Russia that sharp discrepancies in political ideologies can develop even within narrowly circumscribed categories, depending upon the actors' different patterns of "structural rootedness" within particular social networks.

⁵ This last formulation applies somewhat less well, it should be pointed out, to the third of the several network models that we shall go on to analyze, that of structuralist constructionism. This model supplements a "static" and formalistic analysis of network structure with a more "dynamic" account of processes of identity transformation, one that necessarily devotes more attention to the content of network ties.

⁶ Network analysts' disagreement with the structural-functionalist view of society is thus reminiscent of Selig Perlman's objection to those Marxist theorists who view the working class as "an abstract mass in the grip of an abstract force" (1979, p. 6).

terms. In this regard, they can indeed be said to be working within the tradition of Merton and Rossi (1950), Parsons (1951), and Nadel (1957).

As a "structuralist" approach to social analysis, the network perspective necessarily also questions the explanatory potential of all those conceptual strategies that emphasize the nonrelational attributes and/or purposive actions of individuals or collectivities-strategies such as interpretive sociology, phenomenology, symbolic interactionism, ethnomethodology, certain variants of Marxian analysis, and rational choice theory. From the network point of view, analytical approaches that direct attention to the "intrinsic characteristics," "essences," attributes, or goals of individuals, as opposed to their patterned and structured interrelationships, are all inherently suspect (Wellman and Berkowitz 1988, p. 5). Although certain rational choice analysts do employ the methodological tools and techniques of network analysis (e.g., Coleman 1990), and while, conversely, certain practitioners of network analysis today tacitly rely on instrumentalist conceptions of action (as we shall see below), network analysis itself as a broad perspective on social structure can clearly be distinguished from the radical individualism of rational choice theory.

Finally, network analysis departs in important ways from the "mainstream" sociological approach to empirical "quantitative" research. As both James Coleman and Andrew Abbott have observed, American sociology before the "watershed" moment of the 1940s was marked by a proliferation of qualitative community studies, influenced in large part by the Chicago school and, ultimately, by the writings of Robert Park (Park, Burgess, and McKenzie 1967), W. I. Thomas (1966), and Georg Simmel (1955). These theorists regarded social facts as ecologically embedded within specific contexts of time and space — that is to say, within particular interactional fields composed of concrete, historically specific "natural areas" and "natural histories." "All social facts," notes Abbott, were seen as "located in particular physical places and in particular social processes. They were also located within the temporal logic of one or more processes of succession, assimilation, conflict, and so on. . . . The Chicago vision was of a social structure embedded in time, a structure in process" (Abbott 1992b, p. 14).

After the 1940s, however, American sociology shifted its focus of attention away from contextual determination and onto statistical survey research and other types of work that took as their unit of analysis not the community or the social group, but rather the individual. "In much of the work following this change," remarks Coleman, "the focus shifted from social processes within the community shaping the system's behavior to psychological or demographic processes shaping individual behavior" (Coleman 1986, p. 1315).

There was no comparable development of tools for analysis of the behavior of interacting systems of individuals or for capturing the interdependencies of individual actions as they combine to produce a system-level outcome. The far greater complexity required of tools for these purposes constituted a serious impediment to their development. . . . The end result [was] extraordinarily elaborated methods for analysis of the behavior of a set of independent entities (most often individuals), with little development of methods for characterizing systemic action resulting from the interdependent actions of members of the system. [Coleman 1986, p. 1316]

From this historical vantage point, contemporary network analysis can be viewed as part of a *second* crucial watershed period in American sociology, one in which empirical research is now directing its attention back again to the systemic level, this time assisted by the development of quantitative techniques and methods of a highly sophisticated nature. In this second pivotal moment, analytic concerns are shifting back once more to those questions of interactional fields and contextual determination that had been so central to sociologists before the "variables revolution" of the 1940s.

How, then, does network analysis propose to account for social behavior and processes? The answer is implicit in the preceding remarks. Such behavior and processes, it suggests, must be explained with reference to networks of social relations that link actors or "nodes." These social relations, significantly, must be understood as independent of the actors' wills, beliefs, and values; they must also be assumed to allocate scarce resources differentially (Wellman 1983, p. 176). Social structure, in this view, is "regularities in the patterns of relations among concrete entities; it is not a harmony among abstract norms and values or a classification of concrete entities by their attributes" (White et al. 1976, pp. 733–34; emphasis in original). A social network is one of many possible sets of social relations of a specific content—for example, communicative, power, affectual, or exchange relations—that link actors within a larger social structure (or network of networks). The relevant unit of analysis need not be an individual person, but can also be a group, an organization, or, indeed, an entire "society" (i.e., a territorially bounded network of social relations);⁷ any entity that is connected to a network of other such entities will do.

Network analysts often find it desirable to carry out their investigations at both the individual and group levels; such combinations highlight what some of them, in a Simmelian (1955) fashion, refer to as the "dualism" of groups and actors—the fact that the nature of groups is determined by the intersection of the actors within them (i.e., by the ties of their mem-

⁷ One recent writer, Margaret Somers (1993), prefers the term "relational setting."

bers to one another as well as to other groups and individuals), while the nature of actors is determined by the intersection of groups "within" them (i.e., by their own various group affiliations; see Breiger 1974). Individual and group behavior, in this view, cannot be fully understood independently of one another. By thus facilitating analyses at both the individual and group level, network analysis makes it possible to bridge the "micro-macro gap"—the theoretical gulf between microsociology, which examines the interaction of individuals, and macrosociology, which studies the interaction of groups or institutions.

Thus the way in which network analysis conceptualizes social structure is at once more general and more concrete than alternative structuralist approaches. It is more *general* because many different kinds of groups, relations, and institutions that putatively organize or structure social processes can be understood in, or be "translated" into, network terms. And it is more *concrete* because these structures need not be treated as "black boxes," but rather can be disaggregated into their constituent elements of actors and relations. The significance of these two features of network analysis for empirical research is considerable. Network analysts are now able to provide far more precise and accurate representations of social structures and social relations than are proponents of competing research strategies.

Most network analysts, of course, also purport to do far more than simply describe the ways in which actors are connected in society. As Knoke and Kuklinski point out, "If network analysis were limited to a conceptual framework for identifying how a set of actors is linked together, it would not have excited much interest and effort among social researchers. But network analysis contains a further explicit premise of great consequence: The structure of relations among actors and the location of individual actors in the network have important behavioral, perceptual, and attitudinal consequences both for the individual units and for the system as a whole" (Knoke and Kuklinski 1982, p. 13). "The hallmark of network analysis," in Edward Laumann's (1979, p. 349) words, "is to explain, at least in part, the behavior of network elements (i.e., the nodes) and of the system as a whole by appeal to specific features of the interconnections among the elements." More specifically, the network approach investigates the constraining and enabling dimensions of patterned relationships among social actors within a system. It is this emphasis, in fact, that provides the link between its theoretical insights and its key contributions to empirical research. What network analysis provides, in particular, is a way of avoiding the pitfalls of what Arthur Stinchcombe terms "epochal interpretations" (or, more memorably, "epochal garbage"); that is, of causal explanations that proceed by "using the apparent causal structure created by narrative of a sequence of events

to create the illusion that epochal theories are being substantiated" (Stinchcombe 1978, p. 10; see also Tilly 1992). Network analysis allows historical sociologists, by contrast, to pinpoint those wide-ranging and recurrent causal mechanisms "whose combinations produce," as Tilly expresses it, "the actual unique histories we observe" (Tilly 1992, p. 11). How, specifically, does network analysis attempt such an important task?

Relational Analysis as a Way of Representing Social Structure

Network analysts generally make use of one of two conceptual strategies in order to explain how networks constrain and enable—and thus to account for various types of social behavior (Burt 1980a, 1987). On the one hand, many analysts adopt a "relational" or "social cohesion" approach that focuses on the direct and indirect connections among actors. This approach explains certain behaviors or processes through the fact of social connectivity itself—as well as through the density, strength, symmetry, range, and so on, of the ties that bind. From this perspective, very strong, dense, and relatively isolated social networks facilitate the development of uniform "subcultures" and of strong collective identities; this notion, of course, dates back both to Durkheim (1984) and to Simmel (1955; 1971, chap. 18). Relational analyses, however, also demonstrate that "weak" ties indirectly connecting individuals or bridging the "structural holes" between isolated social groups may be crucial for many important social processes, such as locating employment opportunities (e.g., Granovetter 1973; Burt 1992). The mathematical tools of "graph theory" have been helpful in developing these approaches (see Harary et al. 1965).

One important application of network analysis that employs the relational or social cohesion approach is a study by Naomi Rosenthal et al. (1985) of women's reform organizations in New York State during the latter half of the nineteenth century. Rosenthal and her associates examine the organizational affiliations of 202 prominent women reformers in state reform activity during the years between 1840 and 1914. By mapping out these affiliations, they develop a detailed portrait of the "multiorganizational field" of social movement activity that obtained during that period. Measures of centrality enable them to identify the particular groups that were most important to that network of reform organizations. Other related methods provide them with careful measurements of the boundaries, shape, and texture of various clusters of such organizations. Finally, "directional analysis" of flows of individuals across organizations provides them with a picture of "three uniquely shaped map configurations" of social movement clusters in three distinct historical periods between 1840 and 1914, each of these manifesting a "different

content to the relations among organizations and activity" (Rosenthal et al. 1985, p. 1043).

Another important line of network research employing relational analysis concerns itself with processes of recruitment to social movements. Its point of departure is a study by Snow, Zurcher, and Ekland-Olson (1980) that examines materials on a wide variety of movements. Snow et al.'s work suggests that individuals with preexisting ties to movement members are more likely to be contacted and recruited to those movements than are individuals without such ties; individuals with few or weak ties to alternative networks are more likely to respond favorably to these recruitment efforts than are individuals with strong commitments to countervailing networks. Snow et al.'s study does not employ sophisticated network analysis techniques, nor does it examine systematically the independent effects of network structures themselves; it focuses instead upon individual ties alone. And yet it does provide a useful corrective to social psychological and culturalist approaches that place undue explanatory weight upon such variables as "individual motivation" to the exclusion of actors' patterns of embeddedness within actual networks of social ties.

A series of studies by Doug McAdam (1986, 1988; see also Fernandez and McAdam 1988, 1989) further corroborates and advances this line of investigation. McAdam's studies are concerned with the participation of college students in the 1964 Freedom Summer project in Mississippi and focus on the patterns of social relationships of student participants, as compared to those of students who applied for the project, were accepted, but failed to participate. McAdam's principal conclusion is that "all of the applicants—participants and withdrawals alike—emerge as highly committed, articulate supporters of the goals and values of the summer campaign" (McAdam 1986, p. 73). What clearly differentiates participants from withdrawals are not their socioeconomic characteristics nor attitudinal differences that "push" individuals into participating, but three structural "pull" factors that facilitated and encouraged participation: (1) participants belonged to a greater number of organizations and to more explicitly political organizations than did withdrawals; (2) participants had higher levels of involvement in prior civil rights activities than did withdrawals; and, most important, (3) participants had more ties—especially "strong" friendship ties—to other Freedom Summer applicants than did withdrawals.

An article by McAdam and Roberto Fernandez (1988; see also Fernandez and McAdam 1989) extends the scope of this analysis to include the effects of even more specifically structural variables such as the "network prominence" of applicants upon their eventual participation in Freedom Summer. McAdam and Fernandez argue that individuals' positions

within multiorganizational fields—in this case, the various networks of interlocking activist organizations at their respective universities—did under certain conditions significantly affect the likelihood of their being recruited to the summer project. It was not the *quantity* of individuals' ties to social movement organizations or to other applicants to Freedom Summer that determined their eventual participation, but rather the *pattern* of their interpersonal connections and common memberships within these organizations. To capture the effects of these patterns, Fernandez and McAdam employ a standard cohesion measure of centrality—"prominence"—in their analysis; they use it to focus attention on the density of applicants' ties to other more or less centrally located individuals within fields of overlapping organizations.

Despite his increasing interest in the significance of "networks as such" in movement recruitment, however—as opposed to social ties "treat[ed] . . . in piecemeal fashion" (Gould 1991, p. 717)—McAdam's research leaves out of consideration one further structural variable: namely, the *multiplexity* of networks themselves and the complex interactions among them. While McAdam's studies neglect the preexisting webs of relationships within which Freedom Summer applicants had been embedded before joining activist organizations, Roger Gould's (1991, 1992) studies of the Paris Commune explore the interactive effects of precisely such networks with more formal organizational structures. Together, Gould argues—*not* separately—these indigenous structures (specifically, the neighborhoods within which the Parisian insurgents lived) and the National Guard units to which the insurgents were assigned decisively affected their overall levels of solidarity and resistance. The key to this interaction process was the residential recruitment system of the National Guard. "Members of each battalion were tied to each other not only through their shared organizational affiliation, but also by the fact that they were neighbors." Gould finds that

insurgents in different neighborhoods influenced each other's degree of commitment to the insurrection through the network of links created by overlapping enlistments [in guard units]. High levels of commitment in one area enhanced commitment elsewhere when enlistment patterns provided a conduit for communication and interaction. . . . [Thus] neighborhoods responded to events in other areas where their residents served in National Guard units. For instance, resistance in the fifth arrondissement was positively affected by the fact that many of its residents served in the thirteenth legion, whose members demonstrated a strong commitment to the insurgent effort. [Gould 1991, p. 726]

Gould concludes from this that "cross-neighborhood solidarity" was a significant feature of the Parisian insurrection. "The interdependence of resistance levels across residential areas was . . . intimately tied not only

to the quantity, but also to the structure of overlapping enlistments" (Gould 1991, p. 727). Gould thus shows that structural analysis needs to take into account not only individual-level variables such as those that are employed in the McAdam studies, but also the complex influences of multiplex or overlapping networks of social ties.

Positional Analysis as a Way of Representing Social Structure

Many network analysts employ a different approach to conceptualizing social structure; their "positional" strategy focuses upon the nature of actors' ties not to one another, but to third parties. This strategy makes sense of certain behaviors and processes in terms of the pattern of relations that defines an actor's position relative to all other actors in the social system. Positional analyses emphasize the importance of "structural equivalence"—that is, the sharing by two or more actors of equivalent relations vis-à-vis a third actor—for understanding both individual and collective behavior (see Lorrain and White 1971). The relevant issue from this point of view is the specific "position" or "role" that a set of actors occupies within the system as a whole. Any such set is termed a "block." An algebraic procedure called "blockmodeling" partitions overall populations into sets of structurally equivalent actors (White et al. 1976; Boorman and White 1976).

Structural equivalence models differ from relational models in at least two crucial respects. First, while the latter fail to distinguish among the members of social "cliques" on the basis of those members' different types of ties to external actors, the former do concern themselves with the structure of the social system as a whole. They generate models "in which an actor is one of many in a system of interconnected actors such that all defined relations in which he is involved must be considered" (Burt 1980a, p. 80). Second, structural equivalence models pay no heed to whether actors in a given position have any direct ties to one another. A block, or set of structurally equivalent actors, from their perspective, may not be a densely knit social clique at all (White et al. 1976).

One interesting example of network analysis that makes use of block-modeling and positional analysis is the work of Peter Bearman (1993) on local elite social structure in England during the century before the English Civil War. Bearman examines the actual patterns of kinship and patron-client ties that bound elite actors together (and that simultaneously drove them apart) during this period, and thereby "induces partitions" or "equivalency classes" of these actors that describe their patterned interactions more accurately than do the standard categorical classifications. Rather than specify the relevant elite actors from afar in such categorical terms as "middling," "rising," "falling," "court," or

"country" gentry, he generates specific blockmodels of their interrelationships in four discrete time periods between 1540 and 1640. "Individuals with distinctive personal biographies act coherently," he argues, "with respect to the interests which arise from the structural positions they share in local and national networks" (Bearman 1993, pp. 11–12). Changes over time in the structure and distribution of these networks thus provide the key to understanding long-term structural changes. Bearman's larger argument is that the social transformations that did occur at the elite level created the "structural prerequisites" for the widespread adoption of certain abstract theological tenets, which in turn would play a crucial role in inspiring the tumultuous political events that were to come. They led, in other words, "to the formation of an elite subworld organized on the basis of social relations that transcended the [localist and kinship-based] traditional social order and created a context in which abstract religious [and constitutionalist] rhetorics could emerge as the critical determinants of elite social action in the century preceding the English Civil War" (Bearman 1993, p. 1).

Another highly sophisticated and innovative historical case study employing the positional approach to structural analysis is John Padgett and Christopher Ansell's brilliant work on the rise of the Medici in early 15th-century Florence. Padgett and Ansell, much like Bearman before them, employ the concept of structural equivalence to identify "the family, economic, and patronage networks that constituted the Medicean political party" (Padgett and Ansell 1993, p. 1260), as well as their main rivals in Florentine politics, the "oligarchs." They use archival data on marital, economic, political, and personal ties to produce an "overall relational picture of Florence's social structure, within [a] 92-family ruling elite" (Padgett and Ansell 1993, p. 1274). Through blockmodeling they find that they are able to predict actual party memberships far more accurately than through standard categorical analyses based, for example, on class and status. Indeed, their analyses of marriage and economic ties in particular prove highly useful in revealing the connections among networks, groups, and party membership. In a pointed reminder of the potential empirical usefulness of what we have termed here the "anticategorical imperative," Padgett and Ansell conclude that "rather than parties being generated by social groups, . . . both parties and social groups were induced conjointly by underlying networks. . . . We do not argue . . . that social attributes and groups are irrelevant to party formation; merely that their role needs to be understood within a deeper relational context. There is no simple mapping of groups or spatial dimensions onto parties; social attributes and group interests are 'merely' cognitive categories, which party mobilization, networks, and action crosscut" (Padgett and Ansell 1993, pp. 1277–78, 1274; emphasis added).

Blockmodeling also proves useful in explaining the superior capacity for collective action of the Medici party vis-à-vis its rival faction, despite the bitter division between those patrician elites and "new men" aligned with the Medici. The Medici party, Padgett and Ansell observe, was "deeply cleaved on two attributional dimensions simultaneously—social class (i.e., prestige) and neighborhood. Not only did the various components despise each other; they did not run into each other much either. Only the Medici family itself linked the segments" (Padgett and Ansell 1993, p. 1281). In fact, the Medici family exerted an exceptional degree of centralized control over its followers precisely by bridging the "structural hole" between patricians and new men. (On the importance of structural holes more generally, see Burt [1992].) The more cliquish oligarch party, by contrast, was constantly beset with "cross-pressure[s] on each family instead of collective convergence," due precisely to its far higher levels of network multiplexity and attributional homogeneity (Padgett and Ansell 1993, p. 1279).

Padgett and Ansell reveal through an analysis of "network dynamics" just how these patterns of social relationships came about in the first place. "Elite marriage and economic networks," they argue, "were reconfigured by working-class revolt and by wartime fiscal crisis, respectively" (Padgett and Ansell 1993, p. 1287). As part of their strategy of reconsolidation in the aftermath of the Ciompi wool workers' revolt of 1378, the temporarily victorious oligarchs deliberately excluded the losers' elite collaborators, including the Medici, from their marital networks. "The oligarchic clique and the Medicean . . . networks," claim Padgett and Ansell, thus "both emerged in tandem, a single network, each reflexively and asymmetrically structuring the other" (Padgett and Ansell 1993, p. 1298). In the meantime, foreign wars with Milan (1423– 28) and Lucca (1430–33) had the effect of severely weakening the Florentine economy and of sending many elite families (with the notable exception of the Medici themselves, who enjoyed special papal ties) into bankruptcy. The elite families attempted to help themselves by depriving in turn the socially and politically more vulnerable new mercantile elements—the new men—of offices and tax revenues. After 1427, the Medici began to pursue economic relations with these new elements in their local residential neighborhoods. It was precisely at that moment that the Medici party emerged as a powerful and self-conscious political actor engaged in struggle against the dominant oligarch faction.

THREE NETWORK MODELS OF HISTORICAL EXPLANATION

Each of these two alternative models of social structure has its strengths and weaknesses. Proponents of the relational approach emphasize its

suitability for mapping the typical relations that individuals have with one another. It is more amenable to traditional survey research techniques, they claim, in contrast to positional approaches that require data for all the elements in the system. Proponents of structural equivalence, conversely, stress its more consistently *structuralist* nature, its capacity, that is, simultaneously to take into account all of the relational data pertaining to a given actor, including his patterns of external relationships—"the relations in which he is involved as well as the relations in which he is not involved" (Burt 1980a, p. 131). "A global [positional] approach," notes Michael J. Mandel (1983, pp. 376-77), "examines all interlocks between roles at the same time. . . . [This] simultaneous consideration of all actors in an entire population . . . spotlights the interdependence of the different roles found in the population. Each role therefore has built into it the elements which differentiate it from other roles within the same overall structure." Positional analysts contend that this feature lends their models a significantly greater degree of predictive power. For example, in a reconsideration of a classic "cohesion" study by Coleman, Katz, and Menzel (1966), Burt shows how the structural equivalence of physicians better accounts for the informal social pressures that led to the diffusion of the use of the drug tetracycline than does their social cohesion (Burt 1987).

Network practitioners employ both of these approaches to make sense of an impressive array of substantive issues. Despite the considerable methodological usefulness of both strategies, however, we contend that each can be subjected to a number of important criticisms. The very assumptions and premises that have made network analysis in both of its methodological variants such a powerful tool raise serious questions about its adequacy as an overall research strategy. We contend that there have been three models implicit in the literature on network analysis models of the relationships among culture, agency, and social structure that have led to varying degrees of difficulty in elaborating satisfactory explanations of historical processes. The first of these implicit models, that of structuralist determinism, neglects altogether the potential causal role of actors' beliefs, values, and normative commitments-or, more generally, of the significance of cultural and political discourses in history. It neglects as well those historical configurations of action that shape and transform pregiven social structures in the first place. A second and more satisfactory—but still deeply problematic—approach is that of structuralist instrumentalism. Studies within this perspective accept the prominent role of social actors in history, but ultimately conceptualize their activity in narrowly utility-maximizing and instrumental forms. And finally, the most sophisticated network perspective on social change, which we term *structuralist constructionism*, thematizes provocatively

certain historical processes of identity conversion and "robust action." It is the most successful of all of these approaches in adequately conceptualizing human agency and the potentially transformative impact of cultural idioms and normative commitments on social action. However, even this perspective falls short in understanding the full complexities of the theoretical interconnections among culture, agency, and social structure. It too pays insufficient attention to the structuring influences of cultural and political discourses upon historical actors. ⁸

Structuralist Determinism

All three of these basic approaches are represented by practitioners of both relational and positional network analysis. The aforementioned relational study by Rosenthal et al. (1985), for example, stands as an illuminating case study in structuralist determinism. Rosenthal and her associates delineate three distinct historical periods of women's reform activity in New York State between the years 1840 and 1914. The first of these, they claim, lasted from 1840 to the late 1860s; it was dominated by a women's rights movement and also featured high levels of involvement in antislavery and temperance organizations. The second period was a transitional one; between the end of the Civil War and the late 1880s there was comparatively little activity, many of the earlier groups disappeared, and "the possibility of creating new national organizations was limited" (Rosenthal et al. 1985, p. 1044). And finally, between the late 1880s and 1914, there was a resurgence of intense reform activity, centering around an increasing number of new organizations linked primarily by the suffrage issue. Rosenthal et al.'s delineation of these three periods of women's reform activity by means of relational analysis surely ranks as a significant and worthy contribution. But its limitations are also considerable: the study provides little systematic explanation as to precisely why these changes occurred from one historical period to the next, settling instead for a succession of static "map configurations" or relational "snapshots" of network patterns. The individual and social actions that led from one structural configuration of reform activity to the next are left unanalyzed, as are the developments in social structure and

⁸ Our term *structuralist constructionism* is coincidentally reminiscent of Pierre Bourdieu's phrase, "constructivist structuralism" (Bourdieu 1990). But we do not imply by this any direct connection between the network analysts whom we are discussing and Bourdieu, although it is true that these various thinkers all share an underlying concern to overcome at both the theoretical and empirical levels the dichotomy between "subjectivist" and "objectivist" standpoints. Bourdieu's understanding of "fields," e.g., does bear striking analytical affinities with that of "social networks" (Bourdieu and Wacquant 1992, p. 114).

cultural and political discourse that underlay and motivated them. At best, Rosenthal et al. treat these various developments in their analysis as exogenous variables.

On the side of positional rather than relational analysis, the early work of Harrison White and his associates on blockmodeling techniques (White et al. 1976; see also Boorman and White 1976) provides another illuminating example of structuralist determinism. 9 White's research includes studies of network data describing structural changes over time (White et al. 1976, pp. 763-68); each of these studies, however (like that of Rosenthal et al.), ultimately culminates in a succession of static representations of social structure. Each manages, that is to say, to generate "no models of processes over time." White et al. recognize that transformations in social structure still need to be explained: "Models of structure are not sufficient unto themselves. Eventually one must be able to show how concrete social processes and individual manipulations shape and are shaped by structure. . . . One fundamental problem here is that many settings may admit not just a single equilibrium outcome, but multiple alternative equilibria. . . . In turn the interesting questions may bear on what external forces may cause a social structure to pass from one equilibrium configuration to another" (White et al. 1976, p. 773; emphasis added). Toward the end of another important article on blockmodeling techniques and role structures, White and his collaborators further acknowledge that "the next analytic task is to provide ways to probe how role structures . . . actually come into being" (Boorman and White 1976, p. 1442). But again, they provide no systematic way of building a concern for human agency and processuality into their explanations.

Another shortcoming that both of these examples of structuralist determinism have in common is the assumption that social networks can best be conceptualized as linking together "concrete" entities such as persons and organizations, rather than as also embodying ideals, discursive frameworks, and "cognitive maps." The latter, from their perspective, remain mere "abstractions." Structuralist determinism rests analytically on a reification of social relations; it transforms the important theoretical distinction between a structure of social relations, on the one hand, and cultural formations, on the other, into an ontological dualism. It thereby "ruthlessly abstracts" the formal or "objective" dimensions of social relations from their cultural and intersubjective contexts so as to be able to represent and analyze such relations with sophisticated

⁹ We discuss below the rather different analytical perspective that White has subsequently adopted—e.g., in *Identity and Control* (1992).

¹⁰ For a telling example, see Granovetter's synopsis of Cambridge University Press's series on "Structural Analysis in the Social Sciences" (Knoke 1990, frontmatter).

technical tools; in the process, however, it drains such relations of their active, subjective dimension and their cultural contents and meanings. To compound the problem, this variant of network analysis then theoretically privileges one side of this dualism—namely, that of "social relations" itself (albeit social relations now blanched of both their active and symbolic aspects)—over that of cultural and discursive formations. It uses social networks ("social being," in Marx's famous formulation) to explain "social consciousness" and culture, but not (also) the other way around. Indeed, in Wellman and Berkowitz's words (1988, p. 5), "symbols, meanings, and values . . . are a derivative and often residual concern."

Structuralist Instrumentalism

Perhaps because of its theoretical limitations, structuralist determinism has given rise to relatively little empirical research on historical processes. Far more common has been the perspective of structuralist instrumentalism, which has also been adopted by practitioners of both relational and positional network analysis. This perspective certainly takes the historical role of social actors very carefully into account. However, it also draws implicitly upon "residual categories" from outside its own conceptual framework—in particular, a model of homo economicus—for explaining the formation and transformation of social networks themselves. There is a striking tendency among structuralist instrumentalists, in fact, to "smuggle" conceptions of agency into their investigations, whether overtly or covertly, from the domain of rational choice theory. Many, if not most, such network analysts assume unproblematically that actors individuals and even groups or organizations—are utility maximizers who pursue their material interests in money, status, and power in precisely the ways predicted by theorists of rational choice. In effect, these analysts project their own anticategoricalism on the actors they study, neglecting how the latter's own cultural and moral categories help to structure their beliefs and behaviors.

A useful example of structuralist instrumentalism on the side of relational analysis are Roger Gould's aforementioned studies of the 1871 Paris Commune (1991, 1992). Gould begins by "posit[ing] an influence process in which a [Parisian] district's resistance level is a function of a set of exogenous variables and of the resistance levels of all the other districts, weighted by the strength of its links with them" (Gould 1991, p. 721; emphasis in original). He investigates three such "exogenous variables" that help to explain these varying levels of resistance: (1) the levels of poverty in an arrondisement; (2) the percentage of skilled salaried workers residing therein; and (3) the percentage of white-collar, mid-

dle-class employees located in any specific neighborhood (Gould 1991, p. 723). "Resistance was stronger," concludes Gould, "in areas that were poor and working class," although his "expectation that white-collar and unskilled workers would play less prominent roles in the insurrection is not supported" (Gould 1991, p. 725). Gould departs here from his own anticategorical approach by relying upon "exogenous" gradational measures of poverty and occupational composition—in addition to social networks—in order to make sense of the mobilization in each arrondisement (see also Gould 1992, p. 727).

Not only must Gould move from relational to gradational data in order to identify accurately the social base of the Paris Commune, but, more troublingly, he never provides a plausible causal account as to why Parisians would have risked their lives for the Commune in the first place. At times he seems simply to assume, dubiously in our view, that working people (or, at least, working-class males of 19th-century France)¹¹ would automatically fight and die for a state representing their class interests. He predicts, for example, that white-collar employees, "who often came from middle-class families," would have been less likely than artisans or workers to participate in the insurrection (Gould 1991, p. 724). As noted above, this expectation is unsupported by the data, an outcome that Gould himself never explains. At other times, Gould emphasizes the importance of neighborhood (and cross-neighborhood) loyalty or solidarity. In this account, he argues that Parisians joined the insurgency not because of class interests per se, but rather because of "social pressure" from neighbors: "Failure to participate in the insurgent effort was construed as a betrayal of loyalty to the neighborhood and was sanctioned accordingly" (Gould 1992, p. 748). This argument, however, fails to explain why or how certain ties and interactions among neighbors, which Gould does not specify concretely, generated such a powerful neighborhood loyalty in the first place; it begs the question as to how certain (unspecified) workers came to believe, and apparently managed to convince others, that "neighborhood loyalty" required nothing less than risking their lives for the Commune. Gould's assumptions about the purely instrumental foundations of political mobilization—whether class or status based—in the present stage of his research prevent him from analyzing such cultural and normative influences in a fully satisfactory manner. Gould implies that simply belonging to a neighborhood with a certain occupational composition (and ties to other such neighborhoods) produced pro-Commune solidarities. But why did such "belongingness" generate powerful solidarity instead of, for example, interpersonal indif-

¹¹ Gould does not say much about the complexly gendered character of the insurgency, simply noting that women were not admitted into the National Guard.

ference or even cutthroat competition, as among the oligarchic clique in Padgett and Ansell's study?

We recognize that Gould's work has thus far appeared only in journal articles and that later, more expansive versions might well exemplify a different sort of explanatory strategy. In its present form, however, we claim that it does relatively little to explore the specifically normative commitments of the social actors engaged in political resistance during the Commune. (The difficulty here is not that Gould neglects "culture" per se, but rather that the underlying logic of his argument—its theoretical logic—fails to accord normative commitments any independent explanatory significance.) In a more complete historical explanation, Gould would have to direct far more attention than he does to the specifically cultural bases of (cross-)neighborhood solidarity and their influence upon individuals' projects of action. Exactly what sorts of practices and rituals, he would need to ask, produced the powerful solidarities of Parisian neighborhoods and the National Guard? What role did political ideologies and cultural discourses play in sustaining or even expanding relations of solidarity? (Gould mentions the discourses of "socialism" and of "republican patriotism" in this context, but he never examines their meanings to workers and thus their causal significance in any systematic fashion.) And finally, what do sources of information such as diaries, letters, union records, and journalistic accounts reveal to us about popular cultural practices in 19th-century Paris and during the Commune itself? (See, e.g., Sewell [1980] and the sources cited in Edwards [1973, p. 175].) Such data sources would demonstrate how popular practices and popular culture, far from being "additional" factors or forces needing to be either "controlled for" or examined alongside of network structures, were in fact important dimensions of those structures themselves—grounded in, and sustaining, specific, identifiable social ties.

On the side of positional analysis, Peter Bearman (1993), too, adopts the perspective of structuralist instrumentalism. Bearman tells the story of changing elite social relations in England during the "long sixteenth century" by means of a sequence of blockmodel representations of elite social structure. By examining these blockmodels, he specifies "the slow and arduous process by which religious heterodoxy was embedded in the fabric of local elite social and political life," the tangible mechanisms "by which local elites came to perceive themselves and others as actors whose activity was of religious significance" (Bearman 1993, pp. 171, 132). Bearman's approach is not dissimilar to what Max Weber (1949) long ago termed the analysis of "elective affinity"—the study of how particular discourses and cultural formations come to find a "match" and to "resonate" with specific historically embedded actors. Where his approach differs from that of Weber, however, is in its tacit instrumen-

talism—that is, its tendency to devote almost all of its analytical attention to uncovering the "structural preconditions" for this elective affinity, rather than to also exploring the independent causal significance of these discursive frameworks themselves. Indeed, Bearman seems to attribute little more than purely material interests (in money, status, and power) to the historical actors at the center of his account. "The eclipse of localism, the decline of kinship, and the emergence of a national elite subworld," he argues, "were aggregate outcomes of the gentry's pursuit of local status and power" (Bearman 1993, p. 3). The search for "political advantage" was the driving mechanism, in other words, behind the crucial historical transformations of the period—and not (also) the beliefs, values, and normative commitments of these elite actors themselves. Bearman might well have noted, in the opening page of his study, that he is primarily investigating only one side of "the interaction between structural and ideational processes . . . the complex relationship between action and structure" (Bearman 1993, p. 1).

Structuralist Constructionism

Several network analysts have, in recent years, developed more sophisticated approaches than these to studying historical processes, approaches that take into account culture and agency as well as social structure. Again, practitioners of both relational and positional analysis have pursued such investigations. One revealing example of structuralist constructionism on the side of relational analysis is Doug McAdam's recent work on Freedom Summer (1986, 1988). McAdam explicitly rejects many of the instrumentalist claims of other network analysts. He qualifies the notion, specifically, that "structural availability" for social movement participation renders "attitudinal affinity" to a movement completely irrelevant. Such a notion might hold true of "low-risk/cost activism," but "participation in instances of high-risk activism [such as the Freedom Summer project and, we might add, the Paris Commune and the English Civil War] would appear to depend on an intense attitudinal and personal identification with the movement" (McAdam 1986, p. 73). Surely, high levels of such identification were required for the Freedom Summer volunteers to aspire to participate in such a demanding and potentially dangerous undertaking; moreover, the volunteers' accounts of their own motives in open-ended application questionnaires clearly demonstrate that they felt a deep-seated idealism and a strong commitment to the project's goals. "The real question is: Were the volunteers' prior attitudes sufficient in themselves to account for their participation? My answer here is a qualified no. . . . Attitudinal affinity [as well as] biographical availabil-

ity must be considered necessary but not sufficient causes of participation in high-risk/cost activism" (McAdam 1986, pp. 73, 87).

Exactly where, then, did this "attitudinal affinity" for the Freedom Summer project (or, more generally, for any social action) actually come from? One of McAdam's major innovations in *Freedom Summer* (1988) is to elaborate an implicit theory of identity conversion that takes seriously the formation of motivations and identities without sacrificing at all the moment of "structural location." McAdam argues that the key to his account lies in those organizations that drew "the applicants into civil rights activity before Freedom Summer. . . . Extremely risky, timeconsuming involvements such as Freedom Summer," he contends, "are almost always preceded by a series of safer, less demanding instances of activism. In effect, people commit themselves to movements in stages, each activity preparing the way for the next" (McAdam 1988, pp. 50-51; emphasis in original). Individuals first come into contact with movement participants and engage in discussions and joint activities with them, confronting firsthand the issues that the movement has set out to address and gaining in the process a deeper understanding of and moral commitment to its goals. Then, eventually, "at the level of identity," they begin to "'play at' and [to] grow more comfortable with the role of activists themselves" (McAdam 1988, p. 51). Unlike many other network analysts, McAdam recognizes that actors can undergo far-reaching processes of identity formation in the course of their involvements in extraordinary affairs. Such an insight is especially important to bear in mind when analyzing their participation in "high-risk/cost" activities such as Freedom Summer—or, for that matter, in any major social or political movement.

In a recent publication, McAdam concludes that "network theory fails to offer a plausible model of individual action and therefore a convincing mechanism by which interpersonal contacts and organizational memberships draw individuals into activism" in the first place (Friedman and McAdam 1992, p. 160). Friedman and McAdam claim instead that network theory can yield robust explanations of collective action only when synthesized with a modified rational choice model of individual action, one that views collective identities (and not just material resources) as potentially powerful incentives for action: "One of the most powerful motivators of individual action," they write, "is the desire to confirm through behavior a cherished identity. . . . Integration into [activist] networks makes it more likely that the individual will value the identity of 'activist' and choose to act in accordance with it" (Friedman and McAdam 1992, pp. 169–70). It is our contention that the distinctive contribution of McAdam's work is, indeed, to expand the concept of purposive rationality itself to the point of bursting through the seams of standard rational choice theory. It is historical actors' specifically normative commitments, rather than (or in addition to) their pursuit of material goals, that effectively drives their social movement participation.

If there is a weakness to McAdam's analysis of Freedom Summer, it lies in his insufficient attention to precisely this element of normative commitment to cherished ideals. In one of their articles Fernandez and McAdam (1988) note that recruitment contexts, "the residue of a protest culture," affected "the number and form of interactions among potential recruits," and thereby "exert[ed] an important influence on all the processes involved in . . . recruitment" (Fernandez and McAdam 1988, p. 379). McAdam devotes several passages in his book (although not in his articles) to explaining the origins of these recruitment contexts on the eve of Freedom Summer. He discusses, for example, the role of demographic and economic developments in producing a youth cohort driven by an exaggerated sense of its own cultural importance and potency and the role of the liberalization of domestic politics under the leadership of figures such as John F. Kennedy and Martin Luther King, Jr. (McAdam 1988, pp. 13-24). And yet McAdam stops short of providing a satisfactory account of how established currents of American cultural (and political) discourse were selectively drawn upon by civil rights leaders and others and refashioned into a new and powerful definition of the situation. It was the compelling nature of this cultural and political definition that drew fresh recruits to the civil rights cause in the first place, and that helped to create those very networks themselves that McAdam regards as the starting point of his analysis. McAdam might have provided a more convincing account than he does of the cultural and political idioms of the day—not all of which, after all, were supportive of racial equality—and examined how and why certain of them came to have such a powerful resonance for so many people, especially young, relatively affluent college students, precisely at that specific historical juncture.

On the side of positional analysis using blockmodeling techniques, Padgett and Ansell's (1993) work on the Florentine Renaissance serves as a useful example of innovative research on networks, culture, and agency. Padgett and Ansell employ two important theoretical ideas to help explain the rise of the Medici family in early 15th-century Florence: "structural channeling of learning" and "robust action." All of the major figures in their account, they argue, were highly active and dynamic players. Cosimo de' Medici, for example, steered his family from a position of abject defeat in Florentine politics to one of near-total ascendancy during a period of no more than 40 years. And yet, claim Padgett and Ansell, Cosimo did not pursue from start to finish some omniscient "grand strategy"; rather, he shrewdly and opportunistically took advantage of the local "openings" that a succession of exogenous events had

fortuitously brought his way. Specifically, the reconsolidation strategies of the oligarchs after the Ciompi uprising of 1378 had left open several important "structural holes" in their marriage network, one around the Medici themselves and another around a different segment of the oligarchic elite which was based in the Santo Spirito quarter of Florence. The Medici learned that the latter "breach in the oligarchs' defenses" could be successfully exploited through a focused marriage strategy. In addition, a "second structural chain reaction" was made possible by the oligarchs' self-enclosure from the nonpatrician new men. This pattern, together with neighborhood-based policies of tax extraction during a period of financial crisis caused by foreign wars, led to defensive alliances of the new men first with one another in their own neighborhoods and then eventually with local neighborhood patrons among the elite—again, the Medici themselves. Thus, "the Medici party grew up . . . from raw network material unintentionally channeled to them. . . . Only very late in the game . . . did [the Medici] adaptively learn of the political potential of the social network machine that lay at their fingertips. In almost Hegelian fashion, [the] oligarchs created the networks of their own destruction" (Padgett and Ansell 1993, p. 1287).

The Medici were able to exploit the possibilities brought their way through such processes of "network cascading" by virtue of their own structurally anomalous position within the overall Florentine network. Involved in several different "games" at once—pursuing higher status through marriage strategies and simultaneously pursuing monetary gain and patronage influence through neighborhood economic contacts—the Medici sought after a multiplicity of not always compatible goals. Having such genuinely multivocal interests, they appeared inscrutable before their various followers (the new men and patricians) and outmaneuvered their "opponents into the forced clarification of their (but not [the Medici's]) tactical lines of action" (Padgett and Ansell 1993, p. 1264). The key to Cosimo de' Medici's style of robust action, note Padgett and Ansell, was "maintaining discretionary options across unforeseeable futures in the face of hostile attempts by others to narrow those options. . . . Victory means locking in others, but not yourself [Cosimo], to goaloriented sequences of strategic play that become predictable thereby" (Padgett and Ansell 1993, pp. 1263-64). In this respect, Padgett and Ansell echo Eric Leifer's conception of "local action" as those moves that allow actors in "face-to-face competition with others who have similar credentials . . . to avoid claiming a (global) role until there is evidence [that such a role] will be conferred" (Leifer 1988, pp. 865, 866). They echo as well Charles Tilly's conceptualization of "contentious action," the resourcefulness of individuals and groups who "perform in dramas [repertoires of contention] in which they already know their approximate

parts, [but] during which they nevertheless improvise constantly" (Tilly 1992, p. 15; 1986).

It is important here not to confuse Padgett and Ansell's notion of robust action with rational choice conceptualizations of instrumental action. It is true, of course, that Padgett and Ansell themselves speak repeatedly of the Medici's pursuit of money, status, and power. But they also take special pains to point out that none of these ends of action makes any sense at all outside the terms of the cultural categories, values, and beliefs prevailing in Florentine elite society at that particular juncture of history. Moreover, they quite explicitly distance themselves from the Machiavellian presuppositions of game theory by emphasizing the "mutually adaptive learning processes" and "bounded rationality" characteristic of elite conflicts, especially during "tumultuous times" such as those of the Milan and Lucca wars (Padgett and Ansell 1993, pp. 1301-2; see also Padgett 1986). During such moments of "complicated chaos," they suggest, "the games themselves are all up for grabs. Rational choice requires a common metric of utility for footing, but revealed preferences (the basis for inferring trade-offs across goals/roles) only exist post hoc. . . . Clear goals of self-interest . . . are not really features of people; they are Florentine (and our) interpretations of varying structures of games" (Padgett and Ansell 1993, pp. 1307-8).

If there is a major deficiency to the Padgett and Ansell account, it lies elsewhere: in their closing discussion of the Medici party's ultimate accession to state power. Padgett and Ansell fail to explain there precisely why Cosimo de' Medici came in the end to be considered nothing less than the "pater patriae," the father of his country, by so many of his contemporaries or why he was installed in power with the support of "those Florentines who have remained on the margins of our account thus far—the political neutrals" (Padgett and Ansell 1993, p. 1308). The key to the problem, suggest the authors, is contained in "the cognitive category 'oligarch.' . . . When the oligarchs were firmly in control, they were not labeled 'oligarchs'; they were republican 'public citizens of the state.' Loss of legitimacy and Medici victory are what got them their pejorative tag. No longer public-spirited and selfless in attribution, they came to epitomize class self-interest in Florentine eyes" (Padgett and Ansell 1993, p. 1308). It was when the ruling families, squeezed by the fiscal crisis brought on by foreign wars, in turn sought to repress the new men that they earned the epithet "oligarchs." Clearly, this was a most significant moment in the history recounted by Padgett and Ansell; without it, the Medici, despite all of their tactical maneuverings, quite possibly would never have taken power at all. And yet, this crucial aspect of the story—the evident success of the Medici in manipulating toward their own ends the very content of such key terms as "public-spiritedness"

and "self-interest"—is left completely out of the picture until the final pages of the study. Moreover, the authors never provide their readers with any analysis as to why such issues as public-spiritedness, self-interest, and corruption might have had so much meaning for Florentines to begin with. Could the discursive framework of *civic republicanism* (Baron 1966; Pocock 1975), virtually unmentioned in this study, have profitably been brought into the story at precisely this juncture? (Might still other cultural and political discourses also prevalent during that historical period have emphasized such themes?) It was civic republicanism, after all—by itself or, more likely, in complex interaction with other discursive formations—that made possible that special combination of deep concern over social status and hatred of class interest (as opposed to civic virtue) that together allowed the Medici successfully to engage in robust action in the first place and ultimately to seize state power.

RETHINKING THE PROBLEM OF AGENCY

Social Networks and Cultural Narratives

Clearly, then, none of the three different network approaches that we have been examining offers a completely satisfactory approach to historical explanation. While each of these three models does represent a more nuanced understanding of the complex interrelationships among networks, culture, and agency than the one preceding, none completely succeeds by itself in addressing all of the difficult issues at hand. The model of structuralist determinism, for one, features a succession of network "snapshots" of social structure, while neglecting altogether the potential causal significance of symbolic and discursive formations and offering few insights into the concrete historical mechanisms leading from one such network configuration to another. Structuralist instrumentalism, by contrast, clearly acknowledges the explanatory significance of social action, but, on the other hand, conceptualizes the determinants of such action in excessively narrow terms, often relying on unwarranted assumptions about the overriding importance to historical actors of money, status, and power. And finally, structuralist constructionism affirms the possibility that actors' goals and aspirations might well be complex, multivalent, and historically determined; it inquires, for example, into such intricate processes as identity conversion, structural channeling of learning, and flexible opportunism. And yet not even this model, at least as it has been elaborated by network analysts to date, fully recognizes the (potentially) autonomous causal significance of cultural or political discourses in shaping the complex event sequences that it examines.

In recent years, by far the most significant theoretical steps taken in

the alternative direction that we are proposing have been the important writings by Harrison White on identity, temporality, and narrative. Formerly a leading exponent of structuralist determinism, White has now begun to argue that the interrelationships among network structures, culture, and agency themselves need to be reconceptualized. In *Identity* and Control (1992), he suggests that "agency is the dynamic face of networks," agency understood not only as a "by-product of control," but also as "ways of . . . upend[ing] institution[s] and . . . initiat[ing] fresh action" (White 1992, pp. 315, 245). Significantly—and perhaps surprisingly, given his earlier anticulturalist bias—White includes a theory of cultural symbols and discourses in this new version of his social theory; he now takes discursive "narratives" and "stories" to be among the key features of social life. "Social networks," he asserts, "are phenomenological realities, as well as measurement constructs. Stories describe the ties in networks. . . . A social network is a network of meanings" (White 1992, pp. 65, 67).

White's diverse conceptualizations of "identity" play a prominent role in this new social network theory. "Identity," claims White, signifies "any source of action not explicable from biophysical regularities, and to which observers can attribute meaning" (White 1992, p. 6). Four distinct senses or levels of identity "come wound together in the same constructed reality." The first of these is identity as a "primordial and continuing urge" for "secure footing" in "an otherwise chaotic social world." The second is identity as a "social face," the basis "for our everyday construct for the person . . . as an actor in a role [supplying] preferences that may guide him or her toward goals, and into rational action." The third is "identity from frictions and errors across different social settings and disciplines . . . aris[ing] exactly from contradictions across disciplines, from mismatches and social noise." And the fourth is "identity as more-or-less coherent accounts, as biography . . . after the fact as presented in accounts which may become woven into some unique narrative story" (White 1992, pp. 315, 312–14; emphasis added).

Despite its obvious importance for social network theory, what is perhaps most striking about White's new approach are two closely related omissions. First, White never explains precisely why actors or identities engage in these "contending control attempts" in the first place (as in his remarks on the first level of identity). It is clearly inadequate to explain away these control projects simply as some ahistorical "primordial and continuing urge" for "secure footing." And second, White neglects to analyze closely the role of cultural idioms and normative commitments in helping to shape the very identities and aspirations of historical actors. Indeed, he devotes very little space at all to exploring the internal structure and patterning of these symbolic formations. White

begins his book by declaring that he will be "focus[ing] . . . upon the purely social" (1992, p. 14) as distinguished from the cultural level. This is a "perilous undertaking," as he himself clearly recognizes (White 1992, p. 14n.20). White accordingly relegates "narratives" and "stories" to a secondary position in his theory, in favor of more social structural patterns such as networks of social interaction (his second and third levels of identity, e.g., are both constituted by actors' locations within role structures and disciplines). Ultimately, these narratives and stories fail to receive, even in the fourth and final level of identity (constituted by "accounts . . . after the fact"), the sort of careful analytical attention that White accords to social networks throughout.

It is our contention here, by contrast, that networks, culture, and agency relate to one another in ways that not even White, nor even the structuralist constructionists whom he most closely resembles, have adequately conceptualized. Let us not be misunderstood on this crucial point. White is certainly correct in asserting that cultural (as well as political) discourses do inform—and are deeply embedded within—network patterns of social relationships. Social networks are, indeed, "phenomenological realities," as White puts it—or "networks of meaning." Culture and social relations empirically interpenetrate with and mutually condition one another so thoroughly that it is well-nigh impossible to conceive of the one without the other. This is the respect in which culture can, indeed, be said to constitute, in Charles Tilly's felicitous formulation, nothing less than the very "sinews" of social reality. 12

And yet there is another—and itself no less critical—sense in which cultural discourses, narratives, and idioms are also *analytically autonomous* with respect to network patterns of social relationships. These symbolic formations have emergent properties—an internal logic and organization of their own—that require that they be conceptualized as "cultural structures" (Rambo and Chan 1990; Barber 1992) analytically separate from social structure. ¹³ "When they are interrelated," note Jeffrey Alexander and Philip Smith, "symbols provide a *nonmaterial structure*. They

¹² An important illustration of this can be found in a recent article by Margaret Somers (1993) on the development of citizenship practices in 18th-century England. Somers demonstrates there how different types of political culture were embodied in distinctive "relational settings," or "patterned matri[ces] of institutional relationships among cultural, economic, social, and political practices" (p. 595). Political culture—and citizenship practices themselves—hardly stood apart from patterns of family life, social geography, and "the institutional dynamics of law, governance, and administrative structure" (p. 603). Citizenship, as Somers points out (following Karl Polanyi [1957]), is best conceived of as an "instituted process."

¹³ One could alternatively use the term "cultural frames" here as well (see, e.g., Snow et al. 1986; Snow and Benford 1988; and the various articles on "collective action frames" in Morris and Mueller [1992]).

represent a level of organization that patterns action as surely as structures of a more visible, material kind" (Alexander and Smith 1993, p. 156; emphasis added). This is an insight that goes back at least as far as the classical Parsonian distinction between cultural and social systems (Parsons and Shils 1951; see also Sorokin 1947); indeed, it originates in the later Durkheim, who in his religious sociology was the first to underscore the internal logic of systems of symbolic classification (Durkheim 1965; Durkheim and Mauss 1963; Douglas 1966; Alexander 1988b, 1988c; Kane 1991; P. Smith 1991; Alexander and Smith 1993; Emirbayer 1993). 14 Those who, like White in his more recent work, stress the utter inseparability of culture and social structure come close to denying this all-important theoretical insight. They veer off in the direction, in fact, of what Margaret Archer has termed the fallacy of "central conflation": the assumption that because culture and social structure are mutually constitutive, "there is no way of 'untying' the constitutive elements. The intimacy of their interconnection denies even relative autonomy to the components involved. . . . In the absence of any degree of autonomy it becomes impossible to examine their interplay" (Archer 1988, p. 80; emphasis in original). 15 Examples of cultural or discursive structures that need to be analyzed internally (as well as in their interplay with network structures) include the civic republicanism of Padgett and Ansell's Florence, the civil rights discourse of Freedom Summer, and the socialism and republican patriotism of the Paris Commune.

Recognition of the analytical autonomy of cultural structures certainly does not necessitate a return to "values-based" sociology. We are not speaking here of mere "norms" and "values," as Parsons and his followers did, but rather of much larger symbolic formations such as discursive frameworks and cultural idioms. (For a discussion of how this perspective points well beyond the limitations of functionalist "value analysis," see

¹⁴ Another approach, that of "narrative analysis," also inquires into the inner logic of cultural structures. See Steinmetz (1992) and Somers (1992). As Steinmetz summarizes it, this approach holds that "one . . . should pay special attention to [such elements as] the central subject and actors, the form of the plot and its relation to the story, the rules for excluding events from the narration, the turning points, repetitions, and 'filling in.' One should ask whether a given history assumes the form of a complete historical narrative, of annals, or of chronicles. Finally, one should identify the narrator, the actors in the story, and the explicit or implicit audience" (Steinmetz 1992, p. 501). Such a program for narrative analysis is not necessarily incompatible with late-Durkheimian approaches to cultural inquiry.

¹⁵ White's own work can be said to vacillate between central conflation and what Archer (1988) terms "upward conflation," which, like its counterpart, "downward conflation," she defines as a variety of epiphenomenalism. The former denotes for Archer an analytical privileging of the social structural realm, while the latter entails a reduction to the cultural domain.

Alexander and Smith [1993].) Nor do these insights necessarily lead in the direction of a "reification" of culture, a rendering of cultural frameworks as "concrete social entities" with their own appropriate sets of institutions, rules, and resources. There is a significant difference between conceiving of cultural narratives, idioms, and discourses as symbolic patterns possessing their own autonomous inner logic, on the one hand, and thinking of them as substantively distinct "domains" of social life, on the other—surely a "fallacy of misplaced concreteness," in Alfred North Whitehead's memorable phrase (see Goodwin 1994). And finally, in speaking of cultural structures we are not simply adding another "variable" to our complex explanatory equation, as if culture were itself nothing more than a residual category to be brought in after the fact in order to complete a task that social structural analysis alone had failed to accomplish. (For two compelling critiques of the "variables" approach in general, see Blumer 1969, chap. 6; Abbott 1992c.) The point we wish to make is perhaps articulated best by Theda Skocpol, who affirms that "it [does] make a difference which idiom or mixture of idioms is available to be drawn upon by given groups. Indeed, the very definitions of groups, their interests, and their relations to one another will be influenced by cultural idioms" (Skocpol 1985, p. 91; emphasis added).

Why is it so important, then, to think of symbolic formations as if they were analytically autonomous cultural structures? We propose that these cultural formations are significant because they both constrain and enable historical actors, in much the same way as do network structures themselves. Cultural structures constrain actors, to begin with, by blocking out certain possibilities for action, as, for example, by rendering it inconceivable for the oligarchs of 15th-century Florence to have pursued marriage ties with nonpatrician new men, even when it might have been materially advantageous for them to do so. Eviatar Zerubavel (1991) has referred to these cognitive categorizations phenomenologically as "islands of meaning"—an interesting analogue, certainly, to Ronald Burt's (1992; and Padgett and Ansell's own) concept of "structural holes." Cultural structures also constrain actors by preventing certain arguments from being articulated in public discourse or, once articulated, from being favorably interpreted by others or even understood (Swidler 1987). It is often under their aegis, moreover, that contending social groups wage their cultural and political battles. Each of these contending groups "sketch[es] out a different blueprint from a common set of [ideological] principles, . . . out of the same terminology and the same essential set of concepts" (Sewell 1985, pp. 74, 76; see also Sewell 1980; Skocpol 1985, p. 89). Alexander terms this a context of cultural refraction: "In this situation different interests have been refracted through the same cultural lens" (Alexander 1988a, p. 155).

But cultural formations also *enable* historical actors in diverse ways for example, by ordering their understandings of the social world and of themselves, by constructing their identities, goals, and aspirations, and by rendering certain issues significant or salient and others not. (Indeed, by constraining actors' possibilities, these cultural formations already "enable" them as well, since, as Niklas Luhmann [1982, 1990] has pointed out, the "reduction of complexity" serves precisely to enhance the range of alternatives open to individual and/or collective actors.)¹⁶ Symbolic polarities crystallize within cultural structures, dividing social and metaphysical reality into such antithetical categories as "pure" and "polluted," "just" and "unjust," and "sacred" and "profane." Such categories provide the groundwork for normative evaluations as well as for guidelines for action, as in the case of Renaissance Florence, where, as we have seen, the decisive moment occurred only when the Medici had succeeded in becoming identified in the minds of political neutrals as "pure," "just," and "public-spirited," while the oligarchs had come to be seen as exemplars of political "impurity," "corruption," and "selfinterest." Under such circumstances, certain identities, interests, and courses of action come to be more valued than others, to the point where individuals and groups often prefer to sacrifice their own material interests out of a deep-seated commitment toward them, as in the cases not only of the Medici's ascension to power, but also of the English Civil War, the Paris Commune, and the civil rights struggle in the United States (see also Calhoun 1991). Struggles to redefine the cultural and symbolic definition of such situations, and in so doing to identify certain actors (and types of action) with purity and sacrality and others with impurity and pollution, constitute one of the most important dimensions of social conflict (see Emirbayer 1992a; 1992b). Pierre Bourdieu's trenchant insights into the dynamics of classification struggles are helpful here in bringing these conflicts into sharper focus (Bourdieu 1984, pp. 466–84; Bourdieu and Wacquant 1992; see also Emirbayer 1993).

Cultural structures are, then, both constraining and enabling of social action. They are also, in conclusion, multiple and interpenetrating. As Skocpol puts it, "Multiple cultural idioms *coexist*, and they arise, decline, and intermingle in tempos that need to be explored by intellectual and sociocultural historians" (Skocpol 1985, p. 91; emphasis added). There has probably never been but one overarching cultural idiom, narrative, or discourse operative in any given historical context. A full exploration of a case such as that of the rise of the Medici would thus have to feature not only a careful consideration of the internal logic of civic

¹⁶ We are grateful to Ann Mische for this observation.

republicanism, but also an inquiry into other popular idioms of the day—and of how these possibly interacted with (or stood in tension toward) civic republicanism itself. Social actors nearly always find themselves within a cultural "environment" (more on this specific concept below) marked by a rich plurality of cultural formations; while there might in certain cases be historical justification for arguing that one or another of these is primary, the question itself can only be resolved through careful empirical investigation.

Human Agency and Social Action

This last set of considerations allows us now to shift our focus of attention away from the analytical autonomy of cultural formations—the main topic of the preceding section—onto the question of their concrete interrelationship with other (network) structures and with the social actors that reproduce and transform them. This latter topic is surely every bit as significant as the former. For as Ann Swidler has pointed out, "It is . . . the concrete situations in which . . . cultural models are enacted that determine which take root and thrive, and which wither and die" (Swidler 1986, p. 280). Unfortunately, many—if not most—cultural sociologists today fail to address such issues, or even engage them in the first place, at least in a systematic fashion. All too often, they take cultural formations as unproblematically reflecting the beliefs and assumptions of certain categories of individuals, including entire social classes, nations, and even genders, without recognizing that these formations themselves have a relational character and are grounded in specific concrete settings. There moreover remains the question as to how structures of all types -cultural as well as societal-interrelate with social action itself and with the very potential for human agency. These questions require that we consider, in turn, the influence that cultural and societal formations have upon social actors and the transformative impact that social actors, for their own part, have upon cultural and societal structures.

We begin by affirming that White and the structuralist constructionists we have examined are surely on the right track in their common emphasis upon the role of human agency in history. Network analysts such as McAdam, Padgett, and Ansell quite correctly stress the volitional aspects of social life, the capacity of social actors to transform as well as to reproduce long-standing structures, frameworks, and networks of interaction. In this essay, we ourselves hold to such a view. In our understanding, human agency signifies that moment of freedom—or of "effort," as Talcott Parsons termed it (1937)—that exists as an analytical dimension of all actual empirical instances of social action. Human agency, as we conceptualize it, entails the capacity of socially embedded actors to ap-

propriate, reproduce, and, potentially, to innovate upon received cultural categories and conditions of action in accordance with their personal and collective ideals, interests, and commitments (Emirbayer and Mische 1994). We hope to have shown above why a recognition of this capacity for human agency is critical to any adequate attempt at historical explanation.

On the other hand, it is also our implicit understanding in this article that such a capacity for human agency does not—and should not—mean precisely the same thing as "social action" per se. While the moment of "effort" or agency is present in all empirical units of action, this dimension must be understood as an analytical moment only. The "identification of actor and agency," writes Jeffrey Alexander, renders one "guilty of [the fallacy of] misplaced concreteness. Rather than replacing or reinterpreting the familiar dichotomy between actors and structures, [this] identification . . . actually reproduces it in another form. . . . Actors per se are much more than, and [simultaneously] much less than, 'agents' [alone]" (Alexander 1992, pp. 1–2; see also Alexander 1988a). Empirical action, then, is multiply determined. It is not driven exclusively by human agency, but rather is deeply structured as well by several other "environments" of action (to use Alexander's terminology), such as the societal (network) and cultural environments.¹⁷ Each of these environments interpenetrates with and gives shape and direction to the moment of human agency itself. Any empirical instance of action is structured simultaneously by the dynamics of societal as well as cultural structures, even though—in principle, at least—it is never completely determined and structured by them. Long before Alexander, Parsons had come to this very same conclusion as well, by means of his structural-functionalist model and his celebrated "AGIL" schema (Parsons and Smelser 1956; Parsons 1961). More recently, Jürgen Habermas, too, has relied heavily upon this analytical distinction in his major work, The Theory of Communicative Action (1984–87).

Our aspiration here is not to endorse any one of these particular theories of social action unambiguously—certainly not the structural-functionalism of Parsons, for example, with its powerful idealist and consensualist tendencies. The fundamental point that we wish to make, rather, is that network analysis errs seriously in ignoring the conceptual insights shared by all of these various theories, in particular the notion that agency and structure interpenetrate with one another in all individ-

¹⁷ Like Parsons and Sorokin, Alexander also speaks of a "personality" environment—an analytical move that we certainly endorse, even though we have not had the opportunity to discuss personality structures in this particular context (see Smelser 1968; Chodorow 1989; and Goodwin 1992).

ual units (as well as complexes) of empirical action, and that all historical processes are structured at least in part by cultural and political discourses, as well as by networks of social interaction. Earlier we had quoted from Margaret Archer, who called for an analysis of the complex interaction (or "interplay") between cultural and social structural formations. Here we suggest that it is precisely through empirical social action—multiply determined, and undertaken by concretely situated historical actors—that these various analytical environments relate to one another. The several environments of action ought never to be reified as separate, concrete entities, much less hierarchized as if one of them (social networks) were always more causally significant than the others.

Two crucial implications follow immediately and directly from these remarks. One is the notion that historical actors' very identities, goals, and aspirations are themselves fundamentally constructed phenomena. This is a point perhaps most forcefully articulated in the classical sociological literature by George Herbert Mead (1962), who argued that the mind and the social self-no less than society itself-arise and are sustained through interaction, and that the human subject must be regarded as an ongoing developmental process. More recently, Craig Calhoun, too, has suggested that identity "is not a static, preexisting condition that can be seen as exerting a causal influence on collective action; at both personal and collective levels, it is a changeable product of collective action." In particular, identity cannot be "adequately captured by the notion of interest. Identity is a no more than relatively stable construction in an ongoing process of social activity" (Calhoun 1991, pp. 59, 52). Structuralist constructionists such as McAdam, Padgett, and Ansell develop these points quite forcefully. The insight that "risky and unusual collective action places one's identity on the line in an especially powerful way" (Calhoun 1991, p. 61) receives strong corroboration, for example, in McAdam's arguments about processes of identity conversion in social movements. And Padgett and Ansell's perceptive remark concerning the "varying structures of games"—and therefore of "goals of selfinterest"—during times of "complicated chaos" illustrates this point as well. There is simply no such thing as a prestructured individual identity; both individuals and societies are the products and the contents—but not the starting points—of interaction. "What is primary is the intersubjective process" (Calhoun 1991, p. 59).

It is important to note here, incidentally, that individual autonomy is itself a constructed phenomenon; that is, individual autonomy is only made possible by the sheer multiplicity of structures—societal as well as cultural—within which social actors are situated at any given moment. Not only is autonomy linked to location within overlapping and intersecting networks of social ties, as Simmel pointed out long ago (1955,

1971, chap.18; see also Coser 1975; Burt 1980*b*), but it is also made possible by actors' location among a multiplicity of cultural structures, such as idioms, discourses, and narratives.¹⁸

Of course, if cultural and societal (network) structures shape actors, then it is equally true that actors shape these structures in turn. Cultural and social structures do not, in other words, by themselves bring about or somehow "cause" historical change. Rather, it is the actions of historical subjects that actually "reconfigure" (given historically conducive circumstances) existing, long-term structures of action, both cultural and societal (Sewell 1992b, p. 46). Hence the second implication of our earlier remarks: namely, that for a more comprehensive understanding of processes of change, it is necessary to devote more attention not only to the structural levels of causation, but also to those more ephemeral dynamics of historical "events," that "relatively rare subclass of happenings" that transform such structures in "significant" ways (Sewell 1992b, p. 31). 19 While structuralist determinists such as the early White (and Rosenthal et al. 1985) neglect altogether this dimension of historical events, contingencies, and processes of social change in favor of static, side-by-side comparisons of network configurations, structuralist instrumentalists are considerably more sensitive to the causal significance of human agency. It is the structuralist constructionists, however, such as McAdam and his associates and, especially, Padgett and Ansell, who most successfully incorporate this level of analysis into their explicit frameworks of explanation. Indeed, their notions of "robust action," "identity conversion," and "channeled network cascading" capture far better than any other network concepts the inherent processuality and temporality—the "sequential connectedness and unfolding" (Griffin 1993, p. 1097)—of social action (Ricoeur 1985; Abbott 1992b, 1992c; Sewell 1992c; Griffin 1992; Aminzade 1992). Together they reveal more clearly than ever before the extent to which, as Sewell has put it, "structures [find themselves] at risk, at least to some extent, in all of the social encounters they shape" (Sewell 1992a, p. 20).

The most fruitful direction in which network analysis can now proceed is thus toward a deeper exploration of just such analytical themes. Network analysts would do well, in our view, to thematize more explicitly than they have the inherently constructed nature of individual and collective identities. They would do well also to thematize the complex ways

¹⁸ Here, too, the various structures of the "personality" environment—and the tensions and contradictions among them—must be noted, although once again it would take us too far afield to discuss these structures at greater length.

¹⁹ For a provocative and historically grounded discussion of "the interaction of system and event," see Sahlins (1981, 1991).

in which actors' identities are culturally and normatively, as well as societally, determined—the empirical interpenetration, in other words, of those cultural and social structures that we have been arguing must be carefully distinguished from one another on an analytical plane. And finally, network analysts would do well to distinguish theoretically the different orders of temporality and causation that appear already in their historical explanations—the orders, that is, of long-term structural determination, on the one hand, and of the dynamic efforts and projects of historical actors, on the other. It is only by taking these various theoretical notions into account that network analysts will realize most fully the considerable research potential that already inheres in their techniques, their methodologies, and their highly distinctive view of the social world.

CONCLUSION

Despite the quantity and quality of the scholarship that network analysis has produced over the past 20 years, historical sociologists and social theorists have failed to examine and systematically to criticize its fundamental theoretical presuppositions. The abstruse terminology and stateof-the-art mathematical sophistication of this unique approach to the study of social structure seem to have prevented many of these "outsiders" from venturing anywhere near it. The result has been an unfortunate lack of dialogue among network analysts, social theorists, and historical sociologists, and a consequent impoverishment of their respective domains of social inquiry. In network terms, all three camps have remained isolated cliques separated from one another by structural holes, with unbridgeable subcultural styles and mutually incomprehensible discourses. By examining and criticizing the theoretical presuppositions of network analysis, we have tried to provide some sort of a link—a "weak" tie, so to speak—between these various camps, and thereby to render this approach more accessible to sociologists in a wide range of fields.

We have shown how network analysis, despite its forbidding self-presentation, actually proceeds from a few specific, simple, and elegant theoretical presuppositions. Its principal achievement, we have argued, has been to transform a merely metaphorical understanding of the embeddedness of actors in networks of social relationships into a more precise and usable tool for social analysis. We have also suggested, however, that despite its powerful conceptualization of social structure, network analysis as it has been developed to date has inadequately theorized the causal role of ideals, beliefs, and values, and of the actors that strive to realize them; as a result, it has neglected the cultural and symbolic moment in the very determination of social action. Network analysis gains

its purchase upon social structure only at the considerable cost of losing its conceptual grasp upon culture, agency, and process. It provides a useful set of tools for investigating the patterned relationships among historical actors. These tools, however, by themselves fail ultimately to make sense of the mechanisms through which these relationships are reproduced or reconfigured over time. Our own position is that a truly synthetic account of social processes and transformations that takes into consideration not only structural but also cultural and discursive factors will necessarily entail a fuller conception of social action than has been provided thus far by network analysts.

APPENDIX

A Short Glossary of Network Analysis Terms

The following definitions are meant to orient the general reader to the basic terms of network analysis as well as to convey the way in which certain more general sociological concepts have been "translated" into these terms.

Actor.—A person, group, organization, thing, event, and so on, linked to others in a network. This is sometimes referred to as a "node."

Asymmetric tie.—A relation whose form, content, or both is different for the linked actors. See also symmetric tie.

Block.—A set of structurally equivalent actors in a multiplex network. See also multiplex network and structural equivalence.

Blockmodeling.—A technique for finding or "partitioning" (and graphically representing) structurally equivalent actors (or blocks) in a network.

Boundary problem.—The problem of defining the population of actors to be studied through network analysis in a way which does not depend on a priori categories; in other words, the problem of delimiting the study of social networks which in reality may have no limits.

Catnet (from category and network).—A socially cohesive set of structurally equivalent actors hypothesized as more able and likely to share ideas or a common culture and to engage in collective action than other sorts of real or latent groups. See also social cohesion.

Centrality.—The number of an actor's ties to others, weighted by the number of the latter's ties to others.

Clique.—A group of actors in which each is directly and strongly linked to all of the others. Compare social circle.

Content.—The specific nature or type of relation linking actors in a network (e.g., exchange, kinship, communicative, affective, instrumental, or power relations).

Density.—The ratio of actual relations or ties among a set of actors in a network and the maximum possible number of ties.

Distance.—A function of the number and strength of social ties separating two actors.

Dualism.—The idea that the nature of groups is determined by the intersection of the actors within them (i.e., by the actions of their members), and that the nature of actors is determined by the intersection of groups "within" them (i.e., by their group affiliations).

Egocentric network.—An actor (sometimes called the "anchorage"), the actors with which it has relation, and the relations among those actors. This is sometimes referred to as a "personal network."

Form.—The formal properties of the relations among actors in a network (e.g., strength or weakness, density, symmetry or asymmetry).

Multiplex network.—A network with two or more types of relations linking actors (e.g., exchange and communication in a market or communicative and affective ties in a clique).

Network.—The set of social relations or social ties among a set of actors (and the actors themselves thus linked).

Network structure.—The patterning of relations and "holes" among actors in a network. See also structural holes.

Position.—A set of structurally equivalent actors or nodes (e.g., a block).

Positional approach.—An analysis that focuses on the patterning of structurally equivalent relations among actors. See also *relational approach*.

Range.—The number of an actor's ties to others. See also centrality. Relational approach.—An analysis that focuses on patterning of socially cohesive relations among actors. See also positional approach.

Role.—The pattern of relations of a set of structurally equivalent actors (i.e., a block) to other blocks.

Simultaneity, the principle of. The idea that all positions and roles (see above) are determined relative to one another and thus cannot be assumed or altered independently of one another.

Social circle.—A group in which each actor is directly and strongly linked to most (e.g., 80%), but not necessarily all, others. This is sometimes called a "social cluster." Compare *clique*.

Social cohesion.—The presence of a dense network of strong ties among a set of actors. See also *clique* and *social circle*.

Social structure.—The persisting pattern of ties among actors; more specifically, a network (microstructure) or the network of networks (macrostructure).

Strength of ties.—The relative frequency, duration, emotional inten-

sity, reciprocal exchange, and so on which characterize a given tie or set of ties.

Structural equivalence.—The sharing, by a set of two or more actors who are not necessarily linked themselves, of equivalent relations to a third actor.

Structural hole.—The absence of a relation among actors in a network (a crucial element of *network structure*).

Symmetric tie.—A relation whose form and/or content is the same for the linked actors. See also asymmetric tie.

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