



The Embeddedness of Organizations: Dialogue & Directions

M. Tina Dacin

Texas A & M University

Marc J. Ventresca

Northwestern University

Brent D. Beal

Texas A & M University

We review research on organizations to highlight prevailing and emerging conceptions for embeddedness. An integrated framework that considers the sources, mechanisms, outcomes, and strategic implications of embeddedness is presented. Also, promising research directions for embeddedness approaches, including cross-level issues (such as collective cognition and nesting), as well as issues related to temporality, networks, and methodology are identified. © 1999 Elsevier Science Inc. All rights reserved.

This paper reviews recent theory and empirical research that contributes to our understanding of the embeddedness of organizations. The word “embeddedness” has taken on multiple meanings and uses, just as have other key words (Williams, 1976) like structure, culture, learning, and trust. In part, this reflects the timeliness of the term and the varied theoretical traditions and empirical puzzles which ground the concept. What are embeddedness arguments? What mechanisms do they suggest should be involved in understanding organization, strategy, and management? How do these differ from prevailing arguments in organizational studies? What are the limits to the contribution of embeddedness arguments? And, what is *organizational* about this?

In this article, we develop provisional responses to these questions with a focus on current research dialogue and a view to new directions. We treat embeddedness as concept and construct in dialogue with current research on organizations and institutions. Other recent works review in generous detail conceptual and empirical work that develop embeddedness arguments in economic sociology (Lie, 1997; Powell & Smith-Doerr, 1994), network theories of

Direct all correspondence to: M. Tina Dacin, Department of Management, Mays College & Graduate School of Business, Texas A & M University, College Station, TX 77843-4221; Phone: (409) 845-4882; e-mail: tdacin@tamu.edu.

alliances (Gulati, 1998), organizations and strategy (Andrews & Knoke, 1999), studies of social capital (Portes, 1998; Sandefur & Laumann, 1998), networks and organizations (Nohria & Eccles, 1992), and network theory and cultural sociology (Emirbeyer & Goodwin, 1994).

The article has three main sections. We focus on key aspects and traditions, but conceptualize embeddedness research in terms of promising dialogues and directions that span intellectual, professional, and substantive boundaries in the study of organizations in context. We begin by highlighting the historical evolution of the embeddedness construct and review studies that give shape to current conceptualizations of embeddedness. We discuss prevailing approaches in recent theory and empirical work on organizational embeddedness in terms of sources, mechanisms, outcomes, and strategic implications. We identify new and needed directions based on this review and exemplar studies in proximate research literatures. In this section, we address methodological issues in the broad sense of research design, levels of analysis, and measurement in future directions, as well. Our review recognizes overlaps with research traditions in political economy, economic sociology, anthropology, and psychology, but highlights explanatory accounts, current contributions and future directions of embeddedness research in literatures on organization theory and strategy.

Organization and Management Theory Context

Research on organizations and embeddedness draws heavily from concepts and approaches developed to understand the embeddedness of economic activity in wider social structures and is evolving in tandem with this broader tradition. Modern traditions in organization theory are concerned with interorganizational relations and organization-environment relations (Aldrich & Pfeffer, 1976; Davis & Powell, 1993; Nohria & Gulati, 1994). Embeddedness arguments are prominent among the research paradigms that provide revitalized alternatives to prevailing modern traditions.

Several important trends redirect attention to a more contextualized approach in the study of organizations and management (Baum & Dutton, 1996; Clegg, 1990; Granovetter, 1985; Hamilton & Biggart, 1988; Zukin & DiMaggio, 1990). First, there emerged dissatisfaction with organizational theory conceptions of context as primarily resource environments or as a set of constraints or opportunities that regulate, as well as provide resources (tangible and intangible) and transaction opportunities (Pfeffer & Salancik, 1978; Williamson, 1975, 1985). This resource focus tends to overlook or downplay the constitutive or “productive” (Pettigrew, 1985: 37) effects on action possibilities of an organization’s internal and external context. Second, recent work provides increasing synthesis among theories to inform our view of organizational motives and outcomes (e.g., Allmendinger & Hackman, 1996; Baum & Oliver, 1991, 1992; Dacin, 1997; Martinez & Dacin, 1999; Zajac & Westphal, 1995).

Third, dissatisfaction with classical economics has led to more productive dialogue between economics and sociology (Baron & Hannan, 1994; Nee, 1998; Smelser & Swedberg, 1994). Finally, there has been theoretical work to highlight

the multi-level processes that impact organizational action and change (Greenwood & Hinings, 1996). For example, several studies conceptualize the institutional environment as the arena for ecological dynamics in that institutional forces prescribe institutionally-driven selection criteria by which organizations are created or dissolved (Baum, 1996; Baum & Oliver, 1992; Dacin, 1997). In short, embeddedness research offers the potential to inform these arguments by drawing attention to both the nested and constitutive aspects of context. In similar style, colleagues in international management, technology management, organizational culture and cognition, teams, industrial economics, and entrepreneurship are finding embeddedness approaches useful and are also contributing insights grounded in these different traditions to the growing body of embeddedness research.

Embeddedness research from its early formulations offers a direct challenge to transaction cost approaches, and recent work searches for some synthesis with regard to sociological theories of organization. Attention to rich and structured context offers institutionalist extensions to resource dependence and organizational ecology arguments. It re-establishes concerns with political activity and power in the institutional and ecological traditions, and it directs attention to the wider frameworks that organize and determine, coincident with organizational ecology arguments, both resource structure and form of organization and strategy. Recently, strategy theorists and researchers, including those working at the interface of strategy, management, and organization theory, have engaged embeddedness arguments to identify new frameworks for analysis, new dependent variables of interest, and new approaches to multi-level analysis. What are the intellectual sources of the concept?

The Concept of Embeddedness: An Overview

History and Definitions of the Term

Polanyi (1944) introduced the term “embeddedness” in *The Great Transformation* and is typically presented as the originator of the embeddedness concept (Barber, 1995; Granovetter, 1985; Portes & Sensenbrenner, 1993; Zukin & DiMaggio, 1990). However, many theorists (e.g., Marx, Weber, Schumpeter, and Parsons) attempted “to work out alternative and more comprehensive frameworks for the study of economy and society than those generated by the classical political economists” in the welter of economic and societal redefinition from the late nineteenth and early twentieth century (Martinelli & Smelser, 1990: 5). However, Parsons’s presentation of the economy and society as distinct sub-systems (Parsons, 1960) draws the concern of Granovetter and other subsequent theorists.

Granovetter’s (1985) classic essay serves as a more proximate and accessible stimulus for modern research on embeddedness. Granovetter presents embeddedness as the contextualization of economic activity in on-going patterns of social relations. He views embeddedness as consisting of arguments against the primacy of both individual attributes and aggregate outcomes, as well as antithetical to the role of self-interest as the sole guide for action. His concern with the “underso-

cialized” view of action central to the neoclassical tradition in economics is balanced by his concern with the “oversocialized” view of action that prevails in much sociological argument, particularly the legacy of Parson’s structural-functionalism (Wrong, 1961). He argues for attention to the interplay between social structures and economic activity in industrial societies because “all market processes are amenable to sociological analysis and that such analysis reveals central, not peripheral, features of these processes” (1985: 505). Thus, much of embeddedness research seeks to demonstrate that market exchange is embedded in, and defined by, larger and more complex social processes (Barber, 1995; Granovetter, 1985; Portes & Sensenbrenner, 1993; Zukin & DiMaggio, 1990).

In a thoughtful commentary on the term itself, Barber notes that the “career of the concept of embeddedness” can still be usefully and accurately viewed as an extended struggle to expose and correct the deficiencies of the neoclassical economics tradition and to curb the tendency of economists and others to reify or absolutize the market system (1995: 388). Definitions of embeddedness took shape in opposition to the stylized conceptions of markets featured in neoclassical economics in which market transactions are, by definition, strictly rational, faceless, and independent. Although the ideational core of the embeddedness perspective has remained fairly stable since Granovetter’s (1985) statement of “the problem of embeddedness,” the way in which the concept is presented and defined, for audiences inside and outside of economic sociology, continues to evolve.

We use a working definition of organizations and embeddedness that builds on common usage but introduces a commitment to organizations as complex and emergent social structures. This builds on Granovetter’s key insight that embeddedness refers to the on-going contextualization of economic exchange (activity) in social structures. Zukin and DiMaggio (1990) widen this conception by proposing that embeddedness refers to the contingent nature of economic activity on cognition, culture, social structures, and political institutions. In their treatment, these four mechanisms of embeddedness work at the interface of the traditional concerns of political economy and those of social-organizational analytic imageries. Political economy approaches, they contend, “accepted structure as the expression of determination by forces . . . outside any individual’s control,” while “the social-organizational approach emphasizes the variability of institutions that are formed by conscious action or historical accretion” (Zukin & DiMaggio, 1990: 23). This dual focus keeps attention on the macroeconomic, cultural, and societal frameworks in which people act. At the same time, this focus draws attention to organizational variables that enhance their capacity to produce different outcomes.

For Zukin and DiMaggio (1990), emphasis on the interconnectedness of structures and capital—in other words, of power, culture, and organization—is the distinctive contribution of embeddedness approaches in economic sociology. More generally, embeddedness research tends to strike a balance between behavioral rationality and economic efficiency (Smelser & Swedberg, 1994). Embeddedness arguments take economic activity seriously but look beyond the rhetoric of intentionality and efficiency and make a strong commitment towards under-

standing relational aspects of organizations (Marsden, 1981). Finally, embeddedness research is characterized by taking on really rich empirical contexts and getting its hands “dirty” (Hirsch, Michaels, & Friedman, 1990).

Not everything is “embeddedness,” nor do we advocate such a position. Powell cautions researchers to develop greater specificity regarding the embeddedness of strategy. In particular, Powell argues against trivializing embeddedness by pitting “strategic and institutional, or substantive and symbolic [or] economic and social” factors against each other (Powell, 1996b: 295). Usage of embeddedness in this way neglects the central insights reflected in the embeddedness concept from Polanyi through Commons and other turn of the century “old institutionalists” (Scott, 1995; Van de Ven, 1993) and the modern-day inheritors of approaches that link social structures and social organization (Stinchcombe, 1965, 1997). He also challenges conventional wisdom that equates institutions and embeddedness with constraint and conformity to underscore the sociological conceptions that stress the potential for contradiction and conflicts between and across different forms and levels of embeddedness. Finally, he advocates more systematic and rich attention to the legal and regulatory environments, recognizing that law is constructed, negotiated, and constituted in practice (Edelman & Suchman, 1997).

Research on Organizational Embeddedness

The early focus of the embeddedness of economic activity engaged concerns with the institutional features of transactions and more generally of markets—property rights, asset specificity, and other enabling contexts of exchange. But for theories of organizations and management, there is no necessity to begin with a focus on markets and hierarchies. Organization theory and strategy are grounded in rich behavioral traditions (March & Simon, 1958; Perrow, 1986; Powell, 1990; Selznick, 1949), and therefore, can take advantage of behavioral traditions in organization theory at the level of decision processes, group dynamics, strategy, structures, and interorganizational relations to develop the study of embeddedness and organizations.

In organization theory and strategy, much work on organizational embeddedness has typically emphasized the prevailing tradition: theory and empirical research demonstrate the presence of embeddedness by showing constraint on organizational actors, by conceptualizing and measuring variations in degree of embeddedness. But recent work expands on the conception of embeddedness and moves it beyond a focus on economic/market activity in the specific sense. These research projects develop the organizational embeddedness tradition to focus on exploring variation within and between sources and mechanisms of embeddedness (e.g., Baker & Faulkner, 1993; Holm, Eriksson, & Johanson, 1996; Jacobson, Lenway, & Ring, 1993; Lam, 1997; Oliver, 1996; Podolny, 1993, 1994; Uzzi, 1996, 1997; White, 1981).

Friedland and Alford represent yet another approach, to argue that markets are not “simply an allocative mechanism but also an institutionally specific cultural system for generating and measuring value” (1991: 234). They provide

conceptual tools to recognize multiple levels of symbolic structures and material practices that contend for dominance in framing and giving orderly meaning to domains of organizational and practical action (see also Heimer, 1996). This intuition is developed in both theoretical and strategic/practical terms in studies of management and organization (Eccles & Nohria, 1992; Jackall, 1988).

Three exemplar collections anchor these research streams. Zukin and DiMaggio's (1990) volume highlights the emerging field of economic sociology and provides a framework that situates embeddedness research across cognitive, cultural, structural, and political categories. Clegg (1990) identifies research issues in the power, conflict, and culture traditions, in attention to "organization studies in a postmodern world." Baum and Dutton's (1996) recent volume suggests that researchers move toward a more contextualized concept of strategy and organization. Research on organizations and embeddedness can usefully extend such programmatic and theoretical/empirical formulations with attention to four sets of issues. First, we focus on macro-level *sources* of embeddedness that affect organizations, strategy, and managerial work. Second, we turn to the *mechanisms* by which embeddedness is consequential, or comes to matter for organization structures and activity and for the people in organizations. Third, we emphasize *outcomes*, including performance issues, but also with conceptual attention to varied organizational and other outcomes (Meyer, 1994; Rao, 1998b). Fourth, we discuss the *strategic and practical implications* of embeddedness. Here we draw attention to the fact that embeddedness imposes limits on what organizations can do, but also defines ranges of opportunity and renews attention to broad conceptions of collective strategy and comparative advantage.

Macro Sources of Embeddedness

Comparative and historical research on organizations and management provides crucial insights about the macro-sociological sources of embeddedness. Economic activity is organized through institutions, with the institutions themselves anchored in wider political arrangements and cultural systems of meaning (Hamilton, 1994). Two streams of work are important here. The first is a set of arguments that is historical, political, and cultural in nature, with the organization structures and processes imprinted by wider polity arrangements and their impact on conceptions of industrial and market rationalities (Dobbin, 1994; Hamilton & Biggart, 1988). The second stream of work focuses on processes of field structuration (DiMaggio & Powell, 1983; Fligstein, 1996; Powell, 1996a), with an emphasis on communicative and interactional linkages within an arena of institutional life, stratification regimes, social movement processes, struggle over identities and resources, and constitutive institutional activity. Competition occurs in the context of, and takes its forms from, arrangements of these two sorts.

Much comparative work on political and economic organization argues that polity arrangements in Europe, Asia, and the Americas embody distinctive institutional logics of action with consequences for the organization of industries and markets (Dobbin, 1994; Hamilton & Biggart, 1988; Whitley, 1994). Jepperson and Meyer (1991) argue that institutional features at the polity level drive patterns of economic activity. They argue that polity characteristics affect the definition of

authorized economic actors, the prevalence and location of formal organizing, and institutional change mechanisms.

Campbell and Lindberg (1990) return attention to the organizational structure of the economy and on the ability of the state to define and enforce property rights via the authorization of institutional and legal frameworks, which, in turn organize economic activity via selection of different governance regimes. This and other studies highlight the central role of the state and other collective actors in shaping markets (Fligstein, 1996) and industry development (Evans, 1995).

National and international institutions. Whereas standard economic theories argue for relatively homogenous processes of market formation and dynamics, empirical studies highlight social structural variation in the social organization of economies and management between states in Asia, Europe, and Latin America (Evans, 1995; Hamilton & Biggart, 1988; Whitley, 1994). Central principles of economic rationality vary dramatically across countries and time (Biggart & Guillèn, in press; Dobbin, 1994; Greenstein, 1993). Comparative/institutional studies of economic organization give evidence of how political, cultural, and social institutions organize features of competitive markets (i.e., property rights, institutional and legal elements, economic actors, network forms and governance, and control mechanisms) (Campbell & Lindberg, 1990).

Hamilton and Biggart (1988) document that varied configurations between state, market, and kinship systems in three East Asian economies result in effective industrial activity. They find standard market/efficiency arguments, Weberian authority/state structure arguments, and national cultural arguments inadequate to account for the features of industry and market activity across these country case studies. Instead, they offer a perspective that focuses on the historical social structural features that embed state-market-kinship relations (see also Biggart & Guillèn, in press; Biggart & Orrù, 1997; Orrù, Hamilton, & Biggart, 1991). Similarly, Clegg (1990) offers a critical evaluation of economic theories of vertical integration in explaining persisting decentralization and other features of the French bread/bakery industry and the production of knitwear in Northern Italy. Again, his explanatory solution is to identify the contingent sources of embeddedness in social structural institutions and political dynamics.

Studies of how economic activity emerges and comes to be structured in distinctive ways is a part of embeddedness research that focuses on more macro and cross-societal studies, but also with attention to how the nation and sector context shapes the spread of managerial ideologies (Guillèn, 1994) and the receipt of innovation (Westney, 1987). In summary, studies of economic organization and management underscore that institutional arrangements influence the historical evolution of national economies and organizational forms in ways that persist across polity and technologies (Dobbin, 1994; Hughes, 1983) and industry sectors (Herrigel, 1996; Murtha & Lenway, 1994).

Why do these sources of embeddedness matter for researchers in the organization and strategy traditions? In the industry structure tradition (Bain, 1956, 1968; Porter 1985), firms gain competitive advantage by exploiting a weakness in the structure of their industry—a strategy external to the firm. Instead, the resource-based view of the firm focuses on factor endowments internal to the firm,

including managerial acumen, organizational culture, and knowledge capacities (Barney, 1991; Kogut & Zander, 1996). These are calculated efforts to achieve economic advantage made at all levels of economic activity. These are also strategic choices made in an institutional context that shapes what is possible and advantageous. As the institutional features of markets shift, this impacts what strategies are available and adopted.

Biggart and Orrù (1997: 127–129) argue that “the institutional environment creates background factors that precede and logically shape both comparative and competitive strategic action.” Moreover, they contend that *societal* comparative advantage drives the pursuit of market strategies that provide strategic fit to the distinctive institutional features of market activity in a country, the adaptation of well-understood social arrangements to new business opportunities and manufacturing technologies. Further, strategic choices are path dependent, and the “paths” organizational actors likely follow are shaped by socially and materially constructed institutions. Kogut, Walker, and Anand (1996) examine the view that institutions form the contextual environment of the evolution of economic institutions, as well. In their empirical study of diversification behavior, they take into account substantial national differences in patterns and principles of firm ownership and control and explore, given heterogeneity in institutional environments, why there is so little organizational variation in governance and control.

Generative conceptions of structures. Social structure not only constrains economic or other action but is also generative of particular configurations and forms of actors, and particular opportunities for action. In their more phenomenological form, these are the constitutive qualities of social structures and practices (Brown, 1978). This stream of research puts particular emphasis on cultural and institutional properties of social structures which are emergent or prior to the existence of inter-actor ties, but which are, of course, often evident in them (Mohr & Duquenne, 1997). Arguments in this more constitutive tradition focus on core linkages between organizational fields and forms and the broader political and cultural structures in which social actors and interests take shape. Jepperson and Meyer (1991: 206) stake out the commitments of this position: “Unlike classical social and economic theory, we do not see organization as the natural product of private actors and interests. Rather, we see the actors, interests, and functions involved as publicly legitimated, as are the constructed organizations: modern organization is a creature of public authority.” These arguments focus on the political and cultural constructions of governance rules and routines, logics of actor and ordering principles, and market elements that give shape to economic activity, organization, and management. In a voice mindful of such constitutive processes but firm in concern with struggles over resources, Stinchcombe (1997) recalls the virtues of the old institutionalism in economics, including its concern with history and process, embeddedness in social structures, and political dynamics in explaining forms and routines of economic activity.

Organizational field approaches provide a basic framework to examine the links between wider social structure (states and other political and cultural institutions) and organization-level strategy and activity (DiMaggio, 1986, 1991; DiMaggio & Powell, 1983; Hirsch, 1972; Scott, 1994b; Scott & Meyer, 1994;

Zald, 1978). Organizational fields are intermediate between abstract social structural factors and individual action. As fields coalesce and become increasingly structured, field-level processes have an impact on organization-level structure, conduct, and performance. Recent work develops attention to the processes that structure fields, recognizing the sorts of polity processes we describe in the prior section, as well as the role of social movements and the network dynamics of policy domains (Knoke & Laumann, 1991), political and strategic action (Hirsch, 1975), entrepreneurial initiatives (McDonough, Ventresca, & Outcault, in press), and the place of other cultural, network, and historical elements (Scott, 1983) in field definition and change.

These arguments restore attention to direct and indirect network linkages, local and non-local ties, and horizontal and vertical flows of material and symbolic resources in the analysis of organizations and contexts. Moreover, the causal imagery here is different: institutional and competitive processes do not simply affect organizations that stand outside context, nor do organizations efficiently and strategically seek out legitimacy and more material resources. This view of embeddedness shifts attention from action under constraint to the ways in which particular social structures of resources and meanings enable and authorize types of actors and activity. This perspective underscores the difficulty, in practice, of separating “economic” and “institutional” processes and suggests an alternative to conventional treatments that counterpose efficiency with institutional or embeddedness arguments. As Powell observes, “even the most competitive of activities is possible only because of micro- and macro-level institutional arrangements that insure the reproduction of economic exchange” (1991: 185).

Mechanisms

Zukin and DiMaggio (1990) highlight conceptions of embeddedness that refer to the contingent nature of economic action with respect to cognition, culture, social structure, and political institutions. Their arguments highlight mechanisms by which embeddedness affects organizations. In Zukin and DiMaggio’s (1990) work on the embeddedness of economic activity, these four mechanisms are described in terms of how they reduce or attenuate the possibility and practice of (economically) rational activity. We develop their discussion and extend their efforts in light of recent work in organizations, strategy, and management, to shift the focus from economic activity, *per se*, to concerns with organization and management.

Structural mechanisms. A dominant stream of embeddedness research follows the convention of modern economic sociology. The early statements by Granovetter (1985) provide two important shapings to the general usage of the term: (1) a conceptualization of social structure primarily in terms of inter-actor ties and direct relationships; and (2) more generally, embeddedness is treated as a constraint, which at one level organizes economic activity, and at another introduces social factors into the workings of market activity.

The dominant structural tradition focuses on inter-actor ties—the linkages between social actors (both firms and individuals), which comprise a wide variety of social network arrangements. The inter-actor ties approach provides a well-

developed set of theoretical constructs and wide-ranging empirical studies that develop the argument for and mechanisms by which intentional, often-transaction-based ties form, persist, and affect the internal and/or external structures of firms or other organizational actors. Mizruchi's (1989, 1992) work on corporate political behavior demonstrates strong empirical effects of social structure on firm behavior. These early studies established empirical direction for the study of structural effects. With the advance of sophisticated methodological techniques and more recent theoretical developments, the study of social networks has played a central role in consolidating and focusing contemporary approaches to organizational embeddedness.

Our review of the literature on interorganizational relations and networks is schematic in order to highlight the implications of research on inter-actor ties for the study of organizational embeddedness. (For recent detailed reviews of work on inter-actor ties see Galaskiewicz & Zaheer, 1999; Gulati, 1998; Monge & Contractor, *in press*; Podolny & Page, 1998; Powell & Smith-Doerr, 1994). From an embeddedness perspective, inter-actor ties reside within and span across network boundaries. Economic activity does not occur in a social vacuum, but rather is nested in patterns of economic and/or social relationships. In short, economic activity is both channeled and bounded by existing inter-actor ties. The boundaries around these ties and resultant networks serve to constrain, as well as provide opportunities for interconnected actors.

Following Granovetter (1985) and other open systems approaches to organizations, several important research streams have emerged to define the literature on inter-actor embeddedness.¹ First, there has been a focus on the role of repeated transactions with the same parties (Gulati, 1995a). Second, there is a body of work that focuses on the content of inter-actor ties. This work examines the sources and nature of interdependence and is closely linked to the social or relational embeddedness arguments (see for example, Auster, 1994, for a review). This literature primarily addresses the development and role of strong, cohesive relations (Gulati, 1998). Recent studies by Uzzi (1996, 1997) work with key assumptions of these arguments to consider variations in the sources and consequences of embeddedness, between asymmetric actors in an industry, and to examine more directly the socio-cognitive aspects of trust, judgment, and discretion as they inflect structural linkages.

Finally, the third and dominant sub-stream focuses on the structure of ties. This work focuses on the position occupied by an actor in the network. Research in this area has traditionally examined how the immediate social structure of inter-actor ties facilitates, constrains, and/or shapes the flow of economic activity and information. The arguments here emphasize how position affects both action and opportunities of an organizational actor (Burt, 1992; Uzzi, 1996, 1997), as well as outcomes (performance and otherwise). Podolny (1993, 1994) re-introduced conceptions of status as signal operationalized via standard industry markers to argue that position in an industry status hierarchy both recapitulates current industry stratification and is linked to the type and quantity of deals an investment bank is involved in. In addition, recent work extends this to network effects on the

diffusion of practices and innovation (Davis, 1991; Davis & Greve, 1997), and the process of brokering and innovation (Hargadon & Sutton, 1997).

For example, Davis (1991) found that diffusion occurred through direct interlock contacts, which supports the argument that social structure often acts as an important determinant of behavior that is considered to be entirely economic in nature. In short, recent arguments extend the basic concern with position in social structure to incorporate task structures, status structures, as well as formal and informal communication structures as the relevant frame of reference. This work suggests how varied dimensions of social structure may interact to shape basic features of embeddedness and their expression (i.e., sources, mechanisms by which embeddedness matters, and kinds of outcomes).

In light of the complexity, uncertainty, and ambiguity that behavioral studies of organizations document, a focus on embeddedness motivates attention to issues beyond the simple presence of ties. Recent work pioneers the importance of the wider network structure and pattern, interdependence and power, as well as economic forces in understanding embeddedness (Gulati, 1998). This work complements renewed concern with the social psychology and substantive content of network ties (Baron & Pfeffer, 1994; Podolny & Baron, 1997). Social networks may facilitate interfirm exchange, but “social networks per se do not have content and as such do not entail interests, values, motives, beliefs” and without content, “it will be impossible to explain what kinds of social relations have what kind of effect on the behavior of organizations and individuals (Friedland & Alford, 1991: 252). Hence, understanding these elements is essential for explanation and for practice—so that managers can take an active role in the management of interactor ties and development of collaborative capabilities that recognize both opportunities and costs in embedded relations (Uzzi, 1996).

Cognitive mechanisms. Research on cognitive embeddedness encompasses varied streams that focus on the sources and consequences of cognition at multiple levels of analysis. In various ways, the concern here is with how symbolic representations and frameworks of meaning affect individual and corporate actors as they interpret and make sense of their world. Several research streams emphasize cognitive constraints to standard “rational” action, while other work foregrounds alternatives to this view.

One approach to cognitive embeddedness emphasizes the limits that both human and corporate actors face in achieving the aspiration of rationality as in neoclassical economics. In this sense, cognitive embeddedness is concerned with the ways in which “structured regularities of mental processes limit the exercise of economic reasoning (Zukin & DiMaggio, 1990: 15–16). Researchers have identified commonly used decision-making heuristics that tend to frustrate individual attempts at rationality (Kahneman & Tversky, 1973; Nisbett & Ross, 1980). Although the bureaucratic structure of organizations often minimizes some of the decision-making biases to which individuals succumb (Weber, 1947), the same biases that characterize individual decision-making processes are also present in collective decision-making processes. Zajac and Bazerman (1991) identify a number of blind spots in industry and competitor analysis that derive from either faulty logic or the use of inappropriate decision heuristics. For

example, research on the winner's curse demonstrates that there is a tendency for decision-makers to fail to adequately consider their opponents' contingent decisions. They suggest that "under asymmetric information, competitive actors systematically fall prey to a winner's curse (i.e., they consistently, and voluntarily, enter into loss-making purchases)" (1991: 40). In addition, they argue that other sources of bias creep into organizational decision-making in the form of irrational escalation of commitment, overconfidence in judgment and in the use of limited perspectives and frames (1991: 42–43).

In addition to the view of cognitive mechanisms as limits to individual rationality, another approach to cognitive embeddedness focuses on how wider social cognitions embodied in authoritative category and classification systems shape organizational and managerial action (Walsh, 1995). This provides a direct link to recent, fruitful studies in the organizations and managerial cognition literature (Peteraf & Shanley, 1997; Reger & Huff, 1993). Here, research moves away from documenting cognitive limits, to trace out the sources and effects of organization identity (Dutton & Dukerich, 1991), how managers conceive of competition (Lant & Baum, 1995), and how strategic issue definition and operating practices are based in available industry conceptions of control (Porac, Thomas, Wilson, Paton, & Kanfer, 1995); these conceptions of control are moored in industry macrocultures, in historical functional sources (Fligstein, 1991) or in the experiences of founders and top executives (Boeker, 1989; Burton, Baron, & Hannan, 1998; Kraatz & Moore, 1998).

Dutton and Dukerich's (1991) work on the Port Authority of New York found that many of the attitudes and actions of both administrators and employees of the Authority were the result of moral, emotional, and/or aesthetic concerns. The Dutton and Dukerich study represents a valuable look at how normative and affective factors can shape organizational strategy. The work of Porac et al. (1995) draws attention to the existence and strategic importance of collective or shared cognitive models of industry structure. Reger and Huff (1993) also suggest that the emergence and maintenance of cognitively-based strategic groups as localized social structures can be attributed to the fact that these structures serve to simplify what would otherwise be an incomprehensibly complex information set.

Much current work acknowledges the role of macro cognitive elements and constructions (Abrahamson & Fombrun, 1994; Mohr, 1998; Phillips, 1994; Porac et al., 1995; Van de Ven & Garud, 1993; Ventresca & Porac, 1999). This work departs from views that treat cognition as originating "inside" the head of (individual) actors. Instead, these studies treat cognition as social and collective large-scale processes of classification and categorization, or giving of public accounts that support and constitute meaningful organizational activity. Karnoe and Jorgensen (in press) link structuration theory and the embeddedness of local knowledge structures to explicate aspects of the more structural business systems perspective.

Cultural mechanisms. Cultural embeddedness most often refers to the ways shared understandings and meanings come to give form to organization activity, structures, and process. This includes the collective understandings that

shape organizational strategies and goals, ideologies that prescribe conceptions of the means and ends of individual action, and rules systems (including law) that categorize organizational actors and systems of organizational control. Recent research on ideologies of markets, industry logics, and cultures of production (Thornton & Ocasio, *in press*), belief systems about management and managerial work, complement and could be usefully linked to organizational culture studies.

Research studies of culturally embedded models of authority and identity (Kurowski, 1998; Martin, Knopoff, & Beckman, 1998), and control, hierarchy, and expertise (Guillén, 1994, 1997) refocus on the ways that wider ideologies and more grounded cultural practices shape imaginable or authorized organizational policies. Stark (1996) examines legitimation of a new order in postsocialist Hungary. Hoffman and Ventresca (1999) study how cultural and institutional processes delimit apparent tradeoffs in environmental policy arenas that mitigate mixed-motive solutions. These studies yield alternatives to structural and political explanations for macro variations in the prevalence and use of such organizational components as worker participation and modern quality practices (Abrahamson, 1997; Cole, 1985; Zbaracki, 1998) on factors that foster or inhibit practical strategies of change and innovation (Hargadon & Sutton, 1997), and for the micro-dynamics of negotiations in cross- or same-cultural contexts (Adair et al., 1998; Brett & Okamura, 1998).

Two views of culture are present in these research streams, one anchored in conceptions of culture as norms and values, another that treats belief systems and logics in ways that overlap with cognitive mechanisms of rules and schemas (Meyer, Boli, & Thomas, 1987). Too frequently, cultural embeddedness is treated only as the effects of “national cultures”—a conception that is at odds with current conceptions of culture as rules and practices (Meyer, Boli, & Thomas, 1987; Whittington, 1992) and that presents culture only as an abstract or whole, rather than as an empirically accessible construct. Meyer and colleagues focus upon both patterns of activity and the units involved in them (individuals or other corporate and collective actors). They concentrate on the broad patterning of social structures and activity around general rules, defining institutions as “cultural rules giving collective meaning and value to particular entities and activities bound up into larger schemes ...” Durable cultural rules “define the meaning and identity of the individual, the purposes ... of organizations, professions, interest groups, and states ...,” and the patterns of economic and cultural activity depicted as relevant and appropriate for each kind of actor (1987: 12–13). This work incorporates the familiar issue of constraint, but also includes emphasis on the ways that rule systems enable action.

DiMaggio (1994) provides a working analytic distinction between forms of culture that are characteristically constitutive (categories, scripts, conceptions of agency) and forms that are predominantly regulative (norms, values, routines). In the former, culture provides the categories and understandings that enable us to engage in economic and social action; in the latter, culture provides norms and conventions that constrain action. The view of culture as values that suffuse other aspects of belief, intention, and collective life is much contested by the concept of

culture as complex rule-like structures that constitute resources that can be put to strategic use (DiMaggio, 1997: 264–265).

In some research streams, strategic adaptation of organizations to their respective cultural environments is often assumed to be a largely rational process. In this respect, the principle difference between the classical economic approach and embeddedness research lies in the scope of motivational considerations. Economists are predisposed to simplify analysis by focusing on a relatively narrow set of determinants to the exclusion of cultural factors, while embeddedness researchers focus on highlighting important omissions often produced by economics' narrow motivational stance. Oliver (1991) develops an alternative behavioral argument by specifying a range of strategic responses to institutional processes. Goodstein's (1994) study on employer involvement in work-family issues notes that organizational acquiescence to cultural or institutional influences may be a voluntary choice subject to rational decision-making processes. Given this possibility, it is clear that cultural factors must be taken into account if the strategic actions of organizations are to be sufficiently understood. For example, in a study of the impact of nationalism on the strategic behavior of Finnish newspapers, Dacin (1997) found that broad-based socio-cultural norms affect the distribution of organizational characteristics over time. This work demonstrates that the presence of institutional pressures was more important in determining the adoption of institutionally prescribed characteristics than market forces during the period of Finnish nationalism. More recently, Oliver (1996) argues strongly for institutional embeddedness as a constraint or impediment to organizational action. This position is provocative and has generated responses about the enabling dimensions of embeddedness (Powell, 1996b).

Political mechanisms. How do societal struggles for power and the distribution of resources and opportunities shape organizations, interorganizational relationships, and organization strategies and outcomes? And, how do these organizational factors shape the politics of distribution? A principle contribution of political embeddedness has been to draw further attention to how economic exchange is shaped by differences in power, and among organizational actors between these actors and social institutions, such as the legal system, the tax code, or, generally, state actors and class politics (Zukin & DiMaggio, 1990).

DiMaggio (1994) provides a working analytic distinction between forms of culture that are characteristically constitutive (categories, scripts, conceptions of agency, notions of technique) and forms that are predominantly regulative (norms, values, routines). In the former, culture provides the categories and understandings that enable us to engage in economic action. In the latter, culture provides the norms and conventions that constrain action. By altering the context in which corporate actors interact, political factors can potentially have an enormous impact on individual corporations and the industries that these organizations comprise (Barnett & Carroll, 1993; Dobbin, 1995; Mintz & Schwartz, 1990). Comparative studies of government structures and action provide opportunities to refine analysis of political embeddedness and to engage embeddedness perspectives in dialogue with other theories of organization.

Jacobson et al. (1993) argue that recognizing that private economic transactions are embedded in political contexts reveals additional sources of transactions costs typically invisible in the traditional relationship between supplier and buyer. They study three cases of home government interventions in U.S. multinational enterprise transactions in the former Soviet Union and find that government sanctions are imposed on exporting relations first and removed last. Moreover, they find that MNEs make their overseas subsidiaries more independent of U.S. technology and supplies—in effect, “insulating international transactions...” to the goal of reducing U.S. extraterritorial interventions in foreign subsidiaries’ private economic transactions.

A common conception of embeddedness links regulatory structures, ties to political authorities, and similar institutional patterns of political linkage to organizational opportunities and outcomes (Baum & Oliver, 1992). Another stream of research presents institutions as conventions or as efficient solutions to problems of coordination (Nee & Ingram, 1998). But, embedding context also promotes distinct forms and patterns of activity. Where much research on institutions argues that these are fundamental constraints, several studies show how political rules, institutions, and networks construct and constitute the grounds of organizational and industry action (McGuire & Granovetter, 1999; Scott & Meyer, 1994). This interplay is evident in the status struggles and political process (contending) models of organizational action, social movement frames, and organizational forms. For example, Davis and Thompson’s (1994) study on social movements in the shareholder arena and Rao’s (1998a) study of consumer watchdogs both focus on the embeddedness of rival logics in shaping forms and routines.

Dobbin and colleagues present a political-cultural perspective on the sources of economic rationality in industrial logics to show how policy shapes competition by “establish[ing] the ground rules of economic life, thereby creating markets” (Dobbin & Dowd, 1997: 523). The argument is this: states, via public policy and more characteristic industrial policy styles, structure competitive environments by defining the legal form of corporations, the social organization of finance and access to capital, and the rules governing competition (Dowd & Dobbin, 1997). Studies of industrial policy styles provide a similar account of persisting political cultures, and their expression is distinctive industrial cultures and policy paradigms (Dobbin, 1994, 1995).

Here, political embeddedness connects with earlier cultural and cognitive mechanisms working at both micro and macro levels—meaning systems, mental models and categorization processes, to ideologies and moral sentiments and cultural logics (Haveman & Rao, 1997; Ventresca & Washington, 1998). Recall that these logics are “symbolically grounded, organizationally structured, politically defined and technical and materially constrained” (Friedland & Alford, 1991: 248–249). Moreover, powerful social actors shape organizational outcomes (Hirsch, 1975). Evidence of this is provided by DiMaggio’s (1991) account of the role of the Carnegie Corporation in shaping the form and function of art museums between 1920 and 1940 and Brint and Karabel’s (1991) discussion of the role of leading four-year universities, business interests and government bodies in trans-

forming two-year community colleges from primarily liberal arts schools to vocational training institutions.

Political and cultural embeddedness mechanisms also come together in studies that examine stratification in industries and organizational fields and the effect of embeddedness on differential opportunities, constraints, and outcomes for organizations. Romo and Schwartz (1995) present a sociological analysis of regional political economies, specifically examining industrial migration in New York State. They argue that manufacturing establishments are “structurally embedded in regional production cultures that create imperatives to remain in the region, even if the local area has high costs compared to other viable sites.” Their findings support the argument that migration occurs only when core establishments—those central in the regional exchange network—face outside competition that make lower costs elsewhere an attractive alternative (Romo & Schwartz, 1995: 874 and generally 874–907). From their study of GM in the context of factory migration from Canada and the U.S. to Mexico in the early 1980s, they find evidence that “. . . repeated transfers of information, services, and personnel foster mutual adjustments and create a web of economic interdependencies that facilitate the development of new manufacturing strategies . . . The health of these economies therefore ultimately rests on the myriad non-market phenomena embedded in local production cultures” (Romo & Schwartz, 1995: 903).

Although the preponderance of political embeddedness research has focused on external pressures, it should be noted that organization action that does not conform to the economic ideal may be the result of internal, as well as external political factors (Pfeffer, 1981). By directing attention to these issues, political embeddedness makes less plausible the neoclassical assumptions of atomist and voluntary action (Pfeffer, 1997). This ideal of strictly voluntary exchange is contradicted by ethnographic studies, demonstrating that social control, particularly in the workplace, is often achieved by more complex and less virtuous methods (Burawoy, 1979; Graham, 1995; Kunda, 1992). Internal jostling for position, status, and prestige by managers of the organization may also serve to effectively constrain and/or comprise efforts at organization rationality. Research on top management teams (TMTs) has examined the relative power of corporate CEOs and their boards of directors (Finkelstein & Hambrick, 1996), a useful starting point for research on these issues.

Outcomes

In light of our review of the macro sources and key mechanisms, we now turn to the outcomes of embeddedness. Current conceptions of outcomes of embeddedness research tend to focus mostly on effects that other open systems views also emphasize: survival (Baum & Oliver, 1991, 1992); interorganizational relations (Gulati, 1998; Oliver, 1990); as well as the relative benefits for organizations with optimal tie configurations (Uzzi, 1996). The research streams we discuss above add further novel outcomes of interest: features of organizational change and its mechanisms, patterns of interorganizational relations that vary by polity (Hamilton & Biggart, 1988) and with the interaction of various embedding mechanisms (Romo & Schwartz, 1995); definitions of available or imaginable

organizational strategies and political responses (Oliver, 1997); and the institutional production and authorization of organizations, forms, and strategies themselves (Jepperson & Meyer, 1991). We devote the remainder of our discussion on outcomes to focus on two important sets of consequences: institutional outcomes and outcomes of governance and allocation.

Institutional outcomes. Recent insights at the interface of strategy and institutional arguments underscores the ways normative contexts affect firm actions to recognize, as well as appropriate, sources of sustainable competitive advantage (Oliver, 1997). Much work at this interface begins with these same assumptions, considering institutional constraints on action, but is relatively silent with regard to the institutional structuring of competitive markets and more generally industry fields. But how do rules get formed (as in the case of entrepreneurial ventures) and change (as in the case of market dislocations)? Why do rules of competition vary from polity to polity (as in the case of global markets with distinct national models of production), and with what institutional effects on issues of sustainable competitive advantage? Where do normative and legal institutions that regulate market activity come from? Why do they take the forms they do? Why do such norms vary cross-nationally?

For example, U.S. firms in China do not necessarily fail because they have inferior strategies, but because the Chinese polity requires the building of infrastructure and political ties to accomplish a new venture. The social and cultural emphasis of institutional arguments is directly interested in these processes of contest and struggle that dictate the form of these rules (Fligstein, 1991, 1996). Embeddedness arguments can help specify the sources of the rules, how they get set, and guidance about how to set rules that advantage some organizational actors.²

Outcomes of governance and allocation. As we note in the discussion of outcomes above, researchers working in the organizations and embeddedness area are developing the logic of embeddedness arguments to reconsider outcomes of interest, both as innovative dependent variables and also as familiar dependent variables, explained with new mechanisms. Recent work on governance issues recognizes that social ties imbue economic actions with complex meaning, making the apparently clear distinctions between “instrumental” or calculative actions and forms of trust-authorized action less self-evident (Fukuyama, 1995; Putnam, 1993). This work suggests the need to rethink this basic distinction between calculative and other forms of transactions; moreover, where comparative studies (Jacobson et al., 1993) fill out the recognition of transactions costs or improve the “full-costing” of transactions, this research provokes a rethinking of standard conceptions of governance arrangements (DiMaggio & Louch, 1998; Fligstein, 1996; Uzzi & Gillespie, 1999b). Uzzi (1999b) finds that embeddedness reduces the need to erect formal governance mechanisms, which increases resources available for other productive uses, abjuring the powerful language of the “costs” of monitoring, in favor of fresh conceptualization—and language—that recognizes the “benefits” of relationships.

With regard to issues of price formation and allocation, researchers at the cusp of organization and economic sociology are developing research that uses

arguments featuring structural and cognitive embeddedness mechanisms to develop alternative accounts of price formation and allocation (Abolafia, 1996; Baker, 1984, 1990; Podolny, 1993; Uzzi, 1996; Uzzi & Gillespie, 1999a). These studies begin from organization- and status-informed conceptions of market domains, to argue that status structures and social relations “guarantee,” signal, and value performance. These outcomes are distinct, in addition to the standard arguments about how structural ties allocate information and control opportunities to privileged brokers (Burt, 1992). This extension of the information arguments, coupled with evidence from field work and large-scale quantitative data analysis, open up lines of theory about prices as social facts and about price formation processes that restore organizational actors and organizational activity as “market” mechanisms (Uzzi, 1999).

In light of these developments, more conceptual attention is warranted to outcomes, both at the firm-level, but also in terms of collective strategies and mobilization, variation in the social organization of industries and across context, the emergence of new forms of organization and newly authorized (or de-authorized) actors, variations in patterns or rate of entrepreneurial activity, and the like. These embrace a wider view of why embeddedness “matters” and forward a research agenda that gives attention to issues of outcomes and performance understood in more social, political, cultural, cognitive, and institutional terms, rather than relying on outcomes or performance theorized only with tools of modern finance or competitive analysis.

Strategy and Practical Action

Baum and Dutton (1996) suggest that strategy take into account the degree to which identity and strategy represent important contexts for the individual within the organization (e.g., Ashforth & Mael, 1996; Zajac, 1996), the degree to which a firm’s strategy is shaped by its embeddedness in industrial, institutional, historical and legal aspects of its external environment (e.g., Miller, 1996; Oliver, 1996), and the role of interorganizational networks, organizational fields, and other interorganizational interaction patterns in shaping organizational strategy (e.g., Amburgey, Dacin, & Singh, 1996).

Much prevailing research on strategic management involves the search for sources of sustainable competitive advantage. However, current theory and research on organizations and strategy neglects to theorize or give institutional context/foundation to competition (Oliver, 1991). Instead, these arguments treat competition as “natural,” that is, with little attention to the institutional rules that order modern market economies, shape industry development, and support the dynamics of markets (Dowd & Dobbin, 1997; Swedberg, 1994). While resource-based perspectives (Barney, 1991) argue that the acquisition of rare, inimitable resources provides the underlying basis for competitive action, much more effort is needed toward understanding and managing different mechanisms of embeddedness. For example, in the case of inter-actor ties, managers need to acquire, as well as build, collaborative capabilities to realize relational rents (Dyer & Singh, 1998).

Jacobson et al. (1993) also provide specific insights for policy makers and managers. For example, their case studies illustrate that firms chose organizational structures that turned out to be less efficient than alternative structural arrangements, chosen because decision makers did not recognize additional transaction costs that accrued from indirect political and social factors. In this way, recognition of political embeddedness alerts analysts and decision-makers to acknowledge and act on all sources of transaction costs, including those that stem from the actions of political actors, rather than focus only on costs specific to the dyadic relation. With knowledge of costs arising from the political and social context that changes the comparative costs of alternative arrangements, policy makers at all levels can formulate more appropriate evaluation of full impact of government intervention, as well as appropriate firm responses (Jacobson et al., 1993: 453–475).

It is important to consider the duality of embeddedness in addressing its implications for strategy and practical action. While embeddedness can be regarded as a “constraint” (Oliver, 1996), the strategic implications of embeddedness also involve the creation of distinctive opportunity sets. Embeddedness as “opportunity” is shaped in at least three important ways. First, embeddedness constitutes firm activity, but at the same time is constituted and redefined by the behavior of strategic actors. Therefore, the relationship between an organization and its embedded context is reciprocal in nature. Second, cultural and cognitive mechanisms serve to define the range of possible organizational actions across a variety of contexts and levels of analysis. Finally, embeddedness serves as an important means of stratification by opening windows of opportunity for some, while erecting barriers for entry, mobility, and action for others (Powell & Smith-Doerr, 1994; Stark, 1996). This is especially relevant in the formation and redefinition of networks and strategic groups.

New Directions

In this section, we introduce a number of directions that highlight current, as well as identify future, agendas for embeddedness research. We begin with an attempt to extend the inter-actor tradition by focusing on issues of reciprocal embeddedness, the management of inter-actor ties, the role of social capital, as well as provide directions for future work on the complexity, strength, and intensity of embeddedness. Next, we consider linkages between and among different forms of embeddedness and cross-level issues in embeddedness research. We focus on recent comparative/institutional work to highlight the ways in which structural, political, cognitive, and cultural embeddedness simultaneously interact to shape economies, markets and industries, and organizational forms. We then develop other forms of embeddedness such as “temporal” embeddedness, as well as pay attention to aspects of disembeddedness—its sources, mechanisms, and outcomes. This is a relatively under-developed set of issues at the edges of an embeddedness approach. We end with a discussion of methodological issues that examine methodological traditions, emergent methods, and issues that address the measurement of embeddedness.

Extensions in the Inter-Actor Tie Tradition

As we discuss above in the section on structural mechanisms, work in the inter-actor tie tradition has tended to dominate the research agenda of organizational embeddedness. In the following paragraphs, we highlight recent critiques and point to several extensions and new directions for this literature.

Content of ties. Powell and Smith-Doerr (1994: 391) suggest the need to examine “both the form and content” of network ties. Podolny and Baron (1997) have made some progress in this area by studying both the structure and content of ties in an examination of employee mobility. Networks of ties among individuals are critical in accounting for the formation of alliances. Mintzberg (1979) has demonstrated that even the most formal of organizations have an “informal” nature based on friendship, personal ties, and strategically negotiated intra-firm coalitions and ties.

Reciprocal embeddedness. Little has been done to examine reciprocal embeddedness—the impact of individuals and firms in constituting and re-shaping network dimensions and the impact of networks in the creation of new ties. The active process of network building has rarely been studied in the management literature. Gulati (1998: 304) notes the ability of firms to create and shape both embedded opportunities and constraints. There is also some work in the mobilization of social movements that may shed some insight of this issue [see, for example, Davis and Greve (1997) on elite networks; McAdam (1988) on civil rights; Strang and Soule (1997) on anti-apartheid movements]. To date, much of the focus in network research has been on the firm level of analysis. We need to know much more about the role of individuals in the creation and management of linkages, as well as group versus group interaction or studies that examine network constitution and/or re-constitution. Rao, Davis, and Ward (1999) study the migration of firms from NASDAQ to the NYSE and examine the issue of constitution and re-constitution. They found that strong ties to other NASDAQ firms reduce migration, whereas strong ties to NYSE firms increase migration. Szyliowicz and Nelson (1998) argue similarly that technology redefines linkages among stock exchanges, finding that previously autonomous organizations become an “industry”—they become aware, react to, and respond to each other, becoming “competitors.”

Interrelationships across time and space. To what extent do inter-actor ties shape industry norms? To what extent does network membership enhance/decrease the position of relatively weaker players? To date, attention has been devoted to examining how prior ties lead to repeated transactions (Gulati, 1995a). There also needs to be a focus on how current transactions lead to future ties. The role of prior and existing ties on network formation would also be interesting. Firms could potentially leverage the partnerships of their prior or current relationships to form alliance networks. In this way, a firm’s set of past and current relationships serves to provide options for future interaction. In addition, recent theory on socio-cognitive bases of firm and managerial action suggests that tie-formation may also involve long-term assessments of strategic needs or aspirations; here, tie formation is intentional and anticipatory. It is these kinds of

studies that begin to distinguish between inter-actor tie approaches and other conceptions of embeddedness. As above, embeddedness is neither reducible to ties nor only about instrumental linkages, but rather embeddedness implies more durable and constitutive aspects of social structure.

Social capital. More recently, a stream of research has looked at the question of inter-actor ties formation from a different perspective, focusing on the structural dimensions of networks and social systems (Burt, 1982; White, 1981), as well as a more recent focus on content and process of exchange relations (Eisenhardt & Schoonhoven, 1996; Gulati, 1995a, 1995b; Uzzi, 1996, 1997; Uzzi & Gillespie, 1999a, 1999b). This research suggests that the social capital (including trust) available to firms is a function of the nature of their embeddedness in open or closed networks (Burt, 1997; Coleman, 1990; Raub & Weesie, 1990). It has also highlighted the importance of structural holes in organizational networks, as well as rewards that can accrue to firms acting as brokers between more densely connected areas of the network (Burt, 1992). In an examination of the constitutive effects of social structure, Uzzi and Gillespie (1999a, 1999b) find that social capital impacts the access to and pricing of capital.

Capturing the complexity, strength, and intensity of embeddedness. Firms are involved in multiplex ties—multiple forms of cooperation, each with multiple objectives and benefits (Powell & Smith-Doerr, 1994). That is, the content of their objectives and benefits is layered upon one another. The idea of multiplexity of organizational embeddedness focuses attention away from studies of constraint on unit organization actors to give greater consideration to the multi-vocal features of social structures that comprise the embedding context. For example, the embedded nature of a single linkage may be multidimensional and embody many forms of embeddedness, such as economic transaction, information exchange, and social relationships. Further, firms may belong to multiple networks with varying objectives, and thus, there is a need to consider the impact of network overlap on member behavior and outcomes (Granovetter, 1973).

Another set of related issues has to do with the strength or intensity of embeddedness. The area of inter-actor ties probably holds the greatest promise for exploring this issue. Some interesting issues about intensity include: Are firms with a greater number of ties more strongly embedded than firms with a lower number of ties? To what extent does density of ties impact the intensity or strength with which firms experience the constraints and opportunities of embeddedness? A related issue has to do with the management of ties and firm thresholds for handling different intensities of embeddedness. This entails the ability to manage numerous partners and different forms of ties. Miller argues that intensity, extensiveness, and continuity of interactions with other organizational actors and elements in the environment condition the impact of embeddedness. Of note is his conception of extensiveness, which involves attention to the heterogeneity of interaction with external actors, yielding the proposition that higher heterogeneity reduces impact of embeddedness (Miller, 1996: 288).

The management of the intensity of structural embeddedness has important strategic and practical implications. Depending on their relational capabilities derived from prior experience via internal or external ties, firms have different

thresholds for this task. Relational thresholds vary on a number of different dimensions, including number of partners, number of types of ties, and variation by location. While the density of embedded ties can be managed to a point, not all firms have the same capabilities to do so. Some firms can manage ties better than others and, therefore, it's not simply the existence of ties that makes a difference, but the ability to manage and leverage ties that creates value for firms.

These emerging research questions are grounded in the central concerns of the inter-actor ties approach. At the same time, they begin to move theory and empirical studies away from the historical concern with purely market activity and with constraints on action in markets. They focus in on interactions which have other than instrumental objectives, governance arrangements that are not disciplined by a market, and recognize multiple aspects of embeddedness. In addition, they begin to reconnect with longer behavioral traditions in the study of organizations and management.

Linkages/Cross-Level Mechanisms of Embeddedness

We argued earlier that the four mechanisms proposed by Zukin and DiMaggio (1990) are not necessarily linked to a particular level of analysis. In the following section, we address linkages across the different embeddedness mechanisms, as well as across different levels of analysis. We recognize the simultaneous existence and interplay among different forms of embeddedness and suggest how they might simultaneously impact organizational action.

Cognition. While cognitive embeddedness may involve the cognitions and beliefs of an individual actor, it is also relevant in understanding the public and collective cognitions evident in formal organizational cultures or in industry recipes. In short, collective and social actors (organizations, industries, strategic groups) may also be cognitively embedded, expressed via routines, technological systems, and other artifacts that carry cognition. In addition, the presence of multiple mechanisms of embeddedness is perhaps a more realistic conception of the context that organizations and managers face (Dacin, 1997; Reddy & Rao, 1990). How do such multiple contexts interact to shape both opportunity and constraint? What features of the immediate organization or the wider economic and social-political system heighten the force of one kind of embeddedness or attenuate the effects of other kinds?

Culture and collective cognition. Work in managerial and organizational cognition and in more cultural variants of economic sociology underscore the difficulties in drawing distinctions between aspects of cognitive and cultural embeddedness (DiMaggio, 1997). As we discuss above, cognitive embeddedness involves mechanisms such as decision heuristics, but also extends to collective cognition. This includes the common decision-making biases but also the socio-structural features of affective and normative factors, as well as consideration of impulsive or unreflective behavior. A natural, continuing direction for cognitive embeddedness research, therefore, would be to incorporate many of the insights expressed in phenomenology and ethnomethodological and institutionalist sociology (Berger & Luckmann, 1966; Brown, 1978; Meyer & Rowan, 1977). To a significant degree, the constructed world of each social actor is a cultural product,

but it is also a private and negotiated construction that ultimately stems from individual efforts to comprehend and participate in a complex social world. Basic aspects of social interaction are a complex mix of psychological and ontological motives (Collins, 1981; Garfinkel, 1967; Giddens, 1979, 1984; Goffman, 1967).

Nesting. Several recent studies at the interface of organizational theory, strategy, and economic sociology provide a “nested” view of embeddedness (Abolafia, 1996). These present three levels—socio-cultural foundations, institutional arrangements, and structural embeddedness. Elements of this approach are evident in research on industry infrastructures (Van de Ven & Garud, 1993), field approaches in studies of organizations, institutions, and change (Scott 1994a; Scott, Ruef, Mendel, & Caronna, 1999; Uzzi, 1996), co-evolutionary perspectives in technology studies (Tushman & Murmann, 1998) on industry macro-cultures (Abrahamson & Fombrun, 1994; Gordon, 1991), and work on market and industry cognition (Porac & Rosa, 1996). The theoretical work that develops the kinds of linkages, the direction of effects, and the implications of such nesting are very preliminary; empirical studies tend to speak to one or another cross-level process.

Further, studies that examine the linkages between and among the different sources and mechanisms of embeddedness are few, either across levels or combining levels and sources/mechanisms. In fact, there is relatively little theory to guide us in designing such studies. Recent work by institutional and ecological theorists develops field approaches that incorporate attention to interplay of multiple mechanisms of embeddedness over long historical periods (Scott et al., 1999). Similarly, studies in the ecological tradition have broken conceptual and methodological ground in disaggregating organizational processes across multiple levels (Amburgey, Kelly, & Barnett, 1993; Carroll & Wade, 1991), and recent efforts to formalize issues in the study of organizational forms incorporate attention to institutional, political, and cognitive mechanisms of embeddedness (Lewin, Long, & Carroll, 1999).

Arguments could be made as to how cultural processes impact the structure and character of the other three embeddedness categories. For example, cultural beliefs and norms at least partially determine the degree to which actions are considered as cognitively embedded. Similarly, the characteristics and patterns of social interaction, which are the source of structural embeddedness, are subject to overarching cultural factors, as are the legitimacy and authority of institutions that govern or control different aspects of economic activity and are central to the concept of political embeddedness. The challenge here is to distinguish cultural from cognitive, but also cultural from political. For example, we may argue for reserving “political” embeddedness for more direct struggles and distribution of resources and authority among formal political institutions, allowing “cultural embeddedness” to include regimes and ideologies which themselves are expressed in particular political forms and models.

One body of work links cultural and structural embeddedness. Prior work has demonstrated strong linkages between organizational action and institutional infrastructure of a region, state, or society. It is not simply a story about locational differences, but the fact that these locations are infused with different social norms and practices (Dore, 1983; Romo & Schwartz, 1995). Relationships are embedded

in a broader set of socio-cultural forces that shape the nature of collective activity, individual organizational action, as well as shape the boundaries of opportunity sets and constraints. Immigrant networks, for example, create opportunities for some, while closing off network access to others (Portes & Sensenbrenner, 1993). Networks can also lead to inertia, leading network members to not look elsewhere for strategic solutions.

The impact of broader norms on the relational behavior of firms is not trivial. Some firms may actually be culturally disposed to seek out different kinds of ties. For example, in a recent study, Bartholomew and Dacin (1998) found that in the context of R & D alliances, U.S. and Japanese biotechnology firms engaged in roughly the same number of alliances. However, Japanese firms tend to engage in a markedly higher number of international versus domestic alliances. This is, in large part, due to differences in institutional infrastructure and national innovation systems that have led to different technological and partnering trajectories. Other studies examined the role of institutional context across national contexts and found that Korean firms had different strategic orientations and preferences for partners than U.S. counterparts (Dacin, Hitt, & Levitas, 1997; Hitt, Dacin, Tyler, & Park, 1997).

Research that recognizes this nesting of embeddedness but that starts with a more micro assumption regarding the role of heuristics that shape individual decision-making may be the basis for alternatives to standard economic rationality (Uzzi, in press). This work could contribute to the current interest in understanding the institutional and proximate sources of trust (Zucker, 1986), and the development of expertise (Abbott, 1988; Barley, 1996).

Temporal Embeddedness

We discuss above the importance of viewing sources, mechanisms, and outcomes of embeddedness in broad historical and comparative perspective and the recent contributions of historical/longitudinal studies of embeddedness. More attention to temporal embeddedness continues this work in situated interactions (Barley, 1988) and with attention to various forms of organizational control (Perlow, 1998). Conceptions and research on “garbage-can decision processes” argue directly for temporal order in streams of problems, solutions, participants, and choice opportunities as defining the behavioral reality of organizational decision processes. Similarly, recent work on group dynamics underscores the local temporal order that develops in and organizes group process—the “mid-term” features of group interaction (Gersick, 1988; 1994), as well as the notions of entrainment (Ancona & Chong, 1992; Lacey, Gruenfeld, & Ventresca, 1998) that envision social interaction as intertwined identity processes. More generally, the recent review by Hassard (1996) on time and organizations identifies several promising strands of research that highlight how temporal embeddedness channels and guides organizational action.

Another aspect of temporal embeddedness locates the evolution of activity over time. Path dependence arguments highlight the ways in which particular forms of embeddedness actually shape the very definition of efficiency in the context of wider network structures. Studies of path dependence and path creation

(Karnoe & Garud, in press) challenge the neoclassical assumptions with grounded historical studies of how organizational technologies take stable form and play a role in the collective definition of efficiencies. In their now classic form, path dependence arguments argue that contextual factors anchor and privilege technologies without direct attention to efficiency considerations; over time these technologies and the social worlds that form around them channel action (Arthur, 1989). Recent efforts to lose the determinist flavor of some path dependent arguments are evident in concerns with path creation and the contingent features of path dependent processes. This work echoes Granovetter's early critique of Polanyi and is a central emphasis of Zukin and DiMaggio's arguments (see Garud & Karnoe, 1999; McGuire & Granovetter, 1999).

Studying Disembeddedness

Polanyi (1944) makes brief but intriguing mention of disembedded economic activity. More recently, Giddens (1979, 1984) and other social theorists have developed arguments about the disembedding of economic and social activity. These arguments focus on shifts in the scale and sources of embeddedness, where distal embedding in wider global networks supplants and redefines the consequences of more proximate networks of the sort that we have discussed so far. Globalization is regarded as a disembedding process that strips individuals and firms from their local structures and allows for restructuring at a more global level.³ The issues here squarely support recent calls to develop more direct attention to the linkages between social structure and organization form, structure, and activity (Stern & Barley, 1996). Moreover, they underscore the need for attention to cross-levels analysis. In Giddens' formulation, disembedding involves both changes in material experience and attitude/perception. These have fruitful analogues in research on multinational corporations, on transnational flows of products and culture (Van Maanen, 1992), personnel, and patterns of organizational activity (Westney, 1987)—all of which feature attention to the process of disembedding and its subsequent re-embedding in new contexts, often with innovative effects. Much work has focused on the constitutive effects of embeddedness, but embeddedness essentially involves both connection and disconnection. The notion of disembeddedness may well rely on direct and instrumental or intentional action by organizational actors to step back and outside of institutional features of cognition, culture, politics, and the social structure of inter-actor relations.

Methodological Issues & Directions

Prevailing methodological traditions. The methodological focus of event history and network analysis techniques has captured the focus of researchers attempting to study embeddedness. Given the dominance of the research tradition on inter-actor ties, this area has made significantly more methodological progress than theoretical advances. Network analysis (Knoke & Kuklinski, 1982; Mizruchi & Galaskiewicz, 1993; Wasserman & Faust, 1994) and event history methodologies (Strang, 1991; Tuma & Hannan, 1984) have allowed researchers to study a wide variety of issues examining the social structures and consequences of

relational arrangements. These advances are motivated primarily within the context of the formation of ties, the persistence of ties, and other dependent variables that focus on origins and interim process and performance outcomes. However, little is known about how embeddedness in networks affords more proximate performance outcomes, such as firms' greater profitability, sustainable advantage in the marketplace, or enhanced social performance. Most network analyses of competitive advantage have almost always focused on design issues or on network structure (Madhavan, 1998). Recent extensions to event history methods (Blossfeld, Hamerle, & Mayer, 1989; Strang & Soule, 1997; Greve, Strang, & Tuma, 1995) make it possible to model embedded causal processes as social structural effects on outcomes of interest such as foundings, exits, time in state or duration, and time elapsed from key founding or imprinting events. Several recent empirical papers develop these opportunities (Davis & Greve, 1997).

Emergent methodologies. From the set of new directions we outline, it is clear that alternative methodological opportunities will be useful. There is renewed commitment to varieties of formalization, but with focus away from inter-actor ties and rather to the embeddedness of meanings and cultural content, and more generally with efforts to represent qualitative distinctions on their own terms. Mohr and Franzosi (1997), for example, compile pioneering empirical studies that make use of innovative content analysis and network techniques to map the contours of cultural structure.

Methodologies for examining the nested and cross-level issues identified above are emerging in the form of new comparative methods that utilize systematic qualitative comparisons (Ragin, 1987), as well as hierarchical linear models that provide opportunities to disentangle multi-level effects across units of observation. Much work presumes a particular direction of effects—from macro-cultures and social structures to organization-level effects and consequences. We note the value of more conceptual and empirical studies that track alternative directions in effects.

This work is historical and longitudinal by design and is able to identify and understand the ways the political and inter-actor relations embeddedness may redefine or reconfigure broader culture, ideology, and wider foundations of social structure (as in definitions of political regimes and state-market-kinship relationships). Clemens (1997), for example, uses comparative cases that vary features of political and institutional embeddedness to understand the variation and redefinition in opportunity structures facing social movements and political organizations. This suggests the need to focus attention to the variations of interdependence among these mechanisms and to work that distinguishes each form of embedding activity. Burawoy (1998) proposes the "extended case method" as an alternative, participant-intensive strategy for identifying and analyzing the situated nature of everyday activity in "extralocal and historical context" (1998: 4). This work also recalls the value of thorough descriptive work to understand the variety of mechanisms and nesting of embeddedness as complement to, and prior to, formalizing these phenomena.

Methodological innovations have also made it possible to analyze organization strategy and behavior in terms of temporal relations. These include attention

to order and sequence processes among key events, as well as recognition of variations in these patterns across context (Abbott, 1988). Analytic tools that extend the concern of March and Simon with simulation of temporal order to study empirically the pacing, conjuncture, and contingencies of events are also important (Brown & Eisenhardt, 1997). These link usefully to advances in the sequence analysis traditions and event history analysis we note above.

Research design. Schneiberg and Clemens (in press) review a range of research strategies and designs suggested by contextualist institutional arguments of change that focus on the margins of broadly settled domains of organizational activity: "... margins matter. We need to pay close attention to processes that unfold in the peripheries, interstices, and overlaps ... where authority structures are weak, where participants are exposed to multiple models or logics, and where, consequently, actors have the opportunities or the resources to experiment ..." (in press: 37). In addition, looking at cross-level research design will also reveal patterns of decoupling, blocked embeddedness, and the conditions for "disembedded" activity. In ways similar to the emerging stream of research around the dynamics of institutions (formation, erosion, transition among institutional logics and elements), cross-level studies will provide an empirical means to assess the relative "strength" of different types of embeddedness and the ways their interactions may, on one hand reinforce constraint but on the other, create opportunities for "disembedded" activity.

Measuring embeddedness. Another methodological issue is "How" and "Where" is embeddedness best measured? Conceptually and operationally, much research treats embeddedness as dichotomous, noting either its presence or absence. Promising new work must begin to grapple with issues of treating embeddedness as a continuous variable. It will be critical to focus attention to the nested and cross-level effects of embeddedness. First, as we suggest above, embeddedness may be the outcome of several mechanisms, working at different levels, cumulatively affecting organizational embeddedness. A related issue would be to explore whether the effects of the different types of embeddedness are additive or multiplicative. Do they moderate one another? Since a single link can contain the content of economic transactions, information exchange, and social relationships, a useful dilemma for future research hones in on efforts to measure the intensity or strength of embeddedness effects. According to Powell (1996b) it is likely that industries vary in their degree of embeddedness and future embeddedness research needs to attempt to capture this variation.

Conclusions

In short, what can students of organizations and management gain from embeddedness research? In this review, we show how studies of organizations and embeddedness: (1) support the trend towards relational theories and arguments; (2) provide opportunities to conceptualize and measure complex environments; (3) help to refocus research on the dynamic and on-going features of social activity patterns; (4) prompt us to reconsider central outcome and performance variables; and (5) require us to re-conceptualize competition as socially structured

Table 1. The Embeddedness of Organizations: Dialogue & Directions

Section	Subsection(s)	Literature	Main points
Overview	Definition & History	Polanyi, 1944; Wrong, 1961; Marsden, 1981; Granovetter, 1985; Martinelli & Smelser, 1990; Zukin & DiMaggio, 1990; Smelser & Swedberg, 1994; Barber, 1995; Baum & Dutton, 1996	Embeddedness has been historically defined as the antithesis of classical political economy. Economic activity is shaped by cognitive limitations and biases, culture, sociometric patterns, and authority relationships.
Research	Sources of embeddedness	Hughes, 1983; Hamilton & Biggart, 1988; Dobbin, 1994; Guillén, 1994; Hamilton, 1994; Fligstein, 1996; Herrigel, 1996; Biggart & Orrù, 1997; Biggart & Guillén, in press	Economy is a subset of broader institutional, cultural and political arrangements, and these broader social systems delineate, constitute, facilitate and constrain the emergence and practice of different industrial and market rationalities. Economic activity is organized through institutions that are part of broader political structures and cultural meaning systems.
	Mechanisms	Granovetter, 1985; Clegg, 1990; Zukin & DiMaggio, 1990; Baum & Dutton, 1996	The embeddedness of economic activity is manifested through cognitive, structural, cultural and political mechanisms.
	—structural	Mizruchi & Schwartz, 1987; Davis, 1991; Burt, 1992; Podolny, 1993, 1994; Powell & Smith-Doerr, 1996; Gulati, 1995a, 1995b, 1998; Uzzi, 1996, 1997; Davis & Greve, 1997; Podolny & Page, 1998; Galaskiewicz & Zaheer, in press	Inter-actor ties shape the form, structure and content of ongoing economic activity. Research has examined the role of repeated transactions, the content of inter-actor ties, and how network position affects both opportunity and action. Network structure has been shown to affect such phenomena as information flows, the diffusion of innovative work practices and technological transfer.
	—cognitive	Kahneman & Tversky, 1973; Tversky & Kahneman, 1974; Nisbett & Ross, 1980; Zukin & DiMaggio, 1990; Zajac & Bazerman, 1991; Dutton & Dukerich, 1991; Reger & Huff, 1993; Lant & Baum, 1995; Porac et al., 1995	Mental process patterns often fall short of the neoclassical ideal of economic rationality. Commonly-used decision-making heuristics result in consistent decision biases. At the group level, shared schema, cognitive frames, and social cognitions also serve to cloud collective attempts at rationality.
	—cultural	Meyer & Rowan, 1978; Guillén, 1994, 1997; Goodstein, 1994; DiMaggio, 1994; Kunda, 1992; Phillips, 1994; Abrahamson, 1997; Dacin, 1997; Oliver, 1997; Thornton & Ocasio, in press	Ideologies of markets, industry cultures and logics, management and work, and mutual reliance on shared systems of meaning shape and define economic activity. Culture as rules as well as culture as values; refocus on content of culture. Lastly, alternatives to “national” culture approaches.

(continued on next page)

—political	Mintz & Schwartz, 1990; Campbell & Lindberg, 1990; Brint & Karabel, 1991; Barnett & Carroll, 1993; Jacobson, Lenway, & Ring, 1993; Dobbin, 1994, 1995; Romo & Schwartz, 1995; Dobbin & Dowd, 1997; Haveman & Rao, 1997; Murtha, Spencer, & Lenway, 1996; McGuire & Granovetter, in press; Nee & Ingram, 1998	Societal struggles over the distribution of limited resources affects economic activity by producing change in economic institutions, authoring or sanctioning certain activities, or inviting influence in the form of non-market state actors or related institutions. Markets must be created, public policy often influences the shape and character of economic institutions, and powerful actors (often state-sponsored) exert considerable influence in shaping economic outcomes.
Outcomes	Oliver, 1990, 1991, 1997; Baum & Oliver, 1991, 1992; DiMaggio, 1997; Fligstein, 1991; Uzzi, 1996; Gulati, 1995; Rao, 1998a,b	Embeddedness affects the nature and character of interorganizational relations, the distribution of joint benefits, and ultimately, organizational survival.
—institutional	Oliver, 1991, 1997; Van de Ven & Garud, 1993; DiMaggio, 1997; Rao, 1998a,b	Normative contexts affect firm actions and ability to develop sustainable competitive advantage.
—governance	Baker, 1984, 1990; Putnam, 1993; Fukuyama, 1995; Uzzi & Gillespie, 1999a, 1999b; Fligstein, 1996; Abolafia, 1996; DiMaggio & Louch, 1998	Social ties imbue economic structures and governance mechanisms with extra-rational meaning. Distinctions between instrumental action and other forms of trust-authorized action become blurred and difficult to distinguish.
Practical Action	Oliver, 1991; Jacobson, Lenway, & Ring, 1993; Ashforth & Mael, 1996; Baum & Dutton, 1996; Zajac, 1996; Dowd & Dobbin, 1997; Dyer & Singh, 1998	Organizations can and do act strategically in satisfying normative, institutional and/or cultural demands.
Directions	White, 1981; Coleman, 1990; Raub & Weesie, 1990; Powell & Smith-Doerr, 1994; Podolny & Baron, 1997; Gulati, 1998; Davis & Greve, 1997	More work is needed on the structure and content of inter-actor ties. Reciprocal embeddedness, interrelationships across time and space, social capital and the complexity, strength and intensity of embeddedness all represent promising research directions.
Inter-Actor Ties		
Cross-Level Issues	Reddy & Rao, 1990; Zukin & DiMaggio, 1990; Dacin, 1997	Embeddedness concepts cross level-of-analysis and traditional lines of demarcation in different social science fields.

(continued on next page)

Table 1. Continued

<i>Section</i>	<i>Subsection(s)</i>	<i>Literature</i>	<i>Main points</i>
	—cognition	Reger & Huff, 1993; Porac et al., 1995; Porac & Rosa, 1996	Collective cognition is an important area of potential inquiry. Additional work is required on the effect of collective schema or shared cognitive frames on a broad range of organizational activity.
	—cognition & culture	Berger & Luckmann, 1966; Meyer & Rowan, 1977; DiMaggio, 1997	It is often difficult to separate collective cognition from cultural considerations. Useful research could develop this intertwining and its implications for organizations and managers; other work could examine the analytic boundaries between these two mechanisms.
	—nesting	Carroll & Wade, 1991; Scott, 1994a; Abolafia, 1996; Uzzi, 1996, 1997; Baum & Dutton, 1996; Tushman & Murnann, 1998	Current views recognize embeddedness as spanning levels and as potentially nested in hierarchies or other patterns of interconnectedness. First steps are promising in multi-level studies.
	Temporality	Arthur, 1989; Gersick, 1988, 1994; Hassard, 1996; Barley, 1988; Perlow, 1998; Abbott, 1997	Temporal embeddedness and the social ordering effects of time are obvious but neglected mechanisms that shape opportunity and stratification across levels of analysis.
	Disembeddedness	Polanyi, 1944; Giddens, 1979, 1984; Westney, 1987; Van Maanen, 1992; Stern & Barley, 1996	Distal embeddedness may supplant local embeddedness. For example, globalization can be regarded as a disembedding process at the local level as social actors are incorporated into broader networks and cultural systems.
	Methodologies	Tuma & Hannan, 1984; Ragin, 1987; Abbott, 1988; Strang, 1991; Mizruchi & Galaskiewicz, 1993; Mohr & Franzosi, 1997	Novel methods and techniques amenable to the challenges and opportunities of embeddedness approaches are needed. Greater attention needs to be devoted to the development of comparative and cross-level methodologies and to the measurement of embeddedness.

by cultural principles and political practice, in contrast to being understood as an aggregate of individual actions (see Table 1).

What is the distinctive contribution of embeddedness research? Emerging work on embeddedness needs to not make an embedded logic the answer to every empirical site or conceptual mechanism (Powell, 1996b). Many aspects of social, economic, and organizational life are not about the instrumental pursuit of self-interest. In studying the sources, mechanisms, and effects of embeddedness for organization forms, structures and linkages, and activity, the insights of the embeddedness literature enable us to view not only the unintended outcomes of such instrumental action, but also the collateral effects of other action motivated by other forms of rationality (Ventresca & Murnighan, in press).

As we discuss above, much research that has built on Zukin and DiMaggio's (1990) specification of structural, political, cognitive, and cultural embeddedness mechanisms continues to focus on individual actors—whether the cognitions of individual, inter-actor ties, and the like. We offer several perspectives that advocate specific research designs and questions that treat how forms of embeddedness: (1) affect dependent variables conceptualized in supra-individual terms (e.g., the likelihood, shape, and location of collective strategy; how political and cultural embeddedness shape the definition of new performance outcomes at the field or industry level, see especially Rao, 1998b); and (2) provide support for rethinking the nature of independent variables and the causal process. In the social spaces “between” embedding context, the role of temporal embeddedness and other logics of action may become more visible.

In this paper, we make broad claims for embeddedness as a perspective. Turning this potential into practical research issues and empirical studies is a worthy goal. To accomplish this without “breaking apart” embeddedness into constructs that lose the central tension and distinction of the basic insight—that economically rational behavior is not only grounded in wider social structures and meaning systems (the constraint view) but also generative of change and variation within these—is an important challenge for organizations scholars. Studies that more directly inquire into cross-level processes will help to disentangle the interesting issues and questions here.

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