Chapter 8

Managing Organizational Environments: Conceptions of the Environment

OVERVIEW

Our discussion of organizations has, at various points, underscored the importance of factors that are not directly under an organization's control but that affect what it is likely to do—a vast array of influences included under the rubric of "organizational environments." In this chapter, we consider some of the different approaches to conceptualizing organizational environments, first discussing early efforts to identify broad, key dimensions of environments, then describing a line of work examining interorganizational relations (IORs) as a key aspect of environments, and finally discussing contemporary studies that have focused on a variety of selected aspects of organizations' environments. In the following chapter, we continue this discussion by describing a number of broad theoretical paradigms that focus attention on how particular aspects of organizational environments affect particular outcomes.

One definition of the environment is that offered by Hawley: "all phenomena that are external to and potentially or actually influence the population under study" (1968:330). (Hawley used the term *population* to refer to social collectivities more generally—from societies to ethnic groups—but as used, it would also apply to individual organizations.) This gives you some idea of the scope of the phenomena considered in this chapter. That the environment of an organization strongly affects what it does and its outcomes may seem like such an obvious claim that it's hardly worth spending the ink to print it, but surprisingly, early studies of organizations often gave short shrift to the consideration of environmental influences. As we noted in Chapters 2 and 3, much of this work treated organizations as closed systems, focusing largely, if not exclusively, on relations among different components and features of an organization itself in explaining how and why it had a particular structure, how well it performed, and so forth. We also noted a number of reasons for this focus, such as the pragmatic concerns of some researchers, which led them to concentrate on those aspects more amenable to an organization's control and alteration; environmental factors are often much harder to change. Another possible reason for taking a closed-systems approach, though, is the sheer scope of trying to conceptualize, in some coherent fashion, all of the factors that make up the environment.

"DISCOVERING" ORGANIZATIONAL ENVIRONMENTS

Despite initial predispositions toward a closed-systems approach, a number of studies that ostensibly set out to understand relations among internal components of organizations ended up underscoring the need to consider environmental influences on organizations. One line of research that was particularly important in this respect was that produced by students of sociologist Robert Merton in the years following World War II. We referred to this work earlier (see Chapter 2) when we discussed the influence of structural-functionalist theory on early studies by sociologists of organizations. As we noted, this theoretical framework directed sociologists' attention to the analysis of the functions that existing structures served, in terms of enhancing collectivities' day-to-day interactions and operations and, ultimately, their survival. One of the major architects of this theoretical tradition was a sociologist, Talcott Parsons, and one of the common criticisms of Parsons' work was that its emphasis on the functional consequences (or the benefits) of existing structures made it difficult to explain why structures ever changed (Collins, 1994; Collins and Makowsky, 2005; Turner and Beeghley, 1981).

Robert Merton, a student of Parsons and a prominent theorist in his own right, sought to address this criticism by proposing a theory of structural change that was consistent with the general logic of functionalism. Merton (1949) argued that structures typically develop as solutions to recurring problems faced by a collectivity; thus, existing structures do have manifest or intended consequences. However, structures also often have latent, or unintended, consequences; such latent consequences *can* be beneficial for the collective, but they are often negative—they create new problems. To give an example from a classic functionalist explanation for social stratification offered by Davis and Moore (1945), if a social group has trouble finding individuals who are able and willing to carry out certain tasks that the group wants accomplished, it may assign higher rewards to these tasks in order to induce individuals who have the requisite skills to do them. Getting the tasks done competently would be the intended consequence of this arrangement. An unintended consequence might be envy and conflict among group members, created by perceived inequities in the assignment of rewards. Merton suggested that changes in structures were likely to occur when the positive consequences of existing structures (presumably manifest consequences are always positive) were exceeded by latent, negative consequences. Following the example, if inequality creates too many problems among group members, either the reward system will be changed or the collectivity will implode as its members revolt or leave.

To provide empirical evidence for these sorts of general arguments about structural change, Merton and his students (e.g., Blau, 1955; Gouldner, 1954; Selznick, 1966) began to study organizations, with the notion that an organization could be viewed, in many ways at least, as a society in microcosm. This line of studies has three common characteristics: (1) they are typically case studies—rich, detailed descriptions of day-to-day life in organizations; (2) they focus on the interrelations among different organizational components, particularly on the way in which changes in one component lead to changes in others; and (3) they duly detail both the intended and the unintended consequences of organizational structures. As Perrow (1986:164) noted, work in this tradition provides some of the most interesting and readable academic analyses of organizations that have ever been published.

Perhaps ironically, although the explicit focus of this research was on understanding changes *within* organizations, one of the unintended consequences of this line of work was to draw attention to the importance of environmental forces. For example, Blau's (1964) study of a state employment office examined how changes in the record-keeping system for personnel affected individual behaviors and relations among coworkers, but as he reports, a major force for changing the record-keeping system in the first place came from outside the organization—a very weak labor market at the end of World War II, which made it much more difficult for the organization to achieve its goals of helping job seekers get jobs. Likewise, Gouldner's (1954) study of a gypsum mine and manufacturing company focused on the impact of changes in leadership on the use of rules, supervisory practices, and the general relations between workers and management. However, his account indicated that an important part of the impetus for leadership change came from increasing pressure the company faced from its competitors, raising the need for greater efficiencies in organizational operations. Selznick's (1966) study of the Tennessee Valley Authority focused on how its efforts to ensure the democratic representation of constituents' preferences in its decision-making led to its co-optation by wealthier farmers. As Selznick notes, the initial mandate for democratic representation, though, reflected the influence of widespread, negative social attitudes during this era toward elite-dominated economic organizations. Thus, cumulatively, work in this tradition clearly indicated that neglecting the role of environmental forces in explanations of the behavior of organizations was a key oversight (Hinings and Tolbert, 2008; Tolbert and Zucker, 1996).

DEFINING THE ENVIRONMENT

Core Dimensions

As suggested by our opening remark in this chapter, however, how to think about the vast array of factors denoted by concept, "the environment," is a challenge, one that organizational theorists are still wrestling with today. Some of the earliest efforts to address this problem produced rather abstract catalogs of different dimensions of environments (e.g., Emery and Trist, 1965; Levine and White, 1961; Terreberry, 1968). Because you still see references to these dimensions in more contemporary literature, we follow the synthesis offered by Aldrich (1979; see also Aldrich and Marsden, 1988), to give you a sense of this approach.

One often-mentioned dimension is "environmental capacity," which refers to the level of resources available to an organization. At a general level, this is a joint function of the demand for the goods and services an organization offers and the number of other organizations also offering the same kinds of goods and services. Capacity can be characterized at one extreme as "rich" (lots of resources) and at the other as "lean." Environmental capacity affects organizations' opportunities for growth, the degree of constraint they face in making decisions (March and Simon, 1958), and, ultimately, their chances for survival. This dimension relates to a key focus of one contemporary paradigm known as population ecology, which we'll discuss in the next chapter.

A second dimension is termed "heterogeneity," and this refers to the degree to which the organization faces very different demands by constituents. For example, a hotel that serves a range of clients, from families to business travelers to conventioneers, faces a more heterogeneous environment than one that focuses on serving young, affluent adventure travelers. Dealing with an array of constituents who have different expectations and demands makes decision-making more complicated but may also offer more opportunities for attracting resources and for dealing with fluctuations in support from a given set of constituents (Dowell, 2006).

A third dimension is "stability"; this taps a temporal aspect—the rate at which change occurs in products, clients, funding, or other elements of the environment, changes to which the organization has to respond if it is to survive (Barnett and McKendrick, 2004; Gersick, 1991; Meyer, 1982). High levels of instability require organizations to be able to change quickly without becoming unreliable and/or wracked by internal conflict. Below, we describe in some detail a well-known study by Lawrence and Lorsch (1967) that suggests the ways in which organizations that operate in stable and unstable environments are likely to differ.

A fourth dimension is referred to as "environmental concentration"; this refers to the distribution of resources used by the organization across geographical and/or temporal space. You could think of this as the environmental analog of spatial complexity; the greater the environmental concentration, the less likely is an organization dealing with this environment to be spatially complex. The concentration of resources may also be related to other aspects of the environment, in particular to competition with other organizations (Aharonson, Baum, and Feldman, 2007).

A fifth dimension sometimes discussed in the literature is "domain consensus." This involves the degree to which there is agreement among related organizations and other groups in society about which organizations have the right to provide particular goods and services to whom. For example, when a crime is committed on a university campus, there is sometimes disagreement among different law enforcement agencies (e.g., campus police, municipal police, the Federal Bureau of Investigation) over which agency should direct and control the investigation; this state reflects a lack of domain consensus. A lack of domain consensus often entails increased competition among organizations and may lead them to seek state or even international regulation to reduce this (Abbott, 19881; Halliday and Carruthers, 2007).

The last dimension that we will discuss is one denoted as "environmental turbulence." This is related to environmental instability, but it is instability that is associated with a particular feature of IORs: close interconnections among a set of organizations, or very dense networks, such that change that affects any one of them produces a domino effect among the others. Strong ties between organizations often provide them with access to important information and other resources (McEvily and Marcus, 2005), but as the recent cases of the Enron Corporation and Barings Bank suggest, these can also create problems when one key organization in a network fails.

Interorganizational Relations

In contrast to such an abstract approach to thinking about the nature of organizational environments, an alternative approach taken by some researchers focused on organizations' ties to other organizations, examining both factors that affected the formation of such ties and the exchange of resources through the ties. Implicitly, this approach was premised on the assumption that other organizations represented a key (if not *the* key) aspect of a focal organization's environment (Haunschild and Miner, 1997), and it laid the foundation for some of the general theoretical perspectives that we'll discuss in Chapter 9, especially resource dependence. Early studies of IORs were prompted in part by the rapid growth of government-funded social service agencies in the 1960s, as part of the Great Society and War on Poverty programs begun under President Johnson (Levine, White, and Paul, 1963; Turk, 1975). Such growth, and increased government spending that accompanied it, generated concerns about duplication of efforts by different agencies and interest in bringing about better coordination among agencies in order to reduce inefficiencies and overall costs. Thus, much of the research in this area was focused on factors that affected the development of IORs, with an eye to encouraging such developments (Cook, 1977; Levine and White, 1961; Litwak and Hylton, 1962; Warren, 1967). In line with this, a consistent finding from the research on IORs among social service agencies is that strong ties contribute to improved health and social care at the community level (Alter and Hage, 1993; Goes and Park, 1997; Provan and Milward, 1995). The lack of ties among agencies may partly explain some of the observed social inequality in health care and other social outcomes. For example, a study by Galaskiewicz and Shatin (1981) indicated that poor neighborhoods draw fewer social service organizations and the organizations that are located in these neighborhoods have few interorganizational linkages. Hence, not only do poorer neighborhoods have fewer organizational resources, those resources may not be used as effectively as possible because of the absence of IORs among agencies that provide services.

Forms of Interorganizational Relations. Three basic forms of IORs have been studied. These are illustrated in Figure 8-1. The dyadic or pairwise relationship is the simplest form of IOR and has probably received the most attention in empirical research. Research focusing on this form typically concentrates on understanding characteristics that make organizations compatible exchange partners.

The notion of an interorganizational set was derived from work on individuals' role sets (Merton, 1957) and was introduced into the literature on organizations by Evan (1966) and Caplow (1964). Analyses focusing on this form typically examine a focal agency (FA in Figure 8-1) and its dyadic relationships with other organizations; key questions addressed by work taking this approach include how do different ties simultaneously affect the functioning of a focal organization and what conditions facilitate or hinder the maintenance of multiple ties.

The third form of IOR is the interorganizational network, which consists "of all organizations linked by a specified type of relation and … constructed by finding the ties between all organizations in a population" (Aldrich, 1979:281). Networks are "the total pattern of interrelationships among a cluster of organizations that are meshed together in a social system to attain collective and self-interest goals or to resolve specific problems in a target population" (Van de Ven and Ferry, 1980:299).

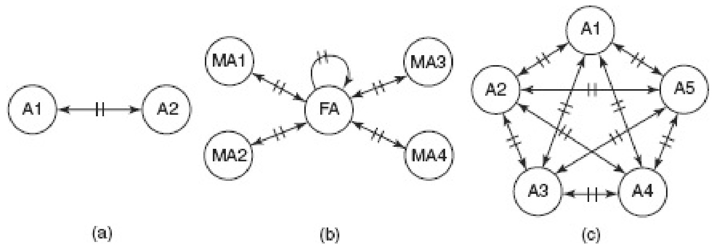

FIGURE 8-1 Forms of Interorganizational Relationships

Pairwise or Dyadic Interorganizational Relationships. Most of the early work on IORs dealt with dyadic relations and attempted to identify the conditions under which a given organization might form a tie to another organization and factors that affected the strength of such ties (Klonglan et al., 1976; Levine and White, 1961; Litwak and Hylton, 1962; Molnar, 1978).

A basic precondition for IORs suggested by this literature is awareness. Van de Ven and Ferry (1980) propose two levels of awareness. One level involves basic knowledge of the goals, services, and resources present in other organizations. This awareness provides some insights into potential interdependence or reasons to form ties (Litwak and Hylton, 1962). The second level of awareness involves interpersonal ties among organizational personnel (Boje and Whetten, 1981). These can involve "old school" ties, membership in common professional organizations, membership in common religious or fraternal organizations, simple friendships, or contacts that are based solely on work. Interpersonal ties facilitate the initiation of interorganizational interaction and, ultimately, longer-term relationships (Galaskiewicz and Shatin, 1981). In line with this, a study of hotels in Sydney, Australia, revealed that friendship ties among hotel managers yielded enhanced collaboration and information exchange and mitigated competition (Ingram and Roberts, 2000). Similarly, research has shown that the existence of personal ties between members of auditing firms and their organizational clients contributes to the maintenance of such IORs over time (Seabright, Levinthal, and Fichman, 1992).

A second determinant of IORs that has been suggested is domain consensus. We discussed this previously in terms of work that sought to identify broad dimensions of organizational environments. In the literature on IORs, this concept refers specifically to agreement among organizations about the roles that they can and should play relative to one another, in regard to their programs and services and clients. When organizations have overlapping domains and cannot agree on which organization will be responsible for which set of clients or activities, they are unlikely to form enduring IORs (0). Ideological factors, including the compatibility of the goals of the organizations involved, common understanding of the nature of the sources of basic problems, and consensus on accepted treatment approaches, also affect domain consensus (Benson et al., 1973; Boje and Whetten, 1981; Mulford, 1980). For example, research has indicated that reproductive services organizations that are predicated on very different views of client–provider relationships are more likely to have clashes between staff members, making it difficult to sustain a relation (Zilber, 2002).

Yet another influence on the formation of IORs, which has received relatively less attention, is geographical proximity, or the spatial distance between organizations. It is more difficult for both organizations and individuals to establish or maintain relationships across distances. Proximity often enhances knowledge or awareness of other organizations and facilitates interaction among personnel from different organizations. The importance of proximity in shaping IORs may depend on the degree to which organizations are dependent upon a local area for their resources (Galaskiewicz, 1979; Maas, 1979). If organizations with localized dependence are successful in commanding local resources, they are more powerful or central in the network of organizations in a community, and this may enhance their ability to form IORs. If, on the other hand, there is high localized dependency with relatively weak access to resources, a given organization may be much less attractive as a partner to other organizations. It can also be noted that the type of unit involved in an IOR interacts with the spatial issue. Modern communication techniques permit the rapid flow of information across space, but clients or staff members are more difficult to transfer.

A final influence on IORs is the size of the actual or potential set or network of organizations (Litwak and Hylton, 1962). This is relevant because it affects the number of organizations available to form ties at any given point in time. Turk (1973) found that the scale of municipal government was positively related to the development of IORs. Increased size may provide general resources that enable organizations to engage in IORs. The number of organizations in a given setting may also affect the strength of IORs that are formed: when organizations form large numbers of IORs, the quality of the relationships weakens (Caragonne, 1978; John, 1977). An analogy with individuals is appropriate here. Many ties reduce the likelihood of each tie being strong, so that there would be a greater proportion of superficial linkages or IORs in a large network than in a smaller network.

Joint Ventures and Strategic Alliances. Current interest in dyadic IORs is reflected in a spate of studies on joint ventures and strategic alliances among business firms. Such activities represent a relatively strong form of IOR, often involving substantial resource commitment and collaboration between two (and sometimes more) organizations in order to accomplish some common goal (Ahuja, 2000; Beckman, Haunschild, and Phillips, 2004). Participating organizations invest resources and pursue "enduring exchange relationships with one another" (Podolny and Page, 1998:59). One example of such collaboration is provided by the hybrid electric vehicle (HEV) project that was begun in 1993, with funding provided jointly by General Motors, Ford, and Chrysler, along with the support of the Department of Energy. The HEV project involved creating a new, separate research and development unit, whose goal was to produce a market-ready vehicle that could operate on electric power within ten years (http://www.nrel.gov/vehiclesandfuels/hev/about.html); all three firms would share in the benefits of the research outputs of this project.

Interestingly, recent work on joint ventures and strategic alliances among business firms has replicated findings from earlier studies that focused on nonprofit social service agencies. It has documented both the importance of interdependencies among firms as a basis for forming such IORs (Khanna, Gulati, and Nohria, 1998; Litwak and Hylton, 1962) and the self-perpetuating tendencies of such ties. For example, Gulati (1995b) found that firms that entered into strategic alliances with another firm had a significant probability of entering into another alliance with the same firm at a later time point; this finding echoes the results of earlier research by Aiken and Hage (1968) on joint programs among social service agencies, which showed that establishing one joint program tended to foster other joint programs.

The Interorganizational Set. As noted, the approach to IORs as an interorganizational set is derived from work on individual-level role sets (Merton, 1957). The key finding of this latter work is that the way a person enacts a given role (e.g., student) is conditioned by other role statuses that she or he occupies (e.g., sorority president, daughter, rock band singer). By the same token, the notion of interorganizational set draws attention to the way in which a given dyadic relation that an organization has with another is likely to be shaped by other IORs the organization has. On the basis of this idea, Evan (1966) offered a number of provocative hypotheses about the way in which the characteristics of the set of organizations to which a focal organization was tied (e.g., the degree of congruence in key values, concentration or dispersion of resources among the organizations in the set, and the total number of interconnected organizations) influenced the focal organization's autonomy and decision-making processes. Many of these arguments are reflected in the theoretic tradition of resource dependence, discussed in Chapter 9.

However, this approach has been given relatively little attention in empirical studies. One key exception is research by Fennell (1980) on hospitals, addressing a problem that initiated much of the IOR studies: factors that affect coordination in the delivery of social services. Her analysis focused on hospital clusters—sets of hospitals within a geographically defined region—and the impact of suppliers to the cluster (doctors in the area) and the set of consumers (potential patients in the area) on differentiation in a cluster. The more each hospital offered distinct services (that didn't overlap with those offered by other hospitals), the more differentiated the cluster was. Her results indicated that cluster differentiation was driven much more by suppliers than consumers: as hospitals within a cluster competed to attract more prestigious physicians, thereby enhancing the organization's prestige, they were led to offer more unique services, regardless of the characteristics of the consumers.

Interorganizational Networks. In recent years, researchers have given particular attention to interorganizational networks, perhaps partly because of the development of more sophisticated analytic tools for studying networks. (For a good description of the development of network analysis, see Scott and Davis, 2007.) Networks of organizations can be incredibly complex. Figure 8-2 depicts the network of organizations involved in human organ transplantations. The characteristics of the organizations that compose the network are important in determining outcomes—for example, whether patients receive transplants when they need them (Healy, 2004)—but the quality of relationships among the organizations may be equally, if not more, critical.

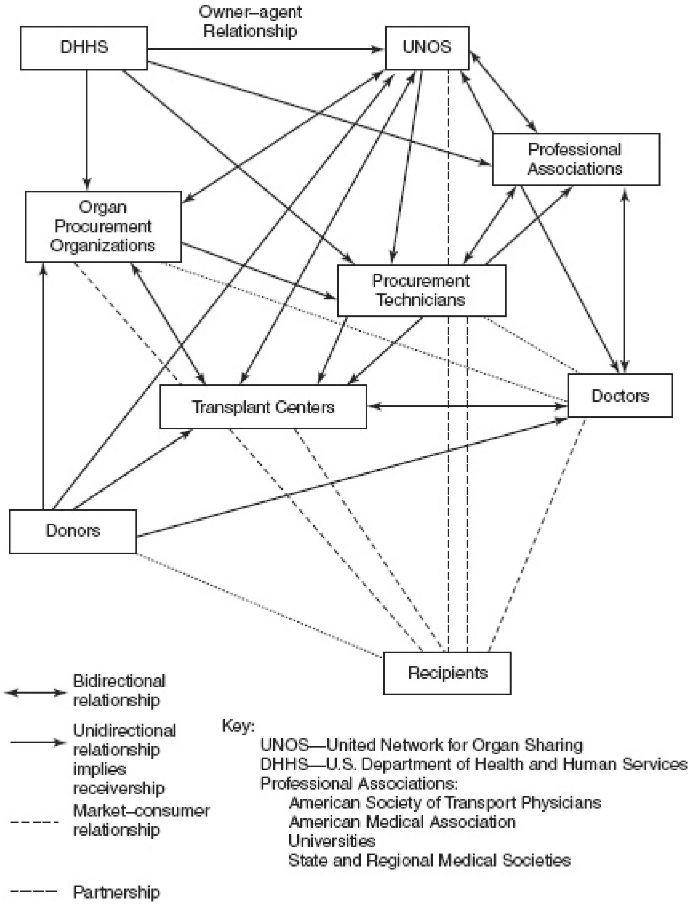

FIGURE 8-2 The Human Organ Transplantation Network

Source: Leslie A. Korb, "The Organ Transplantation Network: A Qualitative Examination of Power, Professionalism, Efficiency, Congruence and Compliance among Stakeholders" (PhD diss., University at Albany, Albany, NY, 2000). Reprinted by permission of Leslie Kolb.

Examination of networks has provided important insights that would be missed in studies of individual organizations. For example, research suggests that when the knowledge base of an industry is both complex and expanding, the locus of innovation is apt to be in networks rather than individual firms (Powell, Koput, and Smith-Doerr, 1996). Moreover, studies of business organizations have provided ample evidence that network relations strongly influence economic decision-making (Broschak, 2004; Gulati and Gargiulo, 1999; Jensen, 2003; Uzzi, 1997). Network researchers argue that this is because organizational decision-makers are "embedded" in social relations (i.e., are part of networks) that provide them with information about different options and, perhaps more importantly, influence their assessment of the value of different options and thus guide their choices (Burt, 1992; Granovetter, 1985). Hence, in contrast to traditional economic approaches, which treat decision-makers as essentially atomistic (unaffected by the constraints of social norms), network research is predicated on the assumption that social relationships, and the norms associated with these relationships, are key to understanding economic behavior, including organizational actions. In line with this approach, studies have shown that, independent of other factors, network ties influence firms' decisions to enter new markets (Jensen, 2003), to engage in mergers with other firms (Kogut and Walker, 2001), and to charge different rates to different sets of customers (Uzzi and Lancaster, 2004)—decisions that, ultimately, shape firms' chances of survival (Uzzi, 1996).

Interlocking Directorates. So how do organizational networks work? How do they influence what organizations do? Much of the existing research on this topic has concentrated on ties between organizations created by connections among top-level members of organizations and, in particular, on ties between individuals who are on the boards of directors of different organizations. These ties are referred to as "interlocks," and organizations that are connected by shared board memberships are characterized as having "interlocking directorates." Interlocks can take different forms. Direct interlocks occur when a member of one organization joins the board of directors of another organization. Indirect interlocks occur when members of two organizations sit on the board of a third organization (Burt, Christman, and Kilburn, 1980), thus providing a link between the first two organizations.

A common assumption in this literature is that individuals from different organizations who regularly attend board meetings for a given organization share information about policies and practices at such meetings (and perhaps outside the meetings as well), based on their own experiences and observations. In the most benign view, such interactions provide organizations with similar information about common problems and contribute to the development of shared responses to such problems (Haunschild and Beckman, 1998). Less benignly, interlocks are viewed as providing a foundation for collusion, co-optation, monitoring, and social cohesion among organizations (Mizruchi, 1996). This more negative view goes back at least to 1913, when U.S. Supreme Court Justice Louis Brandeis warned that such interlocks contain many evils, such as the suppression of competition (Pennings, 1980b).

This jaundiced view of the potential power associated with interlocking directorates is reflected in one line of research that draws on Marxist theory in portraying interlocks as a mechanism through which a capitalist class can act in concert to protect its economic interests. C. Wright Mills (1956), a prominent sociologist, expounded on this approach, echoing President Eisenhower's suggestion that a "military–industrial complex" had come to dominate in the United States' political and economic life, formed through regular interactions among the leaders of large business corporations, the military, and government organizations. Interlocking directorates, presumably, provided a key vehicle for such interactions. The extent to which a self-conscious capitalist class existed and whether the members acted coherently to advance class interests were ongoing points of debate among researchers studying interlocking directorates throughout the 1970s and 1980s (Domhoff, 1971, 1983; Galaskiewicz et al., 1985; Mintz and Schwartz, 1981; Palmer, Friedland, and Singh, 1986; Useem, 1979, 1982, 1984). Based on Canadian evidence, Ornstein (1984) concluded that corporate imperatives and class solidarity factors operate in interlocks. Using data from a U.S. Senate committee, Kerbo and Della Fave (1983) found evidence of an "intercorporate complex" of major corporations, with banks in a central coordinating position. They also found evidence for an inner group of the "corporate class." An analysis of the 1980 congressional elections found that corporate contributions to political action committees (PACs) for these elections were based on class-wide rational actions (Clawson and Neustadt, 1989).

Many network studies have documented the key role played by financial institutions as sources of interlocks in the United States (Keister, 1998; Mizruchi, 1989, 1992). By World War I, commercial banks, investment banks, and insurance companies were the most likely organizations to have their members on the boards of other types of organizations (Pennings, 1980a,b). This situation was, however, a shift from the one that prevailed in the previous century, when railroads, along with the telegraph and coal industries, were at the core of interlocks (Roy, 1983a,b; see also Mizruchi and Bunting, 1981). More recent work suggests, though, that neither banks nor any particular sector dominated interlocks by the late twentieth century. Beginning in the late 1980s and through the 1990s, corporations began to rely more on markets than commercial banks as sources of financing, and banking representatives were found less and less often on corporate boards of directors (Davis and Mizruchi, 1999; Mizruchi, 2004).

Current work on interlocks has focused less on these as a reflection of self-conscious class action and more as a means by which organizations can attempt to manage uncertainty in their environments. Interlocks can provide access to resources. Although banks may have become a less prominent part of interlocking directorates overall, research suggests that organizations experiencing financial problems such as declining solvency and declining rates of profit are apt to seek out directors from financial institutions (Mizruchi and Stearns, 1988). Interlocks also provide organizations with access to information, including ideas about how to deal with common problems. In the 1980s, when many corporations were facing the threat of takeovers by corporate raiders, interlocking directorates became a key source for the spread of poison pills (Davis, 1991), a strategic arrangement that substantially raised the cost to individuals or organizations of taking over a targeted firm through stock purchase. Interlocks also result from organizations' efforts to increase their prestige by putting individuals from high-status organizations on their boards. Research carried out in the Minneapolis–St. Paul metropolitan area (Galaskiewicz, 1997; Galaskiewicz et al., 1985) found that socially elite individuals who were associated with large corporations were disproportionately represented on boards of directors. According to Galaskiewicz et al. (1985; Galaskiewicz, Bielefeld, and Dowell, 2006), both "clout and grace" contributed to the densest interlocks, as economic power and higher social standing made companies and people attractive to one another.

The Galaskiewicz studies dealt with interlocks and corporate philanthropy and documented some interesting linkages at levels below the boards of directors. This research showed that "corporate contributions officers," who hold staff positions well below the top executive level, often have cohesion with one another since they have similar-to-identical role relationships, and ties at this level importantly contributed to the "contagion" in philanthropy that was identified in the Minneapolis–St. Paul area (Galaskiewicz and Burt, 1991). Less research has focused on organizational ties created by individuals at lower levels of the organization (though see Levinthal and Fichman, 1988), despite the fact that such ties may have important influences on organizational decision-making as well as ties at higher levels.

Although research has demonstrated the importance of boards for organizations as diverse as the Young Men's Christian Association (YMCA) (Zald, 1970) and the United Way (Provan, Beyer, and Kruytbosch, 1980), as well as large corporations, some analysts believe that the actual power of boards of directors is often much more limited than their position in the organizational hierarchy would indicate. Although, technically, boards of directors have the right to remove top administrative officers (James and Soref, 1981), frequently the executive officers have greater knowledge of the problems facing organizations than members of the board and can thus control the situation (Berle and Means, 1932). Some studies have shown that at least in some cases the board of directors has little effect on the behavior of managers (Fligstein and Brantley, 1992). Researchers are still seeking to identify conditions under which outside board members (excluding those employed by the organization) will have relatively more or less power vis-à-vis top corporate officers (Belliveau, O'Reilly, and Wade, 1996; Boeker, 1992; Davis, 2005; Ocasio, 1994; O'Connor et al., 2006; Zajac and Westphal, 1996), an issue that has become increasingly salient in the wake of the array of spectacular cases of corporate official misconduct in the last decade (Tolbert and Hiatt, forthcoming).

Selected Aspects

Yet another tack taken by researchers to understanding environmental influences on organizations has been to concentrate on analyzing the effects of selected aspects of environments. To give you a sense of this approach, we discuss four streams of research that have addressed one of the following aspects of the environment: (1) rates of technological change, (2) the passage of laws and regulations, (3) pressures from political actors, and (4) shifts in the demographic composition of clients and/or the workforce.

Technological Conditions. We discussed work on the impact of technology on the formal structure of organizations in Chapter 3. Much of that work was premised on the assumption that an organization was characterized by a given technology, which might vary in terms of how difficult for individuals to apply it (how much knowledge and skill they must have) or to what extent it required coordination of the activities of different individuals. However, little attention was given to the issue of how often the technology itself was apt to change. When we talk about technological conditions as part of the environment, we are talking about the latter aspect: how much the equipment, knowledge and skills needed in the production process, and the products themselves change over time.

New ideas come into circulation and become part of the environment as soon as they cease being the private property of any one individual or organization. Since sciences have norms of distributing knowledge, scientific developments become part of the public domain as a matter of course. A development that can be patented is a different matter, but if it is thought to be significant, other organizations will seek to buy it, copy it, or further extend the previous development. Thus, technological change is determined by conditions that are external to the organization, conditions that can lead to "creative destruction"—forcing organizations to keep up with the changes or die (Schumpeter, 1934). In consequence, organizations face pressures to respond to technological developments in the environment that are crucial to their continued success (McEvily, Eisenhardt, and Prescott, 2004; Zucker, Darby, and Brewer, 1998).

A classic study by Lawrence and Lorsch (1967) focused on this aspect of organizations' environment. Their research examined firms in three industries that varied in terms of the level of change in customers' demands for new kinds of products (a dimension they denoted as "the market"), the frequency with which new production equipment required to create the products was developed (called the techno-economic dimension), and the certainty of means-and-ends knowledge that characterized production (the science dimension). One industry contained firms involved in the production of plastic goods; this industry was characterized by a high level of technological uncertainty. According to interviews with firm managers, firms in the industry faced the continual need to develop new and revised products, which typically had very short life cycles. Perhaps most importantly, the state of knowledge involved in producing new products was extremely uncertain. Lawrence and Lorsch (1967) quote one manager on this issue:

> We very often know the performance characteristics required by a customer or for a new application, but as far as research is concerned, you might as well be asking for the perfect plastic. We have to be concerned with technical feasibility right from the start, and then you don't know as you are involved in a lengthy testing and development process. (p. 25)

In all of the firms in this industry (they studied six), special organizational divisions devoted to research and development were established to keep the organization technologically current.

To more fully understand the impact of such technological conditions on organizations, Lawrence and Lorsch also studied organizations in two other industries: two firms in the standardized container industry (beer bottle manufacturers) and two firms in the packaged foods industry. The first industry was by far the most stable of the three: in the 1960s, beer bottles were almost all brown and held 12 ounces, and no significant changes in the products had occurred in years. The main problems facing organizations in this industry were ensuring "prompt delivery and consistent product quality while minimizing operating costs" (Lawrence and Lorsch, 1967:86). As one of the managers interviewed put it:

> As far as this business is concerned, there is no innovation. If you really want to grow in this business, you have got to have strategically located plants … well-placed throughout the country to give instant service. (Lawrence and Lorsch, 1967:89)

The technological conditions facing organizations in the packaged foods industry were intermediate to those faced by firms in the standardized container industry, on the one hand, and those in the plastics industry, on the other. There was some pressure to be innovative (to come up with "new and improved" products), but core changes in the products and production processes were much less frequent and more predictable than in the plastics industry. Again, quoting a manager from this industry:

> This is a profitable business, which is an intensely competitive market, but not a very price-sensitive one. The top competition takes the form of a very intensive merchandising effort around new product innovations. (Lawrence and Lorsch, 1967:89)

Lawrence and Lorsch's main conclusions were compatible with the basic logic of contingency theory: the kind of structure that was most effective (i.e., associated with strong financial performance) varied by the kinds of technological conditions with which the organizations had to deal. Key departments within the firms in the plastics industry tended to be highly differentiated in terms of formalization, members' definition of organizational goals, views of appropriate interpersonal relations, and time orientations. High levels of differentiation, Lawrence and Lorsch suggest, were beneficial to firms in managing the complex and changing environment. Increasing differentiation, though, created problems of conflict and coordination among the departments, and this required more elaborate arrangements to ensure coordination and deal with conflict (e.g., creation of specific positions and offices just to manage these problems)—to achieve integration, in their terms. Thus, the most effective firms in the plastics industry were both highly differentiated *and* highly integrated. This did not hold for the firms in the container or packaged foods industries. Successful firms in the former industry were much less differentiated, whereas firms in the latter industry were somewhere between those in the container and plastics industry; and this characteristic was much less strongly related to firm effectiveness.

Thus, whether an organization's environment is characterized by frequent or infrequent changes in core technology strongly shapes its formal structure, by influencing the relative importance of adaptation versus reliability as critical determinants of survival. Moreover, the structure of "high technology" firms, those in which the key technologies are rapidly evolving, often reflects the occupational standards and practices (another aspect of the environment) that subgroups in the organization accept—research scientists, engineers, and other professional groups (Barley and Tolbert, 1991; Burton and Beckman, 2007; Zucker, Darby, and Torero, 2002).

Legal Conditions. Another environmental dimension that has received an increasing amount of attention from organizational researchers in recent years involves the laws that govern organizations. As Coleman (1974) pointed out, organizations are, fundamentally, legal creations—laws define the right of organizations to exist as well as the kinds of actions they can undertake and the rules that they must follow. Laws even define how organizations can "die," via dissolution or merger. Both the existence and the integral role of growing staffs of legal experts in many organizations and the trend toward lawyers serving as chief executive officers are indicative of the critical nature of legal conditions for organizations (Priest and Rothman, 1985). Given the importance of laws and regulations, researchers gave surprisingly little attention to the ways in which the legal environment shapes the structure or the outcomes of organizations for a long time. It is only within the last two decades that researchers have begun to explore these issues.

As Edelman and Suchman (1997) point out, the legal environment affects organizations in at least three major ways. One effect they refer to as "facilitative," which means laws provide procedures to be followed in forming organizations, in creating contracts and engaging in transactions both with individuals and with other organizations, in merging with other organizations, and so forth. In short, the legal environment can facilitate decision-making in organizations by providing guidelines so that terms and arrangements don't always have to be negotiated or created de novo. A second effect is termed "regulatory," which refers to the active monitoring and sanctioning of organizations when they fail to comply with laws, such as requirements related to worker health and safety, nondiscrimination in employment, environmental pollution. A third effect, which is a little more esoteric, is referred to as "constitutive." This refers to the law's ability to create social categories or definitions that, once accepted, almost invisibly shape organizational decision-makers' understandings of what issues should be taken into account in designing and operating organizations. For example, the idea that it is unfair to treat individuals differently because of gender was, not so long ago, completely foreign to many employers (and employees) in the United States. The Civil Rights Act of 1964 created gender discrimination as a new form of discrimination, and this categorization has had a major impact on organizations. Edelman and Suchman (1997:484) note that "this aspect [the constitutive] of the legal environment provides the fundamental definitional building blocks that undergird the other two [facilitative and regulative]." Work on the latter aspect of the law is closely tied to an institutional theoretic approach to analyzing organizations, which we described in Chapter 3.

Much of the current work on legal environments has focused on the way in which organizations respond to changes in employment law by modifying their formal structures. For example, Baron, Dobbin, and Jennings (1986) examined the way in which government regulations of employment practices, put in place during World War II to minimize disruptions in industrial production, led to the development of many now-commonplace organizational arrangements, including the use of job analyses to determine the appropriate wage for a job, the use of tests for selecting and promoting employees, and the creation of personnel directors to oversee compliance with government rules. Analyses by Edelman (1990, 1992) suggest that there is a mutual relationship between organizations and the development of law: laws may be passed that identify problems that organizations must address (e.g., preventing discrimination), but the way in which organizations typically respond to the law (e.g., creating distinct units or personnel that are assigned responsibility for preventing discrimination) is often used in judicial interpretations of whether organizations have complied with the law (see also Edelman, Fuller, and Mara-Drita, 2001). More recent work has explored the extent to which formal structures, created by organizations in response to the legal environment, have a real impact on what organizations do or whether they serve primarily symbolic functions and produce few material changes in organizations (Dobbin and Kelly, 2007; Edelman and Suchman, 1997; Kalev, Dobbin, and Kelly, 2006).

Political Conditions. Political conditions represent another broad dimension of the environment studied by organizational researchers—one that is partly, but not perfectly, related to the legal dimension. Work focusing on political conditions has examined both the level of stability of political groups and relationships in a country and the impact of mobilization of groups that seek to change existing arrangements in society (social movements).

Only a few studies have systematically examined the impact of general instability or broad changes in a political system on organizations within the system. Two studies of rates of founding and failure of newspapers in countries during periods of significant changes in national regimes provide examples of such research (Carroll and Delacroix, 1982; Delacroix and Carroll, 1983). Using historical data from two countries, Argentina and Ireland, this research found that increasing political turbulence fueled the founding of newspapers, probably because conflicting actors sought to influence public opinion through publications. They also found, though, that newspapers founded during turbulent conditions had higher rates of mortality than newspapers born under stable conditions, perhaps because they were established *too* quickly, without enough capital or planning. Another study of the collapse of the former East Germany suggests that the changed political system had ramifications for almost all organizations, even cultural organizations, such as symphony orchestras (Allmendinger and Hackman, 1996). Interestingly, the onset of socialism in East Germany had less impact on orchestras than its collapse. Under a socialist system, the level of homogeneity among different orchestras in the country increased but little else changed. However, the demise of the system and the spread of capitalism set in motion increased competition and differentiation among the orchestras, which were especially problematic for lower-status, smaller orchestras.

Another line of research concerned with the impact of political conditions on organizations has focused on the mobilization of groups seeking to change society (although not necessarily completely revamping the political system, as the work we described above). A growing literature has begun to document the interplay between social movement activity, organizational change, and broad social changes (Davis and Zald, 2005; King and Soule, 2007; McCarthy and Zald, 1973; Tilly, 1978).

Bringing about enduring changes in society almost inevitably involves bringing about changes in organizations, since organizational policies and practices typically embody and perpetuate core values that underpin societal arrangements. Take, for example, the Civil Rights movement of the 1960s, a general movement that was spearheaded by a variety of specific social movement organizations that shared the common aims of reducing racial discrimination and thereby decreasing economic and political inequality. Because organizations are key mechanisms through which discrimination and inequality are produced and perpetuated—through the hiring, compensation, and promotion practices of employing organizations; through the admissions and curricular policies of schools; through lending and service policies of financial organizations; and so forth—achieving the general aims of the movement entailed changing the policies and practices of many organizations. Thus, successful outcomes of almost all contemporary social movements, from the environmental movement (Bartley, 2007) to the pro-choice and antiabortion movements (Staggenborg, 1986) to gay-rights and family-values movements (Ash and Badgett, 2006), have implications for organizations. Movements affect organizations either through changing the policies and practices of existing organizations (Lounsbury, 2001) or by fostering the creation of new forms of organizations and/or the demise of existing ones (Schneiberg, King, and King, 2008).

There are a number of strategies social movements may use to bring about changes they desire; while all may reshape organizations' environments, they do so in rather different ways. One of the most common strategies involves changing laws that regulate organizational activities—that is, changing organizations' legal environments (Wade, Swaminathan, and Saxon, 1998). (This is why we noted that political conditions and legal conditions that organizations face are often related.) But social movements pursue other strategies that also affect organizations' environments. They may attempt to persuade individuals to consciously accept and follow particular social norms (Haveman, Rao, and Paruchuri, 2007). For example, the organic foods movement has sought to portray the purchase of produce or meat raised by organic standards as a moral choice, one that contributes to the protection of the environment (Lee, 2007; Weber, Heinze, and DeSoucey, forthcoming). Likewise, the Temperance Movement, at the turn of the nineteenth century, encouraged people to refrain from drinking alcohol on normative grounds. Even in the absence of regulatory laws, if people follow the social norms espoused by the movement, the availability of resources for organizations that provide related services or products is affected.

A related but slightly different strategy involves changing individuals' taken-for-granted beliefs and cognitions. This strategy usually entails some kind of education campaign, such as Drug Abuse Resistance Education (DARE) programs or sex education programs offered in public schools. These programs are often championed by social movement organizations with the aim of instilling beliefs about the logic and utility of particular behaviors and practices (Stimson, 2007). Insofar as they are successful, they also alter the environments of organizations that provide services or products that are involved, such as contraceptive providers and manufacturers, breweries, and alcohol retailers. Thus, different strategies are related to changing the regulative, normative, and cognitive dimensions of organizations' environments (Scott, 2008). Whether changing one or the other dimensions (or some combination) is more effective in bringing about change in organizations has not been assessed by researchers.

Demographic Conditions. Demography—the distribution of social characteristics such as age, race, and gender among members of a population—is another important aspect of organizational environments. As suggested in Chapter 1, the distribution of such characteristics among work-age individuals and among potential consumers of organizational products and the presence of social norms related to the characteristics affect both the demographic composition of organizations (work on this is sometimes referred to as organizational demography) and arrangements involving relationships with external constituents. The impact of this aspect of the environment is often most visible among organizations located in areas where the demography of the local population is changing rapidly. In such cases, it's not uncommon to find that businesses, schools, and police departments have a very different demographic composition than the people they serve, and this can create problems for the organizations. Transitions to adapt the organizations to address changes in their constituencies are often fraught with difficulties (Fernandez, 2001).

At a national level, the demographic composition of the workforce may shift over time as a result of a variety of economic and political forces. Such shifts are apt to lead to changes in social norms that are related to workforce participation by different groups and to changes in organizational practices (Lawrence and Tolbert, 2007). For example, the Great Depression of the 1930s resulted in a small birth cohort between 1930 and the mid-1940s (Easterlin, 1987); when members of these cohorts entered the labor markets in the expansionary post–World War II period, their small numbers contributed to a relatively tight labor market, fueling rapid advancement and high wages. This made it feasible for families to live reasonably well on the earnings of one wage earner, reinforcing traditional gender norms of male-earner, female-homemaker (Kessler-Harris, 2003). With single-earner families as the modal family type, it was relatively unproblematic for organizations to expect blue-collar workers to put in overtime and for white-collar workers to be willing to relocate as the organizations needed. The affluence and family structure of this period contributed to a relatively large birth cohort, born between the mid-1940s and 1960; the size of this cohort increased competition for stable, well-paying jobs when its members entered the workforce. This, in combination with the rise of the Women's Movement, led to a major increase in women's labor force participation rates and to dual-earner families as the dominant type (Blau, Ferber, and Winkler, 2006). In consequence, many organizations are still struggling to create policies and practices that are "family friendly," to fit with the changing needs and demands of the workforce (Reskin and Bielby, 2005).

The demographic composition of organizations, then, is often driven by larger demographic changes in society. Whatever their source, variations in organizational demography have been linked to a wide variety of organizationally important issues, such as levels of conflict, innovation and adaptability, turnover, and interorganizational linkages (DiTomaso, Post, and Parks-Yancy, 2007; Lawrence, 1988; Pfeffer, 1983; Wharton and Baron, 1987; Williams and O'Reilly, 1998).

Work on organizational demography has focused on the impact of the proportional representation of groups on intergroup relations. This work draws on two different literatures: one focusing on conflictual race relations in communities (e.g., Blalock, 1967), which emphasized intergroup competitive processes that could be set in motion as a minority group began to increase in size; and the other focusing on social psychological processes that foster prejudice (e.g., Kanter, 1977), which emphasized perceptions of and attitudes toward dissimilar others. These two traditions lead to different expectations about the effect of group proportions on group relations. The first literature, on community race relations, suggests that as a minority group grows, the dominant group is apt to feel threatened and to increasingly discriminate against minority group members. The second literature, on the social psychology of prejudice, suggests that as a minority group grows, the dominant group has more opportunities for contact with minority members, reducing the power of preexisting stereotypes and decreasing prejudice (at least under certain conditions).

Studies within organizations have found support for both arguments. For example, in a study of academic departments, Tolbert et al. (1995) found that increases in the representation of female faculty led to increasing rates of turnover among the women; the authors attributed this to increasing conflict between male and female faculty in the department as gender ratios became more equal. On the other hand, a study of officers in the Israeli army by Pazy and Oron (2001) found that female officers were evaluated more negatively than male officers when the proportion of women in the unit was lower. Conflicting effects of increasing group heterogeneity have also been found by other work using dissimilarity indexes to measure group heterogeneity. Dissimilarity indexes yield higher values (indicating more heterogeneity) as groups approach equality in proportionate representation. Work using such measures has often found that increasing heterogeneity is associated with greater intergroup conflict, reduced intergroup communication, and lower group performance (Williams and O'Reilly, 1998); at the same time, it is also associated with groups' greater use of information and higher levels of creativity and innovation (Reagans and McEvily, 2003). This suggests that there is need for more research specifying scope conditions: *When* will increases in the size of a smaller, subordinate group lead to improved or more conflictual group relations?

PERCEIVING THE ENVIRONMENT

Our discussion thus far reflects an assumption, common in much of the existing research, that the environment is simply something "out there" beyond the organization, which anyone in the organization can readily spot and identify. It would be handy if that were the case, but it is not. The environment comes into the organization as information and, like all information, is subject to the communications and decision-making problems that have been identified.

People have different positions in organizations. Some people are identified as "gate keepers" or "boundary spanners," who are designated to admit certain information that is relevant to the organization. Their perceptions are influenced by their positions within the organization. Of course, it is difficult to determine where the organization stops and the environment begins. Different positions are at an organization's boundaries, depending on what the activity at the moment is. At times it can be the switchboard operator; at other times it is the president or the chief executive officer (Starbuck, 1976).

An organization selects those aspects of the environment with which it is going to deal (Starbuck, 1976:1078–1780). The selection process is affected by the selection processes of other organizations with which it is in contact. At the same time, of course, interorganizational linkages are affected by environmental pressures. In this manner, organizations go about constructing or inventing their environments. The scope of the domain or environment claimed or selected by organizations has an impact on its operations. Narrow domain claims are associated with stability, broad and inconsistent claims with loss of functions. Broad claims coupled with technological capacity and newness lead to domain expansion (Meyer, 1975). Domain claims seldom contract.

Organizational theory has stressed the importance of perceived uncertainty in the environment (Duncan, 1972). It is equally important to stress that much of the environment that is perceived is actually quite certain, rather than uncertain. Colleges and universities, for example, face a certain demographic profile of the number and distribution of potential students. Business firms face a certain environment of governmental regulations. The environment thus contains elements of certainty and uncertainty. Even when an environment is certain, of course, there is no guarantee that it will be perceived as such (Milliken, 1990).

Just as the perceptions of individuals are shaped by their experiences, so are the perceptions of organizations. Organizations may actually be more realistic than individuals because of their constant comparisons with and sharing personnel among comparable organizations (Starbuck, 1976:1080–1081), but it has not yet been clearly demonstrated that this is the case. It must be remembered that the perceivers of the environment are themselves individuals, all with idiosyncrasies in perception.

SUMMARY AND CONCLUSIONS

This chapter has identified a number of different approaches to conceptualizing "organizational environments" and different ideas about how environments may shape organizations. We began by considering efforts to define the environment in terms of broad, analytical dimensions, then turned to work that focused more concretely on links between organizations as the key to understanding the nature of the environment, and finally discussed a number of lines of work, each of which draws attention to a different, specific aspect of the environment, from technological change to population demography. Today, less attention is being given to developing broad, abstract dimensions, although, as we noted, people still use such concepts as "turbulence" and "domain consensus" in trying to describe environmental conditions. There is still much work being conducted on IORs (especially on networks and interlocking directorates) and on the different aspects of the environment that we discussed in the latter part of the chapter.

In addition, there have also been several major theoretical "paradigms" of the environment that have been developed in the last half century, each of which draws attention to certain aspects of the environment and to certain selected types of organizational outcomes. These paradigms are the focus of the next chapter.