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21 Firms and Environments

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FROM ITS ORIGIN as a distinct domain in the 1950s through the late 1980s, organization theory focused primarily on elaborating and testing theories about organizations as discrete social units. In the foundational text for modern organization theory, March and Simon (1958, 4) defined organizations as "assemblages of interacting human beings [that are] the largest [groups] in our society that have anything resembling a central coordinative system. . . . [This] marks off the individual organization as a sociological unit comparable in significance to the individual organism in biology." In this high-modernist conception,[1] organizations were goal-oriented, boundary-maintaining systems that *contained* their members (Aldrich 1999, 2). Organizations were born, they grew, and sometimes they died. Populations of them, distinguished by their common morphology, waxed and waned at different times, as new industries arose and old ones died out. Moreover, in some places (notably the United States) organizations had expanded their domains to encapsulate ever more of the lives of their constituents. "[T]he appearance of large organizations in the United States makes organizations the key phenomenon of our time, and thus politics, social class, economics, technology, religion, the family, and even social psychology take on the character of dependent variables. . . . organizations are the key to society because *large organizations have absorbed society.* They have vacuumed up a good part of what we have always thought of as society, and made organizations, once a part of society, into a surrogate of society" (Perrow 1991, 725–26). Explaining organizational dynamics was thus tantamount to explaining contemporary social structure.

Theories about organizations proliferated into a set of distinct paradigms that highlighted different aspects of organizations: what shaped their internal structures, where they placed their boundaries, how they gained and used power, how they responded to external assessments, why they were born and died. In his masterful 1967 synthesis *Organizations in Action,* James D. Thompson argued that organization structure and action are largely the result of efforts to balance off the need for rational planning with the requirements imposed by an unpredictable outside world, for instance by sealing off a technical core from the external environment. Subsequent theorists elaborated on themes raised by Thompson. Much of the environmental uncertainty an organization faces comes from the fact that its exchange relations with other organizations create power and dependence relations; thus, resource dependence theorists asked, "What tactics and structures are used to reduce or co-opt the power of outside actors on which the organization is dependent?" (Pfeffer and Salancik 1978). Transaction cost theorists highlighted the factors that make relations with particular buyers and suppliers particularly valuable for the creation of products and services. The animating question of this approach was, "Where do organizations place their boundaries, that is, which activities are done inside the firm, and which are left to outsiders?"—also known as the make-or-buy problem (Williamson 1975).

Organizational ecologists argued that many of the processes that organizations use to create stability thereby make them rigid and unreactive to significant change. Thus, to address the question, "Why are there so many kinds of organizations?" ecologists focused not on (relatively rare) changes in structure but the births and deaths of organizations with particular structures (Hannan and Freeman 1977). New institutional theorists asserted that in many domains organization structures reflected pressures to conform to the expectations of outside evaluators, such as government agencies and professional bodies. These structures, moreover, were often decoupled from the actual work that went on in the technical core. From this perspective, the most compelling question was, "What processes generate the spread of conformity and standardization in organizational practices and structures?" (Meyer and Rowan 1977; DiMaggio and Powell 1983). And in financial economics, an entirely separate approach evolved to explain the

survival and proliferation of large public corporations by examining the institutional mechanisms that make possible the separation of ownership and control (Jensen and Meckling 1976).

For several years, research in organization theory followed the path of normal science laid out by these paradigms (see Davis and Powell 1992 for an extensive review). Students of transaction costs studied make-or-buy decisions across various industries, documenting that firms often brought specialized suppliers in-house but purchased unspecialized inputs on the open market. Resource dependence scholars found that the structure of interorganizational ties, such as shared directors across industries, often mapped onto power/dependence relations. Ecologists found regularities in the patterns of organizational birth and death in industry after industry. Institutionalists documented contagion in managerial practices in both public and private sectors.

Yet the normal science approach to theory development and testing has been largely abandoned in empirical work in organization theory since the late 1980s. Thompson's core question—"How can organizations be structured to achieve rationality in an uncertain world?"—has given way to a newer set of questions: What organizational processes underlay the shape of China's transition from state socialism? Why do industrial districts thrive in some locations and not others? How do previously protected sectors, such as health care and education, adjust to the advent of market pressures? How does law influence the structure and operations of corporations around the world, and how do business elites get the law they want? This chapter focuses on these and other questions, drawing in particular on sociologically oriented organizational research published since 1990. I find that organization theories have not been abandoned; rather, they are used as essentially a toolkit of mechanisms from which middle-range explanations can be constructed in the service of problem-driven research.

Why has organization theory changed from a paradigmatic endeavor to a problem-driven one? A little archaeology of knowledge suggests an answer. It is somewhat remarkable that a single four-year period saw the major foundational statements of transaction cost economics (Williamson 1975), the agency theory of the firm (Jensen and Meckling 1976), organizational ecology (Hannan and Freeman 1977), the new institutional theory of organizations (Meyer and Rowan 1977), and resource dependence theory (Pfeffer and Salancik 1978). Drawing on a common pool of social mechanisms, each of these approaches staked out a niche in an ecology of assumptions, often defining itself in terms of its contrasts to the others. Transaction cost reasoning emphasized that pressure from product markets drove decision makers in organizations to adapt cost-minimizing structures from among the (cognitively) available options; to fail to do so was to be slated for extinction at the hands of lower-cost rivals. Resource dependence argued that there was much adaptation, but in contrast to transaction cost thinking it was aimed at reducing dependency even if this came at the expense of profitability; selection was not seriously contemplated.

Ecologists countered both approaches by arguing that adaptation was rare and often fatal, and (like transaction cost analysis) highlighted competition and selection as dominant influences on the demography of the organizational landscape. Institutionalists saw adaptation as routine, but often merely a facade; organizations often persisted for long periods *in spite of* strategies and structures adapted for the sake of outside evaluators, or simply because they were widespread. And agency theorists argued that one particular type of outside evaluator—financial markets—had a predominant influence over how public corporations were organized and how they evolved within their institutional surround.

These approaches largely covered the mosaic of possibilities for distinct theories of organizations. They differed in what they saw as the most important thing to be explained about organizations, but—like chefs shopping for fresh ingredients at a small market—generally drew from the same set of mechanisms for constructing explanations: imitation, diffusion through networks, prevalence-based legitimation, selection, and so on (see Hedstrom and Swedberg 1998).

But while the niche space for new theories of organization may have been filled by 1980, the objects of explanation themselves changed. To a great extent, the major paradigms reflected the stylized facts of their location and era, the corporate economy of the United States in the mid-1970s. Firms had increased in size and scope over the prior decades, and it appeared that this would continue indefinitely, as corporate assets grew concentrated in the hands of a relative handful of firms. At the same time, corporate ownership had grown increasingly dispersed among atomized shareholders, leaving corporate managers the undisputed masters of their domain (Useem 1984). These

managers were free to pursue the types of strategies described in resource dependence theory, growing and diversifying their firms to increase their power (Fligstein 1990). Bureaucratic processes associated with growth had rendered these large firms relatively inert, as emphasized by ecologists: "Corporate America's sluggish response to oil crises, Japanese competition, and other changes had much to do with its conglomerate tangles of the 1960s" ("Mad Mergers" 1992, 18).

The trends of increasing corporate size, scope, integration, and ownership dispersion prevalent when the major organizational paradigms were created ended fairly abruptly during the 1980s, as the institutional structure of the U.S. economy underwent a substantial shift. More than one-quarter of the largest manufacturers in 1980 received takeover bids in the subsequent decade, frequently resulting in the firm's being split into its component parts, thereby leaving the typical corporation far more industrially focused in 1990 than it was in 1980 (Davis, Diekmann, and Tinsley 1994). White (2001, 24) found that "Aggregate concentration in the U.S.—the fraction of private-sector economic activity accounted for by the largest X companies in the U.S.—declined during the 1980s, and declined further in the early 1990s and then increased by the late 1990s only to the levels of the late 1980s or early 1990s. Overall, aggregate concentration . . . has declined since the early 1980s, despite the substantial merger wave of the 1980s and the far greater merger wave of the 1990s." The few hundred behemoths in the right tail of the size distribution were hardly representative of the 4.3 million corporations in the United States in 1994, and nearly 40 percent of employees worked for firms with fewer than 100 employees (Aldrich 1999, 10–11). The disaggregation of diversified giants into focused components has been accompanied by a proliferation of network forms of production reconnecting the parts, partly reflected in the vast increase in the number of corporate alliances during the 1980s and 1990s (Gulati 1995). At the same time, corporate ownership passed from the hands of individual investors to money managers acting on their behalf: pension funds and mutual funds greatly increased their share of corporate ownership and with it their ability to influence how their portfolio firms were structured and run. By 2001, the parent of the Fidelity mutual funds alone owned 10 percent or more of nearly one in 10 large U.S. corporations (Davis and Yoo 2002).

The image of organizations as basic units of social structure analogous to individual organisms was increasingly belied by boundary-breaching forms of production (Piore and Sabel 1984). In many contexts—particularly in high-technology and cultural production industries—seeking to distinguish separate organizations was like trying to separate out distinct lumps in a bowl of oatmeal. Unlike the production of Model T cars, the production of movies, skyscrapers, jets, and women's better wear was accomplished by shifting congeries of persons, firms, roles, and brands (or other identities). Boundaries around industries similarly became difficult to locate, as deregulation and new technologies encouraged permeability. Telecommunications, information technology, computers, software, and media blurred into an amorphous metaindustry; insurance, commercial banking, and investment banking morphed into "financial services." New industries drew on models and personnel from old while engaging in distinctly new forms of activity (e.g., in biotech and web design). And even determining whether a company was engaged in "manufacturing" or "service" proved increasingly difficult: manufacturers attentive to labor costs increasingly contracted out the actual production of branded goods from PCs (e.g., Hewlett-Packard) to hot dogs (Sara Lee) in favor of the higher value-added activities of design and marketing; industrial conglomerate GE came to derive most of its profits from financial services as it grew into the largest lender and leaser in the United States. The postindustrial economy glimpsed in the 1970s had reached a mature stage.

The blurring of boundaries at the organizational and industry levels was mirrored at the national level, as global trade achieved a level lost since the First World War and international financial flows reached $1.5 trillion per day. The spread of capital accompanied the spread of neoliberal ideology and a particular financial-market-based theory of national economic development. The number of nations with stock exchanges nearly doubled after 1980, and portfolio investment flooded these markets during the 1990s, creating pressures for indigenous companies seeking capital to adopt the structures favored by institutional investors in the United States and Europe. Determining the nationality of a corporation became as problematic as determining its industry. For example, in 2001 Tommy Hilfiger Corporation was headquartered in Hong Kong, incorporated in the British Virgin Islands, listed on the New York Stock Exchange, owned primarily by international institutional investors, held its annual meeting in Barbados,

sourced production to manufacturers in Mexico and Asia, licensed its name to producers globally, and retailed its "classic American clothing" in Europe and North America. Enron had over 3,500 separately incorporated subsidiaries, many in offshore tax havens such as the Cayman Islands, seemingly designed to baffle investors and outside analysts. Locating the boundaries, industry, or nationality for such organizations, typologizing their structures, or even defining dates of birth had become considerable challenges.

Finally, research outside North America demonstrated just how idiosyncratic the large U.S. corporations that were the object of the 1970s-vintage organization theory were. In spite of the convincing theoretical rationale for the efficiency benefits of the large, vertically integrated firm (e.g., Chandler 1977), industrial districts consisting of shifting sets of small specialist firms persisted and thrived as functional alternatives to the "one big firm" (Piore and Sabel 1984). Around the world, sovereign and autonomous organizations appeared rare, while long-standing networks and business groups were both common and influential—to understand a given large corporation in most industrial nations required knowing its group membership (Granovetter 1994). Even the very idea of a "firm" as a basic unit turned out to be quite problematic in some East Asian contexts (Biggart 1992). And when large corporations did exist, they nearly always had a dominant outside owner—either a family or a governmental entity (Davis and Useem 2002). In short, sociological theories about firms and environments increasingly described a world of large, vertically integrated, relatively autonomous corporations that no longer existed.

From some perspectives, this could be seen as a paradigm failure. The notion of cumulative research on organizations would seem like a vain endeavor in this context. Organization theorists failed to construct a model scientific community with boundary control and supporting institutions, with the notable exception of organizational ecologists (Pfeffer 1993). Studies were rarely susceptible to the sort of metaanalysis common in lab-based studies in psychology, and topics flowed more from events in the world than from the internal development of theory. Aldrich (2001, 118–19) points out the problems with such outcome-driven explanations, where researchers begin with endings and work their way backwards to an account for why it happened—like Kipling's just-so stories.

Yet studies continued to be published at a prolific pace. Researchers have largely abandoned the paradigm-driven "normal science" approach in favor of phenomenon-driven work. The community of scholars has come to look more like Greenwich Village than the normal-science Brasilia. "Making sense of transitions" has become both a driver and a focus of research, as many of the papers reviewed here attest. In a sense, Perrow was right when he argued that organizations had become the independent variable to explain politics, social class, economics, technology, religion, and other social outcomes. He was right, however, not because organizations have "absorbed" society, but because organizational *mechanisms* often produce societal outcomes of interest.

Consider how social stratification occurs. Federal legislation creates a particular definition of nondiscriminatory employment practices, and thus influences the career prospects of nonwhite workers, because of the diffusion process by which firms establish a formal personnel function (Sutton et al. 1994). Japanese firms abandon the traditional practice of lifetime employment in waves, restructuring the mobility system of the nation, because they are less likely to be singled out for opprobrium when "everybody else is doing it" (Ahmadjian and Robinson 2001). Deregulation of financial services influences the careers of individuals through the vital rates of organizations (Haveman and Cohen 1994). In each case, organizational processes of the sort described in older organizational theories are the cogs and wheels of larger explanations: diffusion through networks mediates between governmental policy and the career trajectories of nonwhite minorities; social learning and mimesis translate economic pressures into the loss of traditional institutions for employment security; organizational births and deaths following regulatory shifts drive the job changes of financial managers.

In addition to breaking out of the normal science mold, contemporary research on firms and environments is distinguished by two other features. First, the preferred unit of analysis is often implicitly or explicitly the *field* rather than the organization. Bourdieu defines a field as "A space in which a game takes place, a field of objective relations between individuals or institutions who are competing for the same stake," and later as "a network, or a configuration, of objective relations between positions" (Bourdieu and Wacquant 1992, 97). Fields have rules or logics, patterns of relations, and actors that may be human, organizational, or "other." The point of studying fields rather than (populations of) organizations is that

one does not presume the relevant actors (organizations, industries, persons) occupying positions in advance. In health care, for instance, the composition of the field in the United States changed from relatively straightforward just after World War II (community hospitals and physicians in private practice, who were usually members of the American Medical Association) to Byzantine by the 1990s (hospitals, freestanding clinics, HMOs, health "networks," partnerships, and dozens of specialized professional associations, among others; Scott et al. 2000). Hollywood films, once made by vertically integrated studios, came to be created by shifting networks of persons with particular roles (actors, directors) and organizations performing narrowed tasks (Baker and Faulkner 1991). By examining the field over time without presuming that it will be populated by organizations, analysts gain a more subtle and accurate understanding.

Second, there was increasing recognition that findings about business organizations are intrinsically tied to particular places and times. That is, the naive scientism that underlay the notion of a "general theory of organizations" largely gave way to an approach emphasizing context and periodization (see Aldrich 1999, chap. 8). Studies using identical sampling frames and variables turned up divergent results. For example, an animating question in agency theory is, "Why do corporations get taken over through hostile bids?" In the 1960s, the answer was, "Because they had low stock market valuations and their boards were not well-connected" (Palmer et al. 1995). In the 1980s, the answer was, "Because they had low stock market valuations brought about by over-diversification"; their boards' social connections had no impact (Davis, Diekmann, and Tinsley 1994). And in the 1990s, it was, "Because they operated in industries where deregulation prompted consolidation among rivals" (such as defense); neither market valuation, connections, nor industrial diversification made takeover more likely (Davis and Robbins, forthcoming).

Because of inherent limitations of space and comprehensiveness, this chapter takes a relatively circumscribed view of the contemporary economic sociology of organizations. I focus here specifically on recent (primarily since 1990) sociological research on firms and environments. Excellent reviews that trace the study of organizations over extended periods are readily available (e.g., Scott 2003; Aldrich 1999). For a review of paradigm-based research on organizations through 1990, see Davis and Powell 1992. There are, of course, vast expanses of research on firms and environments in the fields of corporate strategy, economics, finance, accounting, law, and elsewhere, each with their own paradigms and problematics. My aim here is to focus on the works likely to be of greatest interest to those that would accept the label *economic sociologist.*

The chapter has three parts. The first section examines issues of strategy, structure, and performance: Why do organizations adopt the strategies and structures they do? How do insiders and outsiders assess their performance? The work here reflects traditions following from the behavioral theory of the firm (Cyert and March 1963), Stinchcombe's (1965) analysis of the impact of social structure on organizational founding, persistence, and mortality, and Thompson's (1967) analysis of the sources of structure. The second section examines fields, states, and institutions. While some of the motivating questions arise out of the new institutionalism (particularly DiMaggio and Powell 1983; and Fligstein 1990), subsequent work has not been particularly bound by these antecedents. Finally, the third section discusses research on network forms and network dynamics, an area drawing on both network methodology and research on elites (e.g., Mills 1956).

Strategy, Structure, and Firm Performance

The Sociological Approach to Corporate Strategy

Research on corporate strategy has traditionally sought to answer the question, "Why do some firms perform better than others?" The general answer has three parts: some industries have structures that lend themselves more readily to monopolies than others; managers of firms can implement strategies that make their firm more monopoly-like, such as through their choice of industry segment; and firms can adopt organization designs in discriminating ways to fit their industry and strategy (Thompson 1967). The traditional approach to research in this area is to examine the performance consequences of different industries, different strategies, and different structures, and to study the process by which firms move toward performance-enhancing combinations of strategy and structure. Organizational sociologists have long since lost interest in this plain-vanilla approach (so much the worse for organizational sociology, according to Donaldson [1995]) and instead have focused on

the *antecedents* of strategy and structure rather than their performance *consequences*. Why do firms choose the strategies and structures that they do? What counts as performance? Addressing these questions has generated a sociological approach to strategy and structure, emphasizing the effects of public policy, cognitive models, and social processes over the influence of industry structure per se.

Choices of Strategy and Structure

Effects of Public Policy and Founding Conditions

Since Stinchcombe (1965) published his analysis of social structure and organizations, organization theorists have found evidence for the ongoing influence on strategy and structure of the prevailing social conditions at the time an organization was founded. In particular, state policies influence decisions about whether to open or close a business, what markets are entered or avoided, what structures and employment practices firms adopt, and how firms compete. State policies favoring cartels increased founding rates of Massachusetts railroads, while antitrust policies depressed them (Dobbin and Dowd 1997). State-level regulations mediated U.S. federal energy policy, thus generating cross-state variation in the creation of independent power producers (Russo 2001). Conversely, business failure rates varied across the states in the 1970s and early 1980s according to state fiscal and labor policies and the power of local labor organizations (Grant 1995). (Aldrich, this volume, reviews research on birth rates.)

State policy itself reflects the broader national culture: Dobbin (1994) accounts for variation among the industrial policies that characterize France, the United States, and the United Kingdom by arguing that cultural paradigms for generating political order were transferred to the project of generating order in the economic realm. This is why the United States has decentralized industries organized around the idea of natural selection, whereas France traditionally had a more centrally ordered system dominated by state-owned firms. He finds that once this pattern was set for railroads—the first modern, national industry—the basic template was adopted across later industrial contexts. Once in place, national paradigms influence the subsequent reception and implementation of organizational innovations. Casper and Hancke (1999) found that the introduction of standardized systems of quality management had divergent impacts in the French and German auto industries: ISO 9000 reinforced a Taylorist hierarchical system in France but supported the autonomy of skilled craftspeople in Germany. Rademakers (1998) found that producers in the Indonesian *jamu* (herbal medicine) industry, some of which are owned by ethnic Chinese families and some by ethnic Indonesians, followed characteristic Chinese family business patterns adapted to the indigenous economic institutions. Moreover, firms with owners of both types also maintained paternalistic relations with buyers and suppliers, reflecting a characteristically Javanese form of household relationship that entails both obedience and obligation. And Biggart and Guillén (1999) find enduring differences in the structure and developmental paths of the auto industries in Argentina, South Korea, Spain, and Taiwan that trace back to culturally specific patterns of family ownership. Small family firms thrive in Spain and Taiwan, and both produce auto components, whereas Korean *chaebol* conglomerates mass-produce branded autos for export, suggesting that initial conditions critically influence possible paths of national economic development and industrial organization.

The American approach to antitrust had a predominant influence on the form that U.S. corporate capitalism came to have. In a sweeping study of the evolution of large U.S. firms in the first eight decades of the twentieth century, Fligstein (1990) found that changes in antitrust policy reverberated across the economy by their influence on how firms created strategies and structures. Firms choose strategies in large part to stabilize their environments and achieve greater certainty, an echo of Thompson's (1967) argument. Yet stability for firms often means oligopoly or monopoly for consumers. Thus, the federal government has at different points enacted policies that ruled out some strategies in wide use (e.g., merger among large competitors), an exogenous shock that prompted firms to experiment with alternatives. When an innovator happens on a strategy that achieves stability and growth, other firms emulate it—often prompting yet another regulatory response, which in turn leads to another round of innovation. Horizontal integration (acquiring competitors) was succeeded by vertical integration (acquiring suppliers and distribution channels), which was succeeded by product-related diversification (acquiring firms that made related products), which was succeeded by conglomeration (acquiring firms in unrelated industries, creating the "portfolio firm").

While Fligstein's account takes the American federal government as a relatively exogenous force

that intermittently drops in to constrain the strategies available to firms, Perrow (2002) provides a prehistory of how states shaped economic activity before there were large businesses on any significant scale. Like Dobbin, Perrow sees railroads as the first large-scale national industry and as the prototype for subsequent genres of regulation, but attributes the form of regulation that emerged in the United States less to national culture and more to the actions of powerful elites shaping the exercise of state power. The relatively weak national state and relatively stronger state and local governments (compared to Western Europe) opened up avenues for corruption that were exploited by wealthy elites to build vast, privately controlled business organizations. By the time the Progressive movement arose to limit the power of big business through a strengthened national state at the turn of the twentieth century, big business had already taken hold and laid the tracks for subsequent corporate evolution. (The theme of elite influence on law and the state is taken up in more detail in a subsequent section.)

In the postwar period, Western European corporations followed a trajectory broadly similar to the United States in terms of strategies and structures while maintaining characteristic national patterns of ownership and corporate governance. According to Mayer and Whittington (1999, 951), "Regardless of country, by the early 1990s, the typical large industrial firm in Western Europe was diversified and divisionalized. France, Germany and the United Kingdom now all follow the Harvard model discovered two or three decades ago by Chandler (1962) and Rumelt (1974) in the United States," which represented a substantial shift from the early 1960s. Davies, Rondi, and Sembenell (2001) further find that with the greater economic integration of the European Union since the mid-1980s, European manufacturers rapidly become more multinational, while their industrial diversification declined slightly.

At the organizational level, strategies that come to dominate a field benefit individuals with backgrounds in particular functional areas of the corporation, who become solutions to organizational problems through the toolkit that their "conception of control" provides. Leaders with a manufacturing background predominate in a field where vertical integration is the dominant strategy; those with a marketing background are advantaged when related diversification is popular; and finance executives gain favor when conglomeration is perceived as the route to organizational success (Fligstein 1990). Dobbin and Dowd (2000) amend this account by pointing to the role of powerful extraindustry actors in shaping the types of corporate strategies adopted by Massachusetts railroads in response to antitrust: after cartels were banned by an 1897 Supreme Court decision, financiers with strong vested interests promoted the adoption of a model of consolidation to replace the forbidden strategy of cartelization. Moreover, choices made by a firm's leader at its founding have ongoing influences both on the firm's employment practices (Baron, Hannan, and Burton 1999) and in how the firms respond to policy changes. U.S. banks, for instance, responded differently to enforcement of the Community Redevelopment Act depending on the strategy they had in place at the outset (Fox-Wolfgramm, Boal, and Hunt 1998). Surprisingly, sometimes even epochal shifts at the level of the state do not substantially alter the trajectories set by firms early on: domestically owned Hungarian enterprises looked much the same before and after the collapse of state socialism in terms of their products and organizational structures (Whitley and Czaban 1998).

In addition to their direct influence on the strategies pursued by corporate executives, changes in state policy can create second-order effects by loosing other forces. During the 1980s, U.S. policy eliminated most barriers to hostile takeovers, enabling "raiders" to buy conglomerates with the intention of splitting them up and selling the parts to their industry rivals (Davis, Diekmann, and Tinsley 1994). Thus, in contrast to prior antitrust policies that encouraged the voluntary adoption of some strategies (e.g., conglomeration) by eliminating preferred alternatives, policy in the 1980s had its effect by making it profitable for outsiders to reverse the strategies of incumbents (Stearns and Allen 1996). State influence is not limited to domestic businesses: in a fascinating study of the influence of alcohol prohibition laws on beer makers, Wade, Swaminathan, and Saxon (1998) find that state-level prohibition enhanced both the founding and survival rates of breweries in neighboring states (up to a point), suggesting that citizens of "dry" states crossed the border to neighboring states to drink, to the benefit of local brewers.

Performance Assessment

Other than changes in state policy, why do firms change course? A robust basic model comes out of the behavioral theory of the firm (Cyert and March

1963): decision makers in firms assess the firm's performance relative to an *aspiration level*, which is in turn a function of the firm's own prior performance and the performance of its peers or competitors. Firms search for alternatives to the extent that performance fails to meet aspirations. Thus, among airlines, good past performance generated organizational inertia, while operating in diverse markets discouraged it (Miller and Chen 1994). In contrast, when radio broadcasters fell short of aspiration levels, they were more likely to undertake risky changes, such as altering their formats (Greve 1998). Further, the effects of change on subsequent performance varied according to what precipitated the change. Broadcasters that performed poorly prior to changing format were likely to do better after the change—above and beyond the expected regression to the mean—while better performers were actually likely to do *worse* after changing formats (Greve 1999). There is also evidence that aspiration levels, like structures, reflect the preferences of founders: whether or not a venture is closed in the face of poor performance depends on thresholds set by its entrepreneur-owner (Gimeno et al. 1997).

If firms—like people—assess their performance relative to their peers, then how do they know who their peers are? In a study of the Scottish knitwear industry, Porac et al. (1995) examined this question by mapping the cognitive models of industry participants. As one might expect from White's (1981) discussion of industry boundaries, who counts as a rival depends on who is observable and whether they share certain attributes—location, styles of product, size, and so on. Although Scottish knit goods may compete with products from Italy and China on store shelves, perceived rivals were those closer at hand. Choice of peers also depends on the audience, according to another study (Porac, Wade, and Pollock 1999): when a change in U.S. policy required firms to publish comparisons of their performance with that of a set of peers to provide a context for executive compensation, firms were given discretion over their choice of peer group. Of course the choices were strategic, with industries being defined broadly when the firm had performed poorly or its primary industry had done well, and narrowly otherwise. Alternatively, industry niches in knowledge-based industries such as semiconductors can be defined by the technological arena laid out by patents—firms can be arrayed in a conceptual space created by patent "neighborhoods" linked by cocitations (Podolny, Stuart, and Hannan 1996).

Social Influences on the Adoption of Strategies and Structures

The influence of "peers" and other alters is not limited to a firm's assessment of its performance, but extends to basic choices of structure and strategy, such as entry into new markets. Semiconductor firms that recruited experienced managers from their rivals were subsequently more likely to enter into similar product markets as the executives' old employers (Boeker 1997). In both the computer and branded foods industries, ties of top executives *within* their industry pushed toward conformity to industry norms, while ties *outside* the industry facilitated deviance (Geletkanycz and Hambrick 1997). Similarly, firms that listed shares on Nasdaq were more likely to react to the defections of their interlock partners to the New York Stock Exchange by also defecting to the extent that they were well connected to NYSE firms, while ties to other Nasdaq firms encouraged Nasdaq firms to stay (Rao, Davis, and Ward 2000).

Social influences travel through multiple channels, by both direct contact and observation at a distance. Shared directors, for instance, influenced large firms' propensities to make acquisitions in the late 1980s (Haunschild 1993) and adopt the multidivisional structure in the mid-1960s (Palmer, Jennings, and Zhou 1993). The choice of Japanese auto suppliers to establish their first plant in the United States or Canada in the 1980s was conditioned on location decisions of (actual or potential) buyers and by suppliers (Martin, Swaminathan, and Mitchell 1998). And Japanese multinationals chose the location of new overseas plants in part based on the paths blazed by other Japanese multinationals before them (Henisz and Delios 2001). Conversely, the decision to relocate a plant *out* of a company's home in New York state looked different to "core" and peripheral firms: core firms could migrate for cost savings, while peripheral firms were held back by social and other ties to their particular locale (Romo and Schwartz 1995).

Firms learn about the appropriateness of certain strategies by observing competitors as well as by direct contact with alters. Both organizational characteristics such as size, and observing others enter a market (especially successful others) influenced the likelihood that savings and loan organizations (S&Ls) in California expanded into new markets traditionally served by commercial banks,

such as nonresidential mortgages and mortgage-backed securities (Haveman 1993). Contact across multiple markets (that is, operating branches in many of the same counties as one's rivals) also influenced the strategic choices of S&Ls (Haveman and Nonnemaker 2000). Similarly, nursing home chains in Ontario chose the locations of acquisition targets based on their own prior experiences and by imitating the choices of competitors (Baum, Li, and Usher 2000). In an uncertain world, choices of strategy and structure turn out to be decisively shaped by firms' social environment—the choices made by buyers, suppliers, rivals, and peers.

Audience Effects

In the behavioral theory of the firm, organizations assessed their performance relative to peers and their own prior performance. But as Thompson (1967, chap. 7) pointed out, organizations are often assessed by *external* constituencies using different and sometimes incompatible yardsticks, and organizations are most alert to the criteria emphasized by the most visible and powerful stakeholders. In the United States, financial markets achieved the position of "most powerful stakeholders" during the 1980s, and a vibrant literature grew around analyzing how the criterion of "shareholder value" came to influence how corporations were run. The capacity of audiences to impose standards changes with political and institutional conditions: prior to regulatory changes sought by institutional investors, shareholders of U.S. corporations were forbidden from engaging in collective action involving more than four owners, which (given the dispersion of shareholdings) significantly reduced their power with respect to management (Davis and Thompson 1994). Firms that failed to live up to the standards of financial investors were frequently undervalued (Zuckerman 1999), taken over (Davis and Stout 1992), or subject to visible pressures from institutional investors and analysts (Useem 1996). The responses of firms followed the well-worn paths suggested by prior work on organizations: compliance and decoupling. Firms operating in diverse industries spun off parts when those parts did not fit the market's conception of the firm (Zuckerman 2000). When investors attempted to change how they were run, firms set up "investor relations" offices with little operational influence (Rao and Sivamakur 1999). And managers adopted tokens of compliance, such as announcing stock buyback plans that markets favored (but often without actually implementing them; Westphal and Zajac 2001) or justifying their compensation plans in terms of shareholder value (Zajac and Westphal 1995). The ensuing scandal of corporate governance suggests that the Potemkin village approach may not be a sufficient way to run a corporation, however. (See Davis and Useem 2002 for an extensive review of work in this area.)

Fields, States, and Institutional Change

The Concept of Field

The advent of the new institutionalism in the study of organizations pushed toward a recognition of the "field" as an appropriate unit of analysis for making sense of organizational and societal processes. DiMaggio and Powell (1983, 148) defined an organizational field as "those organizations that, in the aggregate, constitute a recognized area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar services or products." But subsequent work highlighted the fact that a field need not be composed exclusively of organizations, and that it is best to remain agnostic about the types of actors comprising it rather than assuming a field will be like an urn filled with balls called organizations (e.g., Scott et al. 2000 on the health care sector). Rather, following Bourdieu, it is useful to see a field as a place for a game characterized by objective relations among actors, which may be persons, organizations, or other institutions. In Hollywood, for instance, some of the most important actors are, in fact, actors and not firms (Baker and Faulkner 1991).

The study of fields gained a substantial infusion of order with Scott's 1995 book *Institutions and Organizations.* Two significant contributions of this book were its parsing of the construct of *institution* and its framework for studying multilevel institutional change processes. "Institutions consist of cognitive, normative, and regulative structures and activities that provide stability and meaning of social behavior. Institutions are transported by various carriers—culture, structures, and routines—and they operate at multiple levels of jurisdiction" (Scott 1995, 33). Thus, institutions have three "pillars": a regulative pillar focused on formal and informal rules that constrain and regularize behavior; a normative pillar focused on values and norms that prescribe and evaluate action; and a cognitive pillar focused on common frames of meaning and interpretation that define situations in which action is taken. Legitimacy is then defined

as alignment with one of the institutional pillars. The multilevel framework conceives institutional layers in which actors are embedded in governance structures (organizations and fields), which are in turn embedded in societal institutions that provide models and menus for action. "Societal institutions provide a context within which more specific institutional fields and forms exist, shaping them as both agent and environment. Organizational fields operate at intermediate levels, providing institutional structures within which specific organizations operate. And organizations provide institutional contexts within which particular actors are located and take action" (Scott 1995, 141). Institutional change in this approach can be top-down or bottom-up, and studies of field transitions typically highlight one form or another.

Origins and Transitions of Fields

Where Do Fields Come From?

Fields rarely emerge without precedent but are created when technological or financial shifts create pressures for existing arrangements. Thus, the answer to the question "Where do fields come from?" is "Other fields." Health care experienced a transformative shift in the post–World War II era, in a story well told by Scott and colleagues (2000). For decades, the field was characterized by professional dominance, with physicians and their guild (the American Medical Association) effectively governing entry, training, and work conditions for the practice of medicine and resisting the encroachment of organizations beyond the nonprofit community hospital. It is not obvious on the face of it why the field of "health care" should or should not include barbers and manicurists, cosmetic surgeons, chiropractors, psychiatrists, midwives, drug and alcohol abuse treatment counselors, acupuncturists, or other professionals oriented toward human well-being. Under the era of professional dominance, however, boundary control by the AMA ensured a particular strict definition of "health care provider." The rise of medical specialties and specialist organizations to rival the AMA after World War II and the expansion of medical education set the stage for fragmentation. The creation of Medicare (federal health insurance for the elderly) and Medicaid (state insurance for the poor), and the emergence of a large number of regulatory bodies, created governmental counterweights to the AMA, and a number of new types of organizations proliferated alongside traditional community hospitals after 1965, such as home health agencies and renal disease centers. Finally, during the early 1980s deregulation and formalized cost-benefit analysis by insurers and others created opportunities for novel for-profit business, and the HMO—combining the functions of insurance and provision of health care services—came to be the predominant type, displacing non-profit community hospitals and freestanding physicians. Both the configuration of the field and the types of actors predominating in it underwent a dramatic transformation.

The emergence of fields often involves institutional mimicry or pilferage, in which templates for organized action in one domain are transferred and adapted to a new one. This is particularly useful in fields in which legitimacy cannot be taken for granted. Clemens (1993) describes this process for women's movements at the turn of the twentieth century, drawing on the notion of organizational repertoires in institutional theory to make sense of social movement organizations. Similarly, consumer watchdog organizations drew on culturally prevalent organizational forms to legitimate their activity in what was at the time an entirely new field (Rao 1998). Mimicry also shapes collective-level institutions. Ingram and Inman (1996) document the construction of competing institutional umbrellas by groups of rival hotels on the U.S. and Canadian sides of Niagara Falls, and argue that the creation of these institutions by competing firms was actually helped by the existence of a rival field across the border. Once created, organizations in a field and their institutional surround evolve together, as suggested by Fligstein's (1990) study of federal antitrust policy and the prevalence of organizational forms. Haveman and Rao (1997) argue for a similar coevolutionary story in examining the early savings and loan industry in California. Different types of S&Ls embodied different "theories of moral sentiments": early members of the industry were oriented toward cultivating virtues of prudence, discipline, and citizenship via home ownership, but how this was accomplished varied by organizational type (or "plan"). Haveman and Rao link the changing theories embodied in the different plans to demographic and political shifts in the state. They find that shifts in the predominant "theory of thrift" were manifested in the deaths of S&Ls carrying the old theory and the births of S&Ls carrying the new theory, thus transforming the demographic profile of thrifts in the state.

Markets, Legitimacy, and Change in Fields

Across a range of research domains, studies of fields find that market pressures are often the root

of the most significant field-level change. To quote the old political economist, "All that is solid melts into air, all that is sacred is profaned." From a scholarly perspective, the classic liberal arts college is one of the most sacred places, and the business school perhaps the most profane. Yet when the baby boom generation in the United States exited its college years, liberal arts colleges were faced with a smaller group of "education consumers" who preferred more practical education. A few colleges, particularly the high-status selective schools in the East, held firm to their ancient identity, but the vast majority of colleges ended up offering professional and vocational training—particular a business curriculum—while those that failed to change to meet consumer demands were likely to fail (Kraatz and Zajac 1996). Similarly, rural hospitals facing competitive pressures such as those described in the previous section often adapted by changing forms radically, into nursing homes, drug treatment facilities, or outpatient clinics (D'Aunno, Succi, and Alexander 2000). Even ideologically driven organizations such as kibbutzim in Israel, organized around socialist-Zionist principles that forbade the hiring of outside labor, nonetheless succumbed in the face of pressures from banks and markets (Simons and Ingram 1997). Organizations turn out not to be as inert as we previously thought, and the constraints imposed by legitimacy concerns may not always be binding.

There appears to be a common dynamic to how markets trump legitimacy (cf. Schumpeter 1934). Stearns and Allen (1996) find that merger waves in the United States during the twentieth century followed a similar trajectory in which marginal players find an innovative but often illegitimate means of making money, which is then emulated by core players who thus bring legitimacy to the practice. During the 1960s, for example, acquirers were often of marginal status with respect to the dominant corporate elite of the time (Palmer and Barber 2001), while firms with well-connected managers were less likely to be targets than their disconnected peers (Palmer et al. 1995). By the 1980s, takeovers were allowed and even encouraged by federal policy, and well-connected firms were both the acquirers and the targets (Davis and Stout 1992; Haunschild 1993).

Once a practice proves profitable, whole fields can change their shape through the entry of newcomers and the restructuring of incumbents. Moreover, appropriate practice becomes codified in a new logic of appropriateness, reflected in both rhetoric and practice. The appropriate way to run a large corporation changed from the "portfolio model" of the 1970s, which supported unrelated diversification, to a "core competence" model of the 1980s, which promoted operating in a single focused industry (Davis, Diekmann, and Tinsley 1994). When college publishers were primarily privately owned family businesses, they followed an "editorial logic" in which publishing was a profession built on personal ties between authors and editors, while after conglomerates began acquiring publishers in the 1970s and turning them into profit centers, they became mere businesses following a "market logic"; these logics were reflected in the process by which top executives were replaced during the two periods (Thornton and Ocasio 1999).

While the advent of markets may act as a solvent for legitimacy, the absence of markets can have a similar effect. As part of the transition from state socialism, Russia and the Czech Republic implemented plans of mass privatization intended to allocate shares in state-owned enterprises to the public. The theory was that having publicly traded companies would be an apt step in the path toward advanced industrial capitalism. But because the financial markets on which shares might trade lacked sufficient institutional infrastructure, the allocation of ownership rights ended up being channeled largely through illegal or politically motivated means (Kogut and Spicer 2002). In other words, markets may trump legitimacy, but politics trumps markets.

It is important to note that those running large enterprises around the world are not simply dupes of prevailing logics, and that they can be quite cagey when carrying out actions likely to be perceived as illegitimate. The institution of lifetime employment among core firms in Japan had become quite entrenched by the 1990s, supported by years of growth in which implicit guarantees of long-term employment were readily honored by growing firms. A lengthy economic slump undermined the economic rationale for lifetime employment and made it costly to sustain. Yet firms that shrunk their employment rolls were exposed to opprobrium in the press and tarnished reputations among potential employees. Firms responded by following a "safety in numbers" approach, abandoning lifetime employment en masse so that specific firms were less likely to be sanctioned individually (Ahmadjian and Robinson 2001).

How Changes Become Settlements

Once a field has been restructured, either due to state actions or market pressures, the next step is

for a new set of practices to become a settlement—the way things are done around here. For the movie industry, the rise of the blockbuster in the early 1970s prompted a change in the organization of the field, and in particular in the configuration of the roles of producer, director, and screenwriter. Prior to 1972, firms with a combination of a full-time producer and a combined director-screenwriter had poor financial performance. But 1972's *The Godfather*, which used this configuration, became the first blockbuster, and other filmmakers imitated this combination, which (after 1972) provided on average the best financial performance (Baker and Faulkner 1991). Thus, this combination became legitimate, widely imitated, and successful in Hollywood.

In addition to the appearance of successful models, settlements require a framework to make them comprehensible and to provide a basis for shared understandings, such as norms of exchange. Mary Douglas (1986) argues that analogies provide a robust basis for making conventions seem "natural" by providing a comprehensible parallel for social arrangements. The early radio industry, with signals sent out over invisible airwaves, provided a puzzle for governments seeking a basis for regulation. Was it most like a public utility such as the post office, or a "magazine of the air"? Eventually, radio came to be seen as analogous to public waterways, providing a transferable set of understandings for the appropriate role of governments and private parties (Leblebici et al. 1991). Field-level organizations can also facilitate certain solutions by making them visible and legitimate. Nearly all colleges and universities had recycling programs in place by the early 1990s, but while most simply added recycling to the responsibilities of an existing maintenance department, others created a new position for a full-time recycling coordinator, often staffed by an activist. These latter tended to be the schools with stronger ties to the Student Environmental Action Coalition, a national social movement organization that advocated the professional staffing model (Lounsbury 2001).

Once an order has been established, a number of processes can make the order self-reproducing (Stinchcombe 1968; White 1981). Podolny (1993, 1994) finds that investment banks tend to affiliate with others of similar status when doing deals and that their status position both enables and constrains the types of business they can do. High-status investment banks, paradoxically, have cost advantages: they do not need to advertise as much, they do not need to devote as much effort to convincing buyers of their claims, they can acquire capital more cheaply, and they can pay their employees less. Why, then, do the high-status banks not grow to dominate the market? Because their status (and associated cost advantages) would be compromised by doing the kinds of business low-status banks do. (This is the same reason Nordstrom's does not sell bologna at its food counter, as Jim Baron once put it.) Thus, status constrains the kinds of business banks can do and the kinds of other banks they can consort with, generating a self-sustaining status order (Podolny 1993, 1994).

States and Organizational Fields

Firms as Interpreters and Shapers of Law

One of the most important contributions of organizational sociology in the past decade has been work unpacking the impact of law on the structure and practices of the corporate sector. (See the chapter by Edelman and Stryker, this volume.) One might ingenuously expect that governments create laws with particular mandates for firms, and firms obediently follow them. But in practice laws are often quite ambiguous, and what counts as compliance is ill-specified. Moreover, managers typically seek to minimize encroachment on their prerogatives. Response to new laws thus entails organizations experimenting with alternative forms of compliance that, once they prove sufficient, spread throughout the field and become institutionalized (Edelman 1992). After the enactment of the Civil Rights Act of 1964, private employers with 15 or more employees were prohibited from discriminating on the basis of race, sex, religion, or national origin—a significant incursion into the employment practices of firms, but with no bright line test for compliance. Some employers responded by establishing "equal employment opportunity policies" and "affirmative action offices" as visible tokens of compliance; once these proved adequate, they diffused widely among employers, even as legal pressures for EEO waned during the 1980s (Edelman 1992). They had become part of the standard package for what employers did. Moreover, the impact of EEO legislation extended to employment practices associated with internal labor markets—particularly formal job descriptions, performance evaluations, and salary classifications—which rapidly spread through associations of personnel professionals after the Civil Rights Act (Dobbin et al. 1993).

Two things happen to seal these solutions in place. First, courts may validate particular struc-

tures and practices generated by experimenting organizations, recognizing them as sufficient for compliance and thus institutionalizing them (Edelman, Uggen, and Erlanger 1999). Second, the origins of certain employment practices as grudging responses to legal mandates are often lost, and a new Whiggish history emerges among business managers in which the practices were the spontaneous and economically sensible creation of the businesses themselves (Dobbin and Sutton 1998).

Moreover, once these new structures were in place, they had more far-reaching consequences. The establishment of personnel, benefits, and EEO offices created constituencies within firms for the promotion of policies advocated by their professional networks (Sutton et al. 1994; Sutton and Dobbin 1996). Firms with benefits offices were more likely to create formal maternity leave policies, consistent with the types of policies advocated in their professional journals (Kelly and Dobbin 1999). Thus, although firms may create formal structures with the intention of decoupling them from the "real" operations of the organization, these structures have the effect of linking firms to professional communities attuned to changes in federal policy and establishing a class of professionals that in turn promotes further organizational changes.

Firms as Sources of Law

Fields of firms connected by professional networks generate responses to laws and regulations once these are enacted, but they are also actively engaged in shaping law in the first place. A perennial debate in political sociology concerns whether business elites are unified by a common class interest that they are able to press on state actors (the elite theory view) or whether what divides them is even greater, creating a powerful-but-fractious business class (the pluralist view). Mizruchi (1992) argued that this question is best framed not as a dichotomy but as a variable: ***under what conditions*** are business executives able to act in a unified fashion when seeking to influence state policy? Drawing on resource dependence and network approaches, he documents that the extent to which businesses contributed money to the same portfolio of political candidates, or sent representatives to testify before Congress on the same side of issues, was contingent on the extent to which the businesses were well connected generally and tied to the same financial institutions in particular: "The number of ties that firms shared with the same financial institutions . . . was the most consistently significant predictor of similar political behavior across different measures of the variable" (Mizruchi 1992, 243). Well-organized business elites were particularly influential up until the early part of the Reagan administration (roughly 1981), but business unity at the national level seemed to break down after that (Akard 1992). Ironically, although Reagan was clearly the preferred presidential candidate of business executives, his lenient policies with respect to takeovers rendered these executives more susceptible to unemployment than they had been in decades (Davis and Stout 1992). Thwarted at the federal level, however, business executives did manage to get protective laws passed by nearly all U.S. state legislatures, and the better organized they were (i.e., the more densely their corporate boards were connected within a state), the faster the legislature was to pass the laws that they wanted (Vogus and Davis, forthcoming).

Changes in Field Composition: Diffusion and Institutionalization

One of the most persistent findings in organizational research in the 1990s has been that corporate managers are followers of fads and fashions when it comes to strategies and structures. Business cycles set a context for which types of management approaches are advocated by fad entrepreneurs: a caring, employee-centered approach when unemployment is low, and a more efficiency-oriented approach when unemployment is high (Abrahamson and Fairchild 1999). Once a practice is coded as a solution to an organizational problem (e.g., scientific management as a solution to inefficient work practices; corporate culture as a solution to unmotivated workers), it often diffuses through a network-based process. Diffusion offers a very general mechanism for organizational change at the aggregate level, conditioned by the characteristics of fields (e.g., the network structure of the field, the perceived legitimacy of the practice, the ease of observability of adoption, and so on; see Rogers 1995).

Interorganizational contagion processes have been documented across a wide range of contexts, including why denominations began to ordain women (Chaves 1996); why coal miners in the French Third Republic went on strike (Conell and Cohn 1995); why firms adopted poison pill takeover defenses and golden parachutes in the 1980s (Davis and Greve 1997); why corporations in Minneapolis–St. Paul gave to certain charities (Galaskiewicz and Burt 1991); why radio stations adopted (Greve 1995) and abandoned (Greve 1996) programming formats; and why U.S. firms

made acquisitions (Haunschild 1993), paid the prices they did (Haunschild 1994), and retained particular investment banks when they made acquisitions (Haunschild and Miner 1997). Across these varied situations, diffusion among organizations follows a set of regularities familiar from the more general diffusion of innovation literature, with the difference being that organizational innovations are often difficult to undo. When the multidivisional form spreads from firm to firm through shared directors (Palmer, Jennings, and Zhou 1993), the aggregate result is that it is normal and expected that corporations will have a multidivisional structure.

Consequences of Diffusion

Although diffusion has been widely studied, its consequences have been much less examined. The standard diffusion study treats the innovation as a dichotomy: an actor either does or does not adopt, say, a golden parachute. But most innovations in organizations are more like a continuum: there are casual symbolic adopters, fanatical converts, and everything in between. Total Quality Management (TQM), for instance, was a wildly popular business trend during the 1990s, and most large firms would report that they had "adopted" quality. But TQM consists of a large number of linked practices, from statistical process control to particular compensation policies, and firms varied widely in how and to what extent they adopted TQM. An excellent study of hospitals found that the organizations implemented a different portfolio of TQM practices depending on whether they were early adopters (typically adopting to gain in efficiency) or later adopters (often adopting in order to appear legitimate to outside stakeholders; Westphal, Gulati, and Shortell 1997). This is an area of research with great potential that has yet to be plumbed.

Networks in and around Organizations

Network forms of production within and among organizations gained great prominence during the late 1980s and 1990s, and parallel methodological advances meant that network analysis gained a substantial foothold in the study of firms and environments. Indeed, there was some ambiguity as the term ***network organization*** came to take on a number of divergent meanings. Baker (1992, 398) defined a network organization as "a social network that is ***integrated*** across formal boundaries. Interpersonal ties are formed without respect to formal groups or categories." That is, the relevant nodes in the network were persons within an organization, and the criterion was met if formal boundaries (of departments, for instance) were not a constraint on the formation of work-related ties. In contrast, Miles and Snow (1992, 53) defined network organizations as "clusters of firms or specialist units coordinated by market mechanisms instead of chains of command." Nodes in this case were firms, and ties were alliances or long-term exchange relations (governed by implicit or explicit contracts) among firms. Given the focus of this chapter, we will lean toward the latter definition and examine interfirm ties: interlocks (ties created through shared directors on the corporation's board), alliances, investment ties, and ties through common ownership by a third party. Levels of analysis run from the firm (or firmlike network) to the dyad to the business group to the overall network structure of the economy. (See Smith-Doerr and Powell, this volume, for a more extensive discussion of interorganizational networks.)

Network Forms of Organization

The dichotomy between "make" and "buy" that defined the transaction cost agenda began to break down with Granovetter's (1985) theoretical critique, Piore and Sabel's (1984) revival of the study of industrial districts, and Powell's (1990) delineation of the range of alternative relational types between these two poles. (See Williamson's chapter in the previous edition of this *Handbook* for his response.) The language of networks, and the analytical tools provided by social network analysis, proved to be an apt way to describe production processes outside of vertically integrated firms. The study of industrial districts, largely dormant in Anglo-American circles since Alfred Marshall, became a growth industry thanks to new tools and concepts from network analysis. Becattini (1990, 39) defined an industrial district as "a socio-territorial entity which is characterized by the active presence of both a community of people and a population of firms in one naturally and historically bounded area." Defined in this way, industrial districts turned out to be quite common, and they were often more effective producers than vertically integrated firms. Network forms of production long thought extinct were found, on further examination, to be thriving. Lazerson (1995) found that the Modena knitwear industry maintained an updated version of the "putting-out" system that had predated the modern factory. Moreover, this system of household microfirms was economically

quite sustainable when placed in a supportive institutional environment, in contrast to the usual expectations of transaction cost analysts.

Once network forms were identified, the next step was to typologize them and track their performance: as with traditional organizational designs, some network forms work better than others for some purposes. Paniccia (1998) argued that much of the recent enthusiasm for industrial districts came from the fact that a handful of case studies of successful instances, such as Silicon Valley and certain northern Italian districts, had inappropriately been taken to be typical, and thus prototypes of a superior model of production. But a 40-year comparison of 24 small and medium-sized enterprise districts in Italy showed that few of them matched the ideal type industrial district; they did not always have superior performance; and social ties among participants did not rule out deceit, opportunism, or free riding. Paniccia's (1998) study shows that industrial districts are not a panacea. Other researchers have also worked toward coming up with typologies and performance comparisons across network systems. Thus, network forms of mental health services vary in their effectiveness in terms of client outcomes (Provan and Milward 1995), and interfirm networks in the U.S. wood products–manufacturing industry faced multiple hurdles to demonstrate their legitimacy (Human and Provan 2000). Sturgeon (2002) coined the term ***modular production network*** to describe the evolving system in the electronics industry in which lead firms design, market, and service end products under their own name, while contracting out production to globally dispersed "box stuffers" with the capacity to mass-produce a wide range of electronics products (such as computers and cell phones) with relatively low labor costs. And Windeler and Sydow (2001) find that the industrial organization of television production in Germany has followed a similar path as the U.S. film industry, in which vertically integrated studios morphed into a virtual Hollywood industrial district. By the same token, television programs in Germany are now made by relatively short-term networks organized by producers and comprised of independent directors, authors, actors, and freelance crew members recruited for specific projects.

Formation and Dissolution of Network Ties

Studies of ties among dyads are analogous to ecological studies of foundings and mortality, and draw on similar methodological tools. Rather than the births and deaths of *organizations,* however, network researchers study the births and deaths of *relationships* between firms.

Formation of Ties

Interfirm alliances increased enormously in prevalence after the 1970s, and they have now become an accepted part of doing business around the globe. Findings at the firm level on the propensity of pairs to form dyads paralleled analogous social psychological research on persons: firms were more likely to form alliances with other firms they had allied with before than with "strangers" (Gulati 1995), and pairs of firms were more likely to ally when they had a third partner in common (Gulati and Gargiulo 1999); thus, network structures have an endogenous dynamic that shapes the structure of the larger overall network. Networks beget other networks across a variety of tie types in biotechnology, reflecting the industry's base on knowledge and innovation rather than production (Powell, Koput, and Smith-Doerr 1996). Semiconductor firms with widely cited patents, and those in segments with high rates of patents, were more prone to forming alliances than firms with few or poorly cited patents (Stuart 1998). At a dyadic level, ties involving high-growth firms show the prospects for using mechanisms of social control, as opposed to contractual control (Larson 1992). Finally, interfirm ties (such as alliances and shared directors) are sensibly considered as one path among many for firms to achieve certain ends; thus, if interlocks are a monitoring or information device, then it makes sense that firms that have alternative channels for such information or monitoring (e.g., membership by their managers in the same elite social clubs) would form ties for different reasons than firms without access to these functional substitutes (Kono et al. 1998).

Dissolution of Ties

While much work has been done in recent years on why firms create ties, far less work has examined why these ties lapse. Levinthal and Fichman (1988) found that firms had an initial "honeymoon period" with their auditor, in which they were unlikely to switch to another accounting firm, but that there was a rapid rise subsequently in the risk of dissolution, followed by a steady decline—similar to the so-called seven-year itch in marriages, but on a faster scale. Baker, Faulkner, and Fisher (1998) examined the ties between firms and their advertising agencies, finding that the propensity of clients to fire ad agencies also fol-

lowed an inverse-U curve, but peaking much later (at 11 years). Personal ties from client to agency tended to protect the relationship, as did the status and centrality of the agency and the size of the client. And Palmer (1983) studied the reconstitution of interlock ties "accidentally" broken when a director serving on two boards died or retired, concluding that their rare reconstitution argued against such ties serving a significant corporate function. The causes of the dissolution of ties is another underresearched domain that deserves further work.

Impact of Ties on Firm Performance and Action

Performance

Networks can have two types of effects on firm performance. The first follows from the standard definition of social capital as "The ability of actors to secure benefits by virtue of membership in social networks or other social structures" (Portes 1998, 2). Network ties are conduits for resources. But networks can be "prisms" as well as "pipes," with connections having their effect through the status they confer (Podolny 2001). The best-developed account of networks as "pipes" is Burt's (1992) theory of structural holes. Structural holes are gaps in social structure; an actor has a network rich in structural holes to the extent that his or her contacts belong to network clusters that are disconnected from each other—this disconnection is the "hole." This form of social capital provides opportunities to use financial and human capital productively by giving advantages in access (receiving valuable information and knowing who can use it), timing (being apprised of information before competitors get it), and referrals (getting one's name mentioned at the right time in the right places). Summarizing Burt (1992), a network rich in structural holes has contacts established in the right places where useful information is likely to be aired, providing a reliable flow of information to and from these places, thus creating power to broker transactions among disconnected clusters. Although the theory has a great deal of support at the individual level (see Burt 2000 for a summary), support has been more mixed at the firm level. Burt (1992, chap. 3) finds that margins are higher in industries characterized by structural holes (roughly the extent to which a producer's industry is concentrated and its buyers and suppliers are dispersed). But Ahuja (2000) finds that ties increase firms' rates of innovation (as indicated by patents) in the international chemical industry, but does not find such effects for structural holes—if anything, they had a negative impact. The translation from industry-level to firm-level effects is rather subtle, and suitable firm-level data turn out to be rather difficult to come by.

A major exception to this is the work of Brian Uzzi on the New York garment industry. The dominant union for garment workers has historically kept track of firm-level transactions for compliance purposes, allowing Uzzi to map out the exchange network at the level of the firm rather than the industry. Both social and economic networks are rife in this industry, as buyers and suppliers are often family members, neighbors, or long-term exchange partners. Uzzi's results suggest that there is an optimal level of embeddedness (i.e., a firm's portfolio of relations among buyers and suppliers): having a large number of arm's-length ties is hazardous for a firm's survival prospects, but so is overreliance on a single customer. Rather, the best case is a combination of embedded ties (large-volume exchanges, perhaps underlain by social connections) and arm's-length transactions to hedge one's bets (Uzzi 1996, 1997).

Ties among businesses can also act as a signal of quality to third parties, above and beyond their influence on exchanges. Particularly under conditions of uncertainty, when evaluation of "true" quality is difficult *ex ante*, outside evaluators often rely on a firm's affiliations to assess its status (Podolny 1993). Endorsements through affiliations with high-status actors have documented benefits in investment banking (Podolny 1993), wine making (Benjamin and Podolny 1999), and biotechnology (Stuart, Hoang, and Hybels 1999). Importantly, the effect of high-status affiliations is not merely perceptual, as it affects firms' cost structures and choices about product quality, as well as their ability to woo investors. In a postindustrial economy, perceived facts are real in their economic consequences.

Diffusion and Social Influence

Diffusion through networks is one of the best-studied topics in the sociology of organizations of the past 15 years (see Hedstrom and Swedberg 1998 on this and other mechanisms). Strang and Soule (1998) provide an excellent review of diffusion in social movements and organizations. Focusing specifically on network effects, researchers have found that U.S. corporations were more likely to adopt the highly controversial poison pill takeover defense when they shared directors with prior adopters—experienced directors could ex-

plain the costs and benefits and potential political fallout from adoption (Davis 1991). Their opinions were particularly impactful when the other firms on whose boards they served were similar to the potential adopter (e.g., similar industry or size). Firms were also likely to adopt contentious golden parachute contracts when other firms headquartered in the same locale had previously done so and thus legitimated it according to the local standard (Davis and Greve 1997). Ties to prior adopters made firms more prone to adopting the multidivisional form in the 1960s (Palmer, Jennings, and Zhou 1993), and well-connected corporate leaders made more acquisitions during the 1960s than their disconnected colleagues (Palmer and Barber 2001). Firms listed on the Nasdaq stock market in the mid-1980s were more likely to relist on the New York Stock Exchange when the firms they were tied to through shared directors had done so, but the strength of this effect depended on ties to Nasdaq versus NYSE firms (Rao, Davis, and Ward 2000). Serving on the board of an acquirer prompted firm executives of large firms to make acquisitions themselves (Haunschild 1993), particularly when the prior acquirer was similar to the potential acquirer. This effect is most likely due to informational rather than purely normative influences, as access to alternative information sources (such as when the CEO is a member of a business association with other large firms) generally reduced the impact of board ties (Haunschild and Beckman 1998). Having a banker on the board increased borrowing by firms from the mid-1950s to the early 1980s (Mizruchi and Stearns 1994; see the chapter by Stearns and Mizruchi in this volume for further discussion of the causes and consequences of firm-bank ties). And corporate ties to philanthropic leaders influenced the magnitude of charitable giving in the Twin Cities in the late 1970s and the late 1980s (Galaskiewicz 1997). Across a broad range of board-level decisions, it is evident that the social networks in which directors are embedded have strong influence on corporate actions.

Business Groups as Networks

The 1990s saw a much greater attention to business groups around the world. As Granovetter pointed out in the prior edition of this handbook, business groups are the norm in most industrial economies. These may take the form of family-based ownership groups or simply a set of affiliated companies. Unlike the types of networks described in the U.S. case, however, such groups are often quite exclusive in their ties, with member firms avoiding exchange with firms that are members of competing groups. Japan has two types of business group. Vertical networks are organized hierarchically around banks, while horizontal networks of cross-shareholding, interlocking directorates, and preferential exchange link large, established firms into relatively homophilous groups (Lincoln, Gerlach, and Takahashi 1992; Gerlach 1992). *Keiretsu* membership is consequential for performance, but the effects are quite complex: *keiretsu* members have lower performance on average, but over time the impact of group membership is in effect to speed regression to the mean, as low performers that are group members improve more rapidly than nonmembers, while high performers decline more rapidly than nonmembers (Lincoln, Gerlach, and Ahmadjian 1996).

Based on the evident success of the Japanese model and its Korean adaptation for rapid economic development (see Evans 1995), China has consciously emulated the business group model since the early 1980s. Unlike the case of Japan, however, group membership still had a positive performance benefit during the late 1980s, particularly in nonhierarchical groups (Keister 1998). The impact of within-group ties became even more important over time, according to data from the 1990s, and firm managers continued to express a preference for exchange with fellow group members (those they had done business with before) even when "cheaper" alternatives were available (Keister 2001).

The differences in performance among business groups between Japan and China may reflect their stage of economic development, as a frequently observed tendency is for groups to break down over time. Chilean business networks partially unraveled after the national push for privatization and the increasing prevalence of exchange-traded firms (Khanna and Palepu 2000). Kock and Guillén (2001) argue that this may represent a predictable trajectory, as entrepreneurs in the early stages of economic growth in late-developing nations can reap the greatest rewards as network builders connecting foreign technologies to local markets. This networking skill is broadly applicable across industries, and thus such entrepreneurs tend to build diversified business groups that are profitable early on but that eventually become unwieldy. Thus, diversified business groups tied by ownership links

may predominate in early stages of economic development but disperse at later stages. Even such unraveling still leaves certain network properties in place, however. Networks among German corporations formed by having a major owner in common continued to form a "small world" (in which companies are clustered in network "neighborhoods" but still connected by short paths to most other firms) during the mid-1990s, even after substantial changes in patterns of bank ownership and corporate governance. Firms connected by short common-ownership paths were also more likely to merge than firms connected by long paths (Kogut and Walker 2001). Ironically, and in precise contrast to Germany, U.S. corporate ownership became vastly more concentrated during the 1990s due to the growth and consolidation of a handful of financial service firms, and at decade's end 60 percent of large corporations were tied into a single network component based on common owners (Davis and Yoo 2003).

Aggregate Structures of Networks

The aggregate structure of an economy, like that of an organization or an industrial district, can be represented in network terms. In building their theory of financial hegemony, Mintz and Schwartz (1985) documented the overlaps between financial flows and ties among boards of directors, finding that financial institutions—particularly money center commercial banks—persistently held the most central positions. While this situation held for decades in the United States, it began to change in the 1980s as credit-worthy corporate borrowers increasingly moved toward market-based sources of financing; this in turn was reflected in the declining centrality of commercial banks in the overall intercorporate network (Davis and Mizruchi 1999). Yet in spite of major aggregate changes in banking, corporate governance, and the nature of the economy in the United States, corporate elites continued to be connected to each other through very few "degrees of separation," and the diameter of the corporate network remained quite stable in spite of the hollowing out of its core (Davis, Yoo, and Baker 2003). The German corporate ownership network proved similarly resilient in the face of globalization (Kogut and Walker 2001), indicating that a little bit of structure goes a long way in social networks (Watts 1999). As methodological tools, computing power, and cross-national data become more readily available, we may look forward to seeing more work of this sort with both historical and cross-national comparisons.

Networks in Economic Transitions

A taste of this future style of work appeared in a handful of excellent research articles documenting changes in firms and environments in the transition from socialism. Stark (1996) argued that firms responded to the new types of uncertainty arising in transition in Hungary by diversifying their assets and blurring their boundaries. Guthrie (1997) similarly found that Chinese firms in Shanghai responded to economic instability and administrative instability caused by reform by diversifying into fast-growth ventures in the service sector. Nee (1992) argued that China's transition should not be conceived as a linear process leading to a standard form of capitalism, but pointed to a lengthy, path-dependent, coevolutionary process in which collectives and state-owned firms would morph into hybrid forms ranging from nonmarketized firms to marketized firms to private firms. And Boisot and Child (1996) extend this notion to argue that China is developing a distinct form of "network capitalism" that is institutionally different from prior forms of capitalism. Network-based analyses of economic transitions should be one of the most fruitful areas of future work, applicable to a wide range of research topics at the industry and economy-wide level.

Conclusion

The years since 1990 have been an eventful period for the study of business organizations, marked by vast economic and political transitions. European economic integration, the breakdown of state socialism in Eastern Europe, China's transition to a hybrid form of capitalism, and the apotheosis of "shareholder value" in the corporate sector of the United States have all altered the face of national capitalisms. Financial markets spread and grew around the world, along with a neoliberal ideology about the proper route to economic growth. Transnational corporations elaborated production chains that spanned the globe, while new indigenous industries took root. Underlying the shifts in forms of finance and production were advances in information and communication technologies that substantially expanded the range of possible organizational structures and repertoires. While the

hype around the "new economy" was undoubtedly overdone, there was also real and fundamental change in the world of organizations.

These changes were reflected in the research reviewed in this chapter. In the late 1980s, it was straightforward to write a survey of firms and environments organized around discrete organizational theories (Davis and Powell 1992). This is no longer true. Economic transitions posed challenges for theories rooted in the experience of American corporations of the 1960s and 1970s. Economic activity in the world was no longer adequately captured by the old paradigms, which contemplated a world of states containing bounded organizations that in turn contained members. One might view this situation as a failure to build a research program on organizations qua organizations—yet organizational research proliferated. Rather, the work surveyed here displays an eclectic approach to theory rather than the prosecution of a fixed theoretical agenda.

In some sense, this makes the sociology of organizations more consistent with general trends in sociology as a discipline. Indeed, many researchers that would have been labeled organizational theorists now refer to themselves as economic sociologists. In practice, this has meant that the characteristic kinds of problems studied are not limited to those that flowed naturally from theories of organization, such as, "When should a firm make or buy an input?" or, "How does age affect organizational death rates?" Rather, researchers took on topics of broader sociological significance that could not be answered from within a particular organizational paradigm: How does national culture influence the shape of organizational fields? How do networks among corporations shape their response to legal changes? What happens when markets intrude on formerly "noneconomic" realms of organizational life? It was problems in the world more than problems of theory that drove most of the research described here.

The value of problem-driven research, of course, depends on what the "problem" is. Critics have argued that since its migration from social science departments to business schools, the study of organizations has been increasingly captured by business definitions of worthy problems (e.g., Stern and Barley 1996). Mayer Zald writes, "Organizational studies could be a powerful applied discipline if the scientific base of the field was strong. Since it is not, organizational studies follows the ratings, responding not only to academic fads, but to the whims and foibles of academic hucksters and the problem definitions of corporate executives" (1993, 514). But problem-driven research need not be mere hucksterism or current events: consider *The Eighteenth Brumaire of Louis Bonaparte* or *The Protestant Ethic and the Spirit of Capitalism*. The tension is perhaps between aspirations to grand theory, on the one hand, and to making sense of the intersection of biography and history in social structure on the other (Mills 1959). In times of social change, social research might do better in the middle range. One could try to unite the diverse threads of organization theory with an overarching framework: Aldrich (1999) suggests that evolutionary theorizing can subsume much of the field, and makes a heroic effort to bring a vast amount of work under a big tent organized around variation, selection, and retention. But as Gould (1997, 50) writes, "If we want a biological metaphor for cultural change, we should probably invoke infection rather than evolution." To the extent that organizational change is cultural change, then perhaps we should use a broader set of tools.

Eclecticism in problem-driven work can easily devolve into dilettantism. Yet many of the studies we have considered provide a model of how to use organization theory as a toolkit to be drawn on for elements of explanation. A pragmatic approach uses theory to answer questions better, rather than as dogma. Thus, when explaining widespread change in the mix of organizations, voluntary change in response to student preferences provides an explanation for why liberal arts colleges turned into trade schools (Kraatz and Zajac 1996); organizational births and deaths in the face of political and demographic shifts accounts for changing forms of S&Ls in California (Haveman and Rao 1997); and legal changes enabling hostile bust-up takeovers, followed by changed growth norms, led to the decline of the conglomerate in the United States (Davis, Diekmann, and Tinsley 1994). Mass adaptation, births and deaths, and coercive change are all bits of "sometimes-true theory" that can be drawn on to make sense of events in the world. If the next two decades are like the last two, we can expect to see still more theoretical eclecticism in the economic sociology of organizations in response to social change in the broader world.

Notes

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1. James Scott describes the ideology of "high modernism" in his book *Seeing Like a State* (1997). The core idea is that clearly bounded and centrally administered territorial states could improve the human condition using scientific principles of rational bureaucratic control.

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