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## How the Evolutionary Approach Relates to Other Approaches

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Paradigm proliferation in organization studies has given us a wealth of perspectives from which to view organizations and organizational change. Despite apparent confusion among conflicting theoretical claims, distinct points of clarity stand out in this academic briar patch. As Reed (1996: 33) noted, 'Organization studies is constituted through shared lines of debate and dialogue which establish intellectual constraints and opportunities within which new contributions are assessed.' Collective judgments, codified in rules and norms, emerge from negotiation and debate, resulting in new vocabularies and grammars for organizational analysis. The resulting perspectives are a product of their times, and many are swept away by subsequent historical currents (Aldrich, 1988). Some remain, however, and gain so many adherents that they qualify as schools of thought or theory groups.

Within organization studies over the past several decades, a handful of rather distinct approaches has emerged through fluctuating periods of relentless competition and tolerant cooperation. The evolutionary approach holds out the promise of using these views to achieve an integrated understanding – although perhaps not an integrated theory – of organizations. Such eclecticism delights some but disturbs others. For example, Pfeffer (1993: 620) argued that 'without working through a set of processes or rules to resolve theoretical disputes and debates, the field of organization studies will remain ripe for either a hostile takeover from within or from outside. In either case, much of what is distinctive, and much of the pluralism that is so valued, will be irretrievably lost.'

We believe that a diversity of approaches is not only tolerable but also necessary, given our subject matter. We also believe that the evolutionary approach serves as an overarching framework – or metatheory – within which the value of other approaches can be recognized and appreciated. The evolutionary approach constitutes a set of concatenated principles and uses multiple approaches to explain particular kinds of changes. Evolutionary models are not causal, because they do not specify the engines driving variation, selection, and retention. Instead, the models are algorithmic, specifying that *if* certain conditions are met, *then* a particular outcome

will occur (Dennett, 1995: 48–60). In explaining any particular evolutionary *if-then* path, a theorist may be obliged to draw upon ideas from several approaches. To give readers a sense of how the model of variation, selection, retention, and struggle uses other approaches to explain organizational change, we review six of them: organizational ecology, institutional theory, the interpretive approach, organizational learning theory, resource dependence, and transaction cost economics (TCE).

We consider how the chosen perspectives deal with issues of variation, selection, and retention. We also offer a review of critical issues under debate within each approach, as well an assessment of their contributions to an evolutionary understanding. A summary of the six perspectives' relation to evolutionary theory is given in Table 3.1. We present the six approaches in alphabetical order, as their precise historical ordering and current standing are subject to dispute.

## The ecological approach

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The ecological approach explains organizational outcomes in terms of the demographic composition – size and distribution – of organizational populations and the resource environments they are located within. It emphasizes foundings and disbandings as sources of population level change, and downplays transformations. Ecological approaches to organizational analysis focus on relations between organizations and thus complement more micro-analytic approaches, which focus primarily on social relations within organizations. Ecologists assume that organizational populations can be identified that have *unit character*, responding in similar ways to environmental forces (Hawley, 1950). Populations are dependent upon distinct combinations of resources – called *niches* – supporting them. Because they compete for resources within the same environment, organizations in a population are in a state of competitive interdependence. Competition pushes organizations toward adopting similar forms, resulting in greater homogeneity or specialization of forms within different niches. Organizations, in a sense, find niches to protect themselves against competition. Organizations often make common cause with one another as they compete with other organizations and populations, thus creating a mutualistic state of cooperative relations. Competitive and cooperative interdependencies jointly affect organizational survival and prosperity, resulting in a distribution of organizational forms adapted to a particular environmental configuration (Carroll and Hannan, 2000; Hannan and Freeman, 1989).

### Variation, selection, and retention

Organizational ecology has mainly looked for variation between organizations, via differences across organizations produced during their foundings. Ecologists assume that the most important processes to study are population demographics, or what Carroll and Hannan (2000) called *vital events*: patterns of foundings, transformations, and disbandings. These events constitute the dependent variables in most ecological analyses. Ecologists appreciate, even celebrate, the high level of volatility generated by these events. Sources of intra-organizational variation have been relatively neglected, in part because the preferred research design is the single population

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**Table 3.1 Six perspectives on organizations: relation to evolutionary theory**

<b>Perspective</b>	<b>Variation</b>	<b>Selection</b>	<b>Retention</b>
Ecological	<ul style="list-style-type: none"> <li>• Variation introduced via new organizations</li> </ul>	<ul style="list-style-type: none"> <li>• Selection results from fit between organizations and environment</li> </ul>	<ul style="list-style-type: none"> <li>• Retention through external pressures and internal inertia</li> </ul>
Institutional	<ul style="list-style-type: none"> <li>• Variations introduced from external origins, such as imitation</li> </ul>	<ul style="list-style-type: none"> <li>• Selection via conformity</li> </ul>	<ul style="list-style-type: none"> <li>• Retention through transmission of shared understandings</li> </ul>
Interpretive	<ul style="list-style-type: none"> <li>• Variation introduced as people negotiate meaning through interaction</li> </ul>	<ul style="list-style-type: none"> <li>• Selection via emergent understandings and compromise</li> </ul>	<ul style="list-style-type: none"> <li>• Retention is problematic; depends on learning and sharing</li> </ul>
Organizational learning	<ul style="list-style-type: none"> <li>• Variation via problemistic search or information discontinuities</li> </ul>	<ul style="list-style-type: none"> <li>• Selection results from fit to target aspiration level or existing organizational knowledge</li> </ul>	<ul style="list-style-type: none"> <li>• Retention in programs, routines, and culture</li> </ul>
Resource dependence	<ul style="list-style-type: none"> <li>• Variation introduced as managers try to avoid dependence</li> </ul>	<ul style="list-style-type: none"> <li>• Selection via asymmetric power relations</li> </ul>	<ul style="list-style-type: none"> <li>• Retention a temporary result of coalitions and bargaining</li> </ul>
Transaction cost economics	<ul style="list-style-type: none"> <li>• Variation introduced via intendedly rational action</li> </ul>	<ul style="list-style-type: none"> <li>• Selection involves actions to minimize transaction costs</li> </ul>	<ul style="list-style-type: none"> <li>• Retention via transaction-specific investments</li> </ul>

census, covering long spans of time and observing all vital events, but yielding fewer details about particular organizations (Carroll and Hannan, 2000: Chapter 5).

Selection, within population ecology models, results from the degree of fit between organizations and their environments. For example, small and highly efficient organizations will do better than small and inefficient organizations in impoverished environments with widely scattered resources. Selection criteria are embedded in an organization's surroundings, although selection itself is a joint product of organizational and environmental characteristics. Populations emerge as a result of processes that segregate one set of organizations from another, such as incompatible technologies, market demands, or institutional actions such as governmental regulation (Hannan and Freeman, 1986). Populations are also subject to blending processes that blur the boundaries between them, such as the rise of shared technologies, common markets, and institutional actions such as deregulation. In their simpler models, population ecologists argue that organizations are relatively powerless against the combined weight of their competitors and other external forces.

With regard to retention processes, population ecology explanations explicitly presume a model of organizations as structurally inert – changing at rates slower than their

environments, although they usually do not specify the precise form of internal replication processes. Structural inertia hinges on the daily success of reproduction processes. Hannan and Freeman (1984) argued that structurally inert organizations are produced by the combination of external selection of organizations displaying reliable and accountable structures *and* the power of internal institutionalization. Externally, organizations become embedded in networks of obligations and commitments as they age, pressuring their leaders to continue with past practices. Internally, members develop a homogeneous outlook, come together around vested interests organized to protect traditional practices, and adopt hiring and promotion policies that lock existing structures in place.

### Issues under debate

Ecologists have focused their analyses on the founding and disbanding of organizations in populations. Even though most studies have been at the population level of analysis, organizations have been the actual unit of selection studied. Astley (1985) noted that ecologists have generally neglected the community level, preferring to focus on intra-population dynamics rather than on the origins of new populations. Only recently have studies examined the rise and fall of entire populations (Aldrich and Fiol, 1994; Ruef, 2000, 2004). Studies of community-level processes are also increasing (e.g. Barnett and Woywode, 2004), and we will discuss them in Chapter 11.

In earlier analyses, assumptions concerning structural inertia deflected ecologists' attention away from transformation, but signs of change are apparent. Many organizational ecologists have begun to relax the assumption that adaptation is a rare phenomenon, and have examined the 'relative roles of adaptation and selection in evolutionary change ... [and] the relationship between transformation and selection processes' (Amburgey and Rao, 1996: 1278). Levinthal (1991) argued that selection and transformation are neither competing nor complementary processes, but rather are fundamentally related. Without stable structures, selected because they are best suited to their contexts, organizations would have no platform on which to create transformed structures. Ecological models now explicitly include transformation processes, as evidenced in work by Barnett and Carroll (1995) and Dobrev and colleagues (2002). Because ecologists ordinarily study entire populations, rather than only the fastest-growing or largest organizations in them, they are particularly well placed to study the conditions under which transformation occurs. With longitudinal data on organizations that did not change, as well as those that did, ecologists can identify the preconditions of transformation. Ecological analyses of foundings have also begun to examine the social processes involved in organizational startups (Ruef, 2005).

Ecological research has been primarily concerned with aggregates of organizations, and thus it has downplayed the role of individual actors and their interpretations. Also, because their data sets encompass such a broad historical sweep, ecologists typically have obtained only limited information on the internal structural features of the organizations in a population. However, a recent strand of organizational ecology recognizes that the internal demographic composition of organizations – their membership or leadership profile – may also prove fateful for organizational life chances. In the *genealogical* approach to internal demography, the process of interest involves the transfer of resources and routines from old to new organizations. Phillips (2002) emphasized the movement of high-ranking employees who stop being members of one organization

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(a 'parent') to become founders of another (its 'progeny'). Among Silicon Valley law firms, he found that greater transfers between parents and progeny decreased the life chances of the parent organizations but increased the life chances of their progeny in the 50-year period after World War II.

Ecologists assume that essential differences between types of organizations can be captured with the concept of *organizational form*. Debate has occurred over whether forms need to be defined *a priori*, rather than invoked pragmatically in the context of each empirical study (McKelvey and Aldrich, 1983). In theory, analysts recognize the existence of an organizational form when external audiences enforce a common identity through sanctions (Pólos, et al., 2002). In practice, organizational forms tend to be defined on the basis of common labels applied to organizations in industry censuses, trade directories, newspapers, phone books, and other archival sources.

### Contributions

One of ecology's major contributions has been to the business policy and strategy literature, where it has focused attention on *organizations* as a unit of analysis, rather than *decisions*. It has made organizational survival and failure a salient outcome in studies of organizational performance. Analysts interested in strategic outcomes have also blended ecological with institutional and learning models in a sign of fruitful theoretical eclecticism. For example, in two special issues of the *Strategic Management Journal* in 1994 and 1997 devoted to competition, four of the 14 empirical papers were explicitly ecological and focused on organizational survival as an indicator of successful strategies. Barnett et al. (1994) examined the relative competitive advantages of single-unit versus multi-unit retail banks in Illinois, and Rao (1994) found that victories in certification contests enhanced firms' reputations and improved their life chances. In an analysis that combined ecology with institutional economics, Silverman et al. (1997) showed that trucking firms improved their life chances when they followed policies aimed at minimizing transaction costs. Ingram and Baum (1997) combined ecological and learning models in their examination of hotel chain failures in the United States. Even business strategy theorists not using ecological models often feel compelled to make at least a passing reference to population ecology explanations.

Population ecology has exhibited the greatest theoretical and methodological consensus among all the sub-fields in organization studies (Pfeffer, 1993). The academic social structure maintaining the population ecology theory group has created a body of cumulative research and theorizing that builds tightly upon work that preceded it. By choosing a limited number of problems, using a small set of agreed-upon concepts, and maintaining rigorous standards in research design and statistical analysis, population ecology has enjoyed a level of visibility and influence far out of proportion to the relatively small number of researchers who actually practice its craft. One sign of its growing theoretical and empirical base is the increasing use of computer simulations that model and test ecological principles (Carroll and Harrison, 1994; Bruderer and Singh, 1996; Lomi and Larsen, 1998; Barron, 2001). Simulations require investigators to make their assumptions explicit and to choose model parameters that are empirically plausible; ecologists now have the findings and the tools to make such simulations possible.

## The institutional approach

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The institutional approach focuses on the objectified and taken-for-granted nature of organizations and organizational environments, as perceived by participants. It emphasizes the value-laden character of institutions and the way in which organizational actions are legitimated when cloaked in an institutionally acceptable rhetoric. In reviewing developments in institutional theory in sociology, political science, and economics, Scott (2001: xx) argued that the ascendance of institutional theory was simply 'a continuation and extension of the intellectual revolution begun during the mid-1960s that introduced open systems conceptions into the study of organizations.' Actually, Parsons' (1956) two essays in the inaugural volume of the *Administrative Science Quarterly* were the first explicit statements on organizational environments as institutional-cultural phenomena. He argued that institutional patterns within organizations must be compatible with those of other organizations and social units within society, and he explored the institutionalized rules governing organizational behavior. Parsons also identified supra-organizational societal norms as the context within which authority and interorganizational contracts are carried out.

As with other wide-ranging theoretical perspectives, institutional theory has many faces (DiMaggio and Powell, 1991; Tolbert and Zucker, 1996). *Institutionalization* itself has several meanings, depending on which institutional theorist one reads, although the meanings are certainly complementary. Selznick (1957) originally developed the theme of institutionalization as a process of instilling values, and his students and intellectual heirs subsequently pursued that line of inquiry (Clark, 1956; Perrow, 1986; Stinchcombe, 1964; Zald, 1970). Institutional theorists often claim Berger and Luckmann (1966) as intellectual forefathers, although Berger and Luckmann did not identify what they were doing as 'institutional theory.' They elaborated the theme of institutionalization as a process of creating reality, and depicted actors as creating an external reality that was subsequently objectified, taken as real, and internalized by others.

Using the language of Berger and Luckmann, Zucker (1987) pointed to the exterior, objective, and non-personal character of something that has been institutionalized. It takes on rule-like, social fact quality, and when embedded in a formal structure, its existence is not tied to a particular actor or situation (Meyer and Rowan, 1977). Tolbert and Zucker (1996) described the processes involved in the growth of deeply shared meanings among social actors as *habitualization* and *objectification*. Habitualization is the rise of patterned problem-solving behaviors, and objectification is the elaboration of shared social meanings attached to these behaviors. Some institutional analysts have treated institutions as distinct societal systems, in keeping with a long tradition in sociology that explores the characteristics of the family, religion, the economy, government, and education.

### Variation, selection, and retention

Institutional theorists have treated variation primarily as external in origin, generated as organizations are forced to respond to, adapt to, or imitate the ebb and flow of normative and regulatory currents in their environments. Some analysts have treated variation as arising from organizations responding to events at higher levels of analysis,

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such as changes in populations and communities (Zucker, 1987). When *environments* are treated as institutions, analysts have typically adopted a reproductive theme, focusing on how system- or sector-wide social facts are copied on the organizational level, with governmental units or professional associations seen as the usual source of such facts (e.g. Ruef and Scott, 1998). As a consequence of adopting externally-generated facts in pursuit of legitimacy, the technical core of an organization is de-coupled from direct evaluation on the grounds of efficiency. Meyer and Rowan (1977) argued that schools, R&D units, and government agencies maintain a facade of standardized, legitimated, formal structures while actually allowing variation in internal practices because of practical considerations. Schools can thus claim that they are effective because they meet state-mandated guidelines for their curricula, while ignoring actual data on student achievement.

When *organizations* have been treated as institutions, analysts have typically adopted a generative theme, examining the creation of new cultural elements by organizations, with small groups and managers often acquiring new facts by imitating other organizations (Zucker, 1987). Internal organizational processes and the example set by similar organizations thus generate new cultural elements. However, as in population ecology, such theories have paid limited attention to entrepreneurship and the creation of new organizations. As shown in Scott's (2001) comprehensive review of the field, the term *entrepreneurship* seldom appears in connection with institutional theory, with a few notable exceptions. Based on his study of Silicon Valley semiconductor startups, Suchman et al. (2001) proposed an *institutional ecology* of entrepreneurship to understand how institutional intermediaries, such as consultants and lawyers, influence the flow of resources and cognitive templates into new organizations. DiMaggio (1988) discussed the role of *institutional entrepreneurs*, focusing on people who mobilize resources *within* organizations to change them.

Selection forces in institutional theories arise from the constraining role played by cultural elements, such as symbols, norms, and rules. Selection processes in institutional theory tend to involve conformity to external norms, constituted and sustained by political actors in organizational fields (Meyer, 1994). Rather than conform, organizations sometimes pursue alternative strategies, including compromise, avoidance, defiance, and manipulation of institutional norms (Oliver, 1991). Norms cohere within *organizational fields*, sets of interacting groups, organizations, and agencies oriented around a common substantive interest, such as medical care, educational policy, or support for the arts (DiMaggio and Powell, 1983). Analysts define fields based on their research interests. Depending upon an analyst's purpose, a field could include suppliers, labor unions, consumer groups, regulatory agencies, trade associations, and other organizations.

Struggles within organizational fields occur over non-material as well as material resources, and the most intense struggles develop over who will have the power to shape rules and norms (Fligstein and Freeland, 1995). Organizations change their structures to conform to an institutionalized pattern supported by powerful legitimating forces outside their boundaries (DiMaggio and Powell, 1983). Delegitimizing forces also affect organizations, as pointed out by Oliver (1992) and Davis et al. (1994). When an organizational form falls out of favor and loses legitimacy, as corporate conglomerates did in the 1980s, actors in that societal sector cease adopting that form and move on to others.

Scott (1987), following Meyer and Rowan (1977), argued that in modern societies, symbolic systems have become formally rationalized, with government and the professions playing a key role. The professionalization of school administration, for

example, has made school superintendents very sensitive to what similar organizations are doing. School reforms have tended to spread quickly from district to district as they have become institutionalized. Similarly, differentiated departments in universities persist because codified typifications about universities have become institutionalized in the American academic system (Scott, 2001: 79–80). One outcome of successful imitation is enhanced organizational stability, and perhaps also a higher level of efficiency. Success comes from imitating others, not from an organization's own technical achievements.

A common theme running through all faces of institutional theory is environmental influence over organizations. Scott (1987) identified seven different forms of institutional explanation, differing by which types of institutional elements were examined and which causal mechanisms were posited. Most of the verbs used to describe organization–environment relations carry the connotation that environments dominate or overpower organizations, and in this respect, institutional theory resembles population ecology. Organizational structures may be *imposed* by a higher authority, such as via the coercive power of government (Guthrie and Roth, 1999), or *authorized* by a higher authority when a subordinate unit voluntarily seeks its approval (Ruef and Scott, 1998). Structures may be *induced* when a higher authority offers incentives or generates ambiguity for organizations (Zorn, 2004), or *acquired* when organizations deliberately choose a structural model, such as via imitative or normative isomorphism (DiMaggio and Powell, 1983). They might also be *imprinted* when new organizations take on the attributes of their surroundings (Boeker, 1988), *incorporated* when organizations adapt to the degree of differentiation in their environments (Selznick, 1957), or *by-passed* when participants pay more attention to normative pressures than technical requirements (Meyer and Rowan, 1977).

Retention mechanisms are typically subordinated to selection processes in institutional theory. Like ecologists, institutional theorists tend to treat the persistence of organizational entities as relatively non-problematic. They argue that people experience much of the social world as a taken-for-granted constraint and thus not available as raw material for conscious choice. People do something not because it is the normatively 'correct' thing to do or the rationally 'best' thing to do, but because it is the *only* thing to do. Institutional theories highlight the forces that create and maintain organizations as coherent, integral units, focusing on large, long-lived organizations. Forces such as socialization and charismatic leadership promote the transmission of shared meaning, increasing the likelihood of the successful daily reproduction of an organization.

Institutional theory might benefit from paying more attention to the psychological literature on habits (Hodgson, 2004a; Wood et al., 2002). When Berger and Luckmann (1966), Tolbert and Zucker (1996) and others write of habituation, sedimentation, and other such processes, they are referring to the ways in which some action has come to have an automatic character. In the language of psychology, the behavior has become controlled by a stimulus, rather than by goals. Once controlled by a stimulus – such as situational cues provided by other people, signs and artifacts, and so forth – people no longer have to reflect on their actions.

## Issues under debate

Commenting on Scott's early portrayal of institutional explanations, Heydebrand (1989: 333) argued that 'while the scope of institutionalism has been widened, its internal



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coherence and precision has been weakened by incorporating various strands of traditional sociology.' Because of its broad scope, institutional theory has seemed to bridge the action versus structure debate that divides much of organization theory. However, Hirsch and Lounsbury (1997) contended that this sense of inclusiveness is misplaced, because the 'new' institutional theory has departed substantially from the 'old' institutional tradition. Whereas the old institutionalism included classic studies of organizational conflict and transformation, such as Selznick (1949) and Clark (1956), Hirsch and Lounsbury (1997: 408) argue that the new version neglects 'endogenous change, process, volition, organizations as units, informal relations, conflict, attitudes, and unanticipated consequences.' Echoing an argument made earlier by DiMaggio (1988), they were particularly critical of what they saw as the 'new' institutionalism's relative neglect of interest-based and local action, and their replacement by explanations claiming the embeddedness of actions within larger, constraining structures. Czarniawska (1997: 192) voiced a similar concern: 'On the one hand, the *construction* of institutions implies and demands a proactive vision of human actors, busying themselves with plotting, performing, accounting for what they do, and thus producing reality as they know it. On the other hand, the notion of institutions suggests *accretion*, a passive process not under anyone's control, just happening.'

Hirsch and Lounsbury's prescription for institutional theory's alleged failings involved three lines of research. First, they called for historical studies that would examine the micro-level actions generating organizational changes. Second, they wanted more studies of how institutions become sites of struggle, and sometimes even unravel. Ironically, DiMaggio (1991) has carried out such a study, examining the role of professional interest groups in American museums in the early part of the 20th century. Third, they suggested focusing on how and why the strength of institutions varies, perhaps using a social network perspective. Institutional theorists would not disagree with such a call, as many of them have also advocated the analysis of organizations in network terms, e.g. DiMaggio (2001) and Powell (1990). Although several programmatic statements have included admonitions to produce more process-oriented research, actual studies to date have mostly taken the existence of institutions for granted and have examined their adoption and diffusion, rather than their creation.

Hirsch and Lounsbury's (1997) critique of institutional theory as neglecting power and conflict has been echoed by others. Although DiMaggio and Powell's (1983) typology mentioned three types of isomorphism, subsequent work has mostly used the concept of mimetic isomorphism. Mizruchi and Fein (1999) found that of the 160 articles in six major journals that cited DiMaggio and Powell between 1984 and 1995, 115 merely mentioned the article, with no additional discussion. Of the remaining 45, only 26 attempted to operationalize one of the types, and the majority focused only on mimesis. After analyzing the characteristics of authors who had used DiMaggio and Powell's ideas, Mizruchi and Fein (1999: 677) concluded that mimetic isomorphism has dominated research applications because it is 'consistent with the dominantly held view among leading North American organizational researchers that emphasizes cognitive decision-making processes at the expense of interorganizational power and coercion.'

### Contributions

The broad reach of the institutional perspective is its major strength, making it potentially relevant to all levels of analysis and all spans of time, from micro-level interactions

to large-scale change in nation-states. As Jacobs (2005) noted, core works in institutional theory – such as DiMaggio and Powell's (1983) influential article – are among the most cited in organization studies and sociology journals. Scott (2001: xx) himself observed that the concept of institution 'has continued to take on new and diverse meanings over time, much like barnacles on a ship's hull, without shedding the old.' Consider its message: reality is socially constructed; taken-for-granted rules and norms govern social life; symbol systems in modern societies have become increasingly rationalized; and so forth. This broad sweep has blurred the boundaries between the institutional perspective and other perspectives, opening up possibilities for very fruitful collaboration. For example, the concepts of 'population' and 'population growth' in population ecology have been heavily influenced by institutional theory. In asking 'where do organizational forms come from,' Hannan and Freeman (1986) modified their earlier concept of population, based in biological ecology (Hannan and Freeman, 1977) in favor of a concept based on principles of social construction derived, in part, from institutional theory. Similarly, Hannan and Freeman's (1989) model of population growth took account not only of new populations' needs for material resource mobilization, but also of their dependence on institutional processes that legitimate them.

Institutional theorists have shown a willingness to work at many levels of analysis, from organizations to world systems, and have also taken on major issues that other, more narrowly focused perspectives have avoided. For example, Suchman et al. (2001) investigated law firms' contributions to the growth of high technology firms in Silicon Valley, and Thornton (2004) examined changes in publishing firms in the college marketplace over three decades. Edelman (1990) studied the influence of new labor legislation on the expansion of due process rights for American workers, and Dobbin (1994) analyzed the political changes that affected the development of national transportation systems in three nations. Despite pressures from applied fields to focus on narrow issues such as efficiency and intra-organizational problems, institutional theory has succeeded in expanding organization studies' scope and vision. Practitioners of institutional theory have kept alive the issues that stand at the heart of sociologists' interests, such as concerns for social inequality and long-term historical changes in social norms and values.

## The interpretive approach

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The interpretive approach focuses on the meaning social actions have for participants at the micro level of analysis. It emphasizes the socially constructed nature of organizational reality and the processes by which participants negotiate the meanings of their actions, rather than taking them as given. Unlike institutional theorists, interpretive theorists posit a world in which actors build meaning with locally assembled materials through their interaction with socially autonomous others. The various interpretive views have in common their focus on an actor's perspective on life in organizations, and they stress that organizational members must take into account the constraints of their social and physical environments (Fine, 1984).

Interpretive theorists are not interested in actors as individuals but rather as members of social categories. We define interpretive scholarship quite broadly, and thus would include Blau's (1955) classic study *Dynamics of Bureaucracy*, based on non-participant observation in several bureaucracies. We would also include more

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recent monographs, such as Biggart (1988), who used a Weberian social action approach to study women's participation in direct-selling organizations, and Hochschild (1983), who used a symbolic interactionist perspective to study firms' exploitation of their women employees' emotions in dealing with customers. A more traditional example of interpretive scholarship is Duneier (1999), who engaged in participant observation to understand the social organization and experiences of street vendors in New York City. Several versions of the interpretive perspective were also displayed in a special issue of the *Administrative Science Quarterly* on organizational culture (Smircich, 1983).

Interpretive researchers disagree over whether to focus on symbols and cognition or on actual behaviors. Some persons who call themselves cultural researchers study values or cognitive interpretations, focusing on the stories, myths, ceremonies, and rituals they collect through ethnographic research or surveys within organizations (Stewart, 1998). For example, Ingersoll and Adams (1992) argued that people interpret organizational actions using *meaning maps* that are heavily shaped by the books and stories they read as children. They found that children's stories in the United States portrayed people as happiest when they embraced their organizational roles. Stories also depicted people as accepted and satisfied when they found their own special slot. Other interpretive researchers focus more on observed behavior and job histories, rather than on stories (Barley and Kunda, 2004). Some cultural researchers argue very strongly against a purely cognitive approach and take a more materialist approach, maintaining that considerations such as power and privilege heavily affect culture, as well as an observer's ability to understand it. For example, Kunda's (1992) ethnographic portrait of cultural norms in an East Coast high-technology firm depicted senior management as deceitful and manipulative, whereas employees were depicted as victimized and exploited.

### Variation, selection, and retention

In the interpretive view, variation in organizational structures emerges through social interactions in which people negotiate, compromise, accept others' definitions of what they are to do, and then act on them. Variations are generated within organizations, as people cope with problems involving the reproduction of their organizations from one day to the next. By making agreements to do things, people write scripts in which they then become social actors. They delegate themselves to play social roles, and then are constrained to fulfill the roles (Latour, 1993). In most interpretive accounts, the scripts are never all-encompassing because people possess the capacity to learn as they go, attending to their contexts, and they thus preserve the provisional nature of much social interaction. However, some interpretive-based models treat organizations as simply the site in which contending societal forces collide and members work out their differences. Clegg (1989) expressed such a view, and Burrell (1988), in his appreciative remarks on Foucault, also came close to this position.

Selection within interpretive models results from negotiation, compromise, and emergent understandings, as members interact in replicating or modifying the routines and competencies of their organizations (Strauss, 1978). For example, social order within medical schools results from students' negotiation between distinct medical values, including perspectives that emphasize clinical experience, medical responsibility, and academic success (Becker et al., 1961). Interest group models implicitly

assume that selection criteria reflect an emergent structure of ideological and cultural dominance. The resulting dominant view sets individual preferences and suppresses incompatible interpretations. The interpretive view fits with other theories that focus on selection processes generated by actors' contributions to sustaining ongoing social interaction. Other theories include views of organizations as marketplaces of incentives (Dow, 1988; Georgiou, 1973), as arenas of class conflict (Clegg, 1989), and as sense-making entities (Weick, 1995).

Retention mechanisms are a very salient issue for interpretive theorists, because they implicitly view organizations as less coherent and stable than do ecological or institutional theorists. They tend to treat organizations as associations of self-interested parties, sustained by the rewards they derive from their association with other members or with the organization itself (Swanson, 1971). This view leads to the expectation that organizations are constantly at risk of dissolution. The reproduction of organizational structure depends on participants continually negotiating a shared understanding of what they are doing (Garfinkel, 1967). Selected variations that represent successful solutions to problems must be shared, in some way, to be retained. In all cases, learning from one's predecessors sustains the reproduction process.

Many, but not all, interpretive theorists emphasize the different, conflicting views that coexist in organizations, with such differing views potentially undermining an organization's coherence as a stable entity. Some versions are similar to institutional theory in positing socialization processes as leading to normative consensus. In others, replication is accomplished only via an uneasy truce between contending parties with divergent understandings of what should be done. Meyerson's (1991a) account of hospital social work examined the tension between two very different models of treatment: a medical model and a psychosocial model. She described how social workers learned to live with the ambiguity resulting from the models' simultaneous existence. Some workers responded to the tension by becoming cynical, whereas others denied the ambiguity altogether.

## Issues under debate

Because it sees social reality as built from the bottom up, the interpretive perspective allows room for the play of chance, creativity, and accidents. When well done, interpretive accounts remind us that at the micro-level, the future remains open (within limits), and strategy, ambition, accidents, luck, and other forces drive changes in social life. For example, in his account of the Tenerife air disaster, Weick (1991) showed how cumulative ambiguities and misunderstandings in communication across organizations resulted in the death of hundreds of people. However, interpretive accounts are also vulnerable to a researcher's attempts to 'explain everything,' tying up loose ends and constructing too tidy an explanation. Martin (2002), for example, noted that investigators studying organizational culture from an *integration perspective* usually constructed explanations portraying organizations as unified, harmonious, and homogeneous. By contrast, investigators using a *differentiation perspective* have been more attentive to ambiguities, inconsistencies, and the existence of organizational subcultures.

At one extreme, theorists within the interpretive approach tend to assume that interactions and negotiations take place between actors with fixed preferences. In contrast, Weick's (1979) learning model, in which people discover or modify their

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preferences as they interact, presents a more subtle view of selection forces within organizations. Organizations, whether unified or differentiated in their cultures, can persuade individuals to accept a new interpretation of their behaviors. At the other extreme, critical theorists have claimed that people may be manipulated into a view of the world more compatible with the organization's interests, as opposed to their own (Perrow, 1986).

Some theorists argue that organizational actors essentially create the context to which they react, thus creating a closed explanatory loop (Weick, 1979). Not every theorist goes this far, but the concept of *enactment* – that actions precede interpretation and interpretations create a context for action – places heavy demands on anyone conducting research on why people and organizations behave as they do. Given what we know about cognitive heuristics and attribution bias, how much can we trust participants' self reports about their actions? Intensive field-based studies and ethnographies are an alternative to self-reports, but such studies are time consuming and expensive. Nonetheless, they are invaluable for spelling out the conditions under which variations result in enactment, and the extent to which enactment is intentional or blind.

### Contributions

One of the great strengths of the interpretive approach is that many of its practitioners rely heavily on direct observation and field work, rather than surveys and organizational records, thus avoiding the *trained incapacity* of most sociologists (Reiss, 1992). Survey researchers, according to Reiss, force respondents to speak to us 'in our own words,' rather than their own. Ethnographers with a cultural focus often spend lengthy periods in the field, observing participants' behaviors. For example, Barley (1990) spent one year observing changes in role relationships resulting from the introduction of a potentially innovative technology in two radiology departments. These reports from the field give us a closer look at processes within organizations, although they are still filtered through a lens wielded by the researcher, and thus subject to charges that authors are 'performing an act of ventriloquism' (Czarniawska, 1997: 198). Deconstructionists have disabused us of romantic notions that ethnographers offer unvarnished 'voices from the field.' Well-done ethnographies make readers aware of the author's voice and what it represents.

Ethnography is extremely time-consuming and emotionally draining. Many field workers only accomplish a single substantial ethnography before going on to write shorter essays and commentaries, e.g. Willis (1977) and Stewart (1989). Nonetheless, their work has illuminated the emotional foundations of action within organizations. Golden-Biddle and Locke (1997) wrote an historical account of the development of Glaser and Strauss's 'grounded theory' approach to fieldwork and also provided guidelines for analyzing data collected using that approach. Kleinman and Copp (1992) wrote passionately of the emotions raised by fieldwork, as researchers struggle with difficult issues. Fieldworkers must grapple with defining their roles vis-à-vis their subjects, coming to terms with negative feelings about the people whom they study, coping with time pressures when analyzing an intractable body of field notes, and trying to construct a valid account. Kleinman and Copp argued that fieldworkers enact a variety of social identities in the field, only one of which is 'professional researcher.' Their account reveals, in passing, one reason why true field-based ethnographies are so rare in organization studies, as well as why they are so valuable.

## The organizational learning approach

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The organizational learning approach focuses on how individuals, groups, and organizations notice and interpret information and use it to alter their fit with their environments. Some changes may improve their fit, whereas others may worsen it, and organizational learning has no inherent link to success. Two strands of theory and research on organizational learning have developed over the past five decades: the adaptive learning perspective and the knowledge development perspective (Glynn et al., 1994). The adaptive learning perspective, pioneered by Cyert and March (1963), treats organizations as goal-oriented activity systems that learn from experience by repeating apparently successful behaviors and discarding unsuccessful ones. Within the adaptive learning framework, theorists distinguish between incremental or single-loop learning and radical or double-loop learning (Argyris and Schön, 1978). At the extreme, trial and error models of learning that emphasize simple repetition of 'what works' can be seen as evolutionary processes with undirected variation and a constrained set of selection processes. Since its original formulation, March (1981), his students (Levinthal, 1991; Levitt and March, 1988; Denrell and March, 2001), and others, have modified the approach to take into account a variety of constraints on organizations' capacities to learn from experience. For example, in his simulation model contrasting exploration and exploitation as conflicting strategies, March (1991) used assumptions that implicitly ruled out radical learning under the most plausible scenarios. Subsequent contributors have also moved the perspective away from a purely behavioral approach and toward a more cognitive approach. For example, Greve (2003) drew on many concepts and principles from social psychology in developing his performance feedback model of organizational learning.

The second strand of the learning approach, the knowledge development perspective, treats organizations as sets of interdependent members with shared patterns of cognition and belief (Weick, 1979, 1995). Learning occurs as patterns of cognitive associations and causal beliefs are communicated and institutionalized. Sense-making and enactment are critical activities in the learning process, and researchers have studied the development of knowledge structures and causal maps within organizations, as well as their diffusion between organizations (Argote, 1993). The knowledge development perspective emphasizes that learning is not limited to simple trial and error or direct experience. Instead, learning can be inferential and vicarious, and organizations can generate new knowledge through experimentation and creativity. Although the learning approach shares much in common with the interpretive approach, it differs by explicitly taking a developmental view of organizational activities. Institutional theories have drawn heavily from the learning approach, with some researchers contributing to both (DiMaggio, 1997). The knowledge development perspective conceptually and empirically fits with work on technological evolution and organizational knowledge creation and deployment (Tushman and Anderson, 1986).

### Variation, selection, and retention

From the adaptive learning perspective, variations are generated when performance fails to meet targeted aspiration levels, triggering problem-driven search routines.

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Called *problemistic* search by Cyert and March (1963), variations from standard operating procedures follow well-understood heuristics and involve localized investigations that cease when satisfactory solutions are found. Following trial and error logic, a failure of standard procedures could result in their replacement by new ones, thus generating further variation. Such models raise the question of whether organizations will recognize a 'failure,' simply ignore it, or redefine their objectives (Milliken and Lant, 1991; Sitkin, 1992; Staw et al., 1981). From the knowledge development perspective, variation increases under conditions of cognitive confusion and misunderstanding, such as when knowledge acquired across group or organizational boundaries must be integrated into existing causal maps and beliefs. Changes in interpersonal and interorganizational networks may bring new information or interpretations into a unit, triggering a round of sense making (Gulati and Gargiulo, 1999). In a more subtle fashion, the creation of new and idiosyncratic jobs may create openings for the importation of new meaning systems into an organization (Miner, 1992).

Selection among variations in the adaptive learning perspective occurs when managers compare the results of their actions to pre-set aspiration levels. In keeping with the tenets of problemistic search, managers should keep those variations that helped them reach targets and try other variations to replace those that failed. In short, successful actions tend to be repeated (March, 1981). Unsuccessful actions should provoke further search. However, learning models also allow aspiration levels to shift with experience, with targets tending to adapt to actual performance levels over time. Selection in the knowledge development perspective results from the compatibility of new information and beliefs with current knowledge. Prior organizational learning creates knowledge structures and sets of conceptual categories that filter subsequent information and thus influence further learning. Cohen and Levinthal (1990) borrowed the term *absorptive capacity* from industrial economics to refer to the level of stored knowledge and experience that make organizations better able to learn from further experience.

Retention mechanisms are critical for learning theorists, because without a way to store and retrieve new routines or knowledge, organizations gain nothing from experience. From an adaptive learning perspective, the results of problemistic search are stored in routines and *performance programs* that can be reused when needed (March and Simon, 1958; Nelson and Winter, 1982). Learning is then embodied in sets of interlocked role behaviors, supported by job descriptions, socialization, training programs, written rules, and other externalized manifestations of what has been learned (March et al., 2000). From the perspective of knowledge development, retention occurs when the culture of an organization is altered: its belief system, causal maps, and other aspects of the knowledge structure. The new system of shared cognition and beliefs directs members' attention to those features of the environment made salient by new conceptual categories. Based on the two perspectives in organizational learning, theorists argue that learned information is retained in organizational memory in two ways (Cohen and Bacdayan, 1994): as declarative memory, involving facts, propositions, and events, and as procedural memory, involving skilled actions, competencies, and routines.

Cognition can plausibly play a role in any of the three processes of variation, selection, and retention within organizations. Therefore, the line between micro-evolutionary and organizational learning models is somewhat fuzzy. When models treat variation as directed by actors' intentions, or posit selection and retention processes

that involve cognitive and inferential processes, learning models become more distinct from evolutionary approaches (Miner and Mezias, 1996). Nonetheless, committed evolutionary theorists would argue that the cognitive and inferential processes people use are themselves the products of a long-term cultural evolutionary process, thus situating learning models within a larger evolutionary framework (Dennett, 1995: 370–400).

### Issues under debate

The community of theorists and researchers using the organizational learning approach has been extremely productive over the past several decades, but several of its members have been critical of its lack of integration (Huber, 1991). Organizational learning theorists have often been content with merely pointing out the flaws in rational actor assumptions (Cohen and Sproull, 1991). Because it offers a clear alternative to the more rationalistic models in industrial economics and the more aggregate models of population ecology, the organizational learning approach has attracted the attention of institutional theorists. Like the institutional approach, the organizational learning approach encompasses a diversity of research streams. Relying on the participants' own self-critical remarks, we have identified a few issues that are receiving a great deal of attention from learning theorists.

First, Glynn et al. (1994) noted the difficult methodological problems posed by the complexity of learning models and attempts to apply them across levels of analysis. With regard to complexity, learning models tend to include constructs representing how participants view their environments, as well as constructs representing environments. From experimental work by social psychologists on cognitive heuristics, self-perception, and attribution, we know that participants are often not very good reporters on their own perceptions and beliefs (Kahneman et al., 1982). In addition, because learning theories are explicitly about change over time, researchers must create dynamic designs to follow their subjects over time. Behavioral theorists, working from the adaptive learning perspective, often confront these issues by conducting computer simulations or creating simulated organizations in laboratory experiments. In addition, these researchers sometimes go beyond individual cognition by seeking measures of learning and memory at the organizational or higher levels of analysis. By contrast, cognitive researchers working from the knowledge development perspective have adapted by doing applied case studies, while also doing laboratory experiments. The result has been a gulf between these two groups and a paucity of dynamic field-based studies of actual learning organizations.

Second, a related methodological issue concerns the process by which observers attribute changes in organizations' actions to learning. 'Not all organizational learning is manifested in observable actions ... and not all changes in an organization's actions reflect learning' (Glynn et al., 1994: 63). Some changes are simply random variations. Other actions are the result of *imitation*. Some theorists would treat imitation as simply 'action' unless participants have learned the underlying rationale for what they copied, arguing that only *intentional learning* should count as real learning. Other theorists argue that imitation of apparently effective action represents a form of vicarious trial and error learning at the level of an entire organization.

Third, scholars in several traditions have argued that organizational memory and action should be distinguished from the mere aggregation of individual level cognition



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(Walsh, 1995). For example, Hutchins (1991) described how a group of people collectively discovered a new process for navigation after the breakdown of equipment aboard a ship. The participants were not individually aware of the actual new process they had enacted. Separating 'action' from 'learning' under such conditions is a daunting task. It requires investigators to probe the very core of an organization's knowledge system and to delineate carefully their constructs and levels of analysis.

Similarly, Weick and Westley (1996) raised the issue of whether the literature on organizational learning is really about an organizational level phenomenon, or simply about individuals learning within organizations. They argued that some theorists have ignored the issue by simply treating organizational learning as learning by individuals within an organizational context. In that respect, organizations are no different from laboratories, small groups, or any other context in which individuals might learn. Other theorists have argued that organizations learn the same way that individuals do, and thus we can readily transfer our theories of individual learning to organizations. Weick and Westley (1996: 456) suggested that we treat organizations as cultures – as repositories of knowledge and as self-designing systems – and focus on the process by which organizing unfolds to create 'learning moments.' Their suggested program closely resembles the approach we have labeled 'interpretive,' but situates it thoroughly within an organizational context.

### Contributions

The organizational learning approach is particularly well-suited for explaining organizational evolution, and indeed some of its adherents adopt evolutionary language in their work, e.g. Miner (1991). Organizational learning, whether from the adaptive learning or knowledge development perspective, is firmly anchored in the behavioral sciences. From this harbor, it ties organization studies to the disciplines of psychology and social psychology. It also is on the frontier of the growing field of cognitive science, one that cuts across the biological and behavioral sciences (DiMaggio, 1997). Such cross-disciplinary cooperative work increases the likelihood of creative theoretical insights, which, following learning theory, we would expect to come from scholars working on the edge of established fields.

The concept of distributed learning and learning embedded in systems of interaction is a new development with great promise (Weick and Roberts, 1993). 'With its emphasis on the construction of information through organizational interactions, a system interaction approach to organizational learning offers a shift in perspective, from an emphasis on the content of learning to the emergent process of learning' (Glynn et al., 1994: 75). Organizational learning thus becomes something accomplished with others, rather than alone, and theorists must attend to the structure of role relationships and interpersonal networks that sustain shared knowledge. This view could link the organizational learning approach to anthropological theories of culture and sociological theories of social networks and collective action.

### The resource dependence approach

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The resource dependence approach focuses on strategic actions undertaken by organizations to manage interdependencies with other organizations in their environment. It

emphasizes some of the same constraints on action as the transaction cost economics (TCE) approach, but takes a more explicitly political approach to managerial motives, focusing on the trade-off between autonomy and survival. Interorganizational relations are the basic unit of analysis, although it has also been applied to other types of relations between subunits. Applications range from micro to macro, across units of analysis from individual managers, to organizational subunits, to firms, to alliances and joint ventures, to interorganizational networks (Burt, 1983; Casciaro and Piskorski, 2005; Mizruchi and Galaskiewicz, 1993; Zajac and Westphal, 1996).

The perspective was born in the early 1960s, when Levine and White (1961) and Litwak and Hylton (1962) argued that the behaviors of organizations in the social services sector could be explained by examining interorganizational exchanges. Government regulation and support were critical to such organizations, and they also operated in situations of resource scarcity, depending upon other agencies and organizations for much of what they needed. At about the same time, Emerson (1962) was developing a theory of power based on dependence relations, which Blau (1964: 118) subsequently reformulated to derive 'power imbalances from the conditions of exchange.' In the field of organization studies, Thompson (1967), Zald (1970), and other sociologically oriented theorists extended and applied many of the premises of resource dependence to interorganizational relations. For example, Thompson (1967) argued that organizations coped with uncertainty by regulating their boundaries and managing internal interdependencies.

Aldrich and Pfeffer (1976) sketched out the differences between resource dependence and evolutionary approaches, but Pfeffer and Salancik (1978) offered the first extensive presentation of the argument. They added concepts from political sociology, industrial economics, and social psychology to create a compelling account of managers struggling to control their organization in the face of external threats. Even though they titled their book *The External Control of Organizations*, they actually offered many strategies by which managers could blunt the impact of external threats and win more autonomy for themselves.

### Variation, selection, and retention

With respect to variation, Pfeffer and Salancik (1978) formulated a fundamental premise in their book that remains at the heart of the perspective: beyond the normal interdependencies grounded in the interorganizational division of labor, some interdependencies are sought (or avoided) because of the power and control possibilities inherent in them. Variations are driven by managers' and administrators' efforts at avoiding becoming dependent on others, while making others dependent on them. Attempts to avoid dependencies may take the form of minor tactical adjustments to internal structure, such as reducing the impact of uncertain supply schedules by increasing stockpiles, or major strategic changes, such as mergers to restrain interorganizational competition. Pfeffer and Salancik (1978) depicted decision-makers attempting to gain power so that they can manage their environments, as well as their organizations. They conceptualized environments as being composed of multiple interest groups, and posited that managers must find ways of neutralizing hostile groups or aligning themselves with those groups that will protect their organizations.

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Selection forces are inherent in asymmetric power relations. Power, in this scheme, is based on Emerson's (1962, 1972) concept that one's power resides implicitly in another's dependency. The parties in a power relationship are tied to each other by the dependence of one on the other, or perhaps by mutual dependence. The dependence of an actor **A** on another actor **B** is 'directly proportional to **A**'s *motivational investment* in goals mediated by **B**, and inversely proportional to the *availability* of those goals to **A** outside of the **A–B** relation' (Emerson, 1962: 32). The dependence of **A** on **B** provides the basis for **B**'s power over **A**, as **B** is in control of, or otherwise has influence over, goods and services that **A** desires. To the extent that **A** cannot do without the resources and is unable to obtain them elsewhere, **A** is dependent on **B**.

Thus, the power to control or influence others resides in control over the resources they value (see Aldrich, 1979: 268–273). Organization differentiation and specialization of function are likely to lead to interorganizational dependencies whenever organizations manage to acquire monopoly control over important resources, and are able to defend their positions. Going beyond TCE's idea of exchange, the resource dependence perspective asserts that one consequence of competition and cooperation over scarce resources is the development of dependencies of some organizations on others. Burt's (1983) network analysis of the American economy and firm profitability was one of the few attempts to test the idea of the impact of dependence on a large scale. He showed that industrial sectors that depended on other, better-organized sectors paid a price in reduced profitability. Given the aggregate nature of his data, however, he could not examine whether a firm's survival was directly affected by resource dependence.

Retention of viable structures is potentially problematic from a resource dependence perspective, given its emphasis on an organization as 'a coalition of groups and interests, each attempting to obtain something from the collectivity by interacting with others, and each with its own preferences and objectives' (Pfeffer and Salancik, 1978: 36). In this quasi-market environment, participants gain and lose power through processes of bargaining, negotiation, and compromise, and thus organizations are constantly at risk of dissolution. Following Barnard's (1938) lead, Pfeffer and Salancik argued that control and influence in organizations depends upon the importance of managers' and subunits' contributions to the organization's survival and success. Organizational units that provide their organizations with the most critical resources become the most powerful (Crozier, 1964). However, Astley and Zajac's (1990) research on 163 subunits in 20 large corporations in the Pacific Northwest of the United States did not support this resource dependence hypothesis. Instead of subunit power being generated by the balance of exchange dependencies between the units, power arose from workflow interdependencies embedded in a firm's division of labor. If retention processes are embedded in an organization's task structure, rather than pure exchange dependencies, then organizational reproduction is less problematic.

### Issues under debate

Like institutional theory, resource dependence has blossomed into a wide-ranging perspective that is often invoked by analysts who admire the theory's scope and clarity. However, some unresolved issues remain. Some critics argue that even though resource

dependence theory has been widely used, key elements of the theory have not been empirically tested. Pfeffer (2003: xvi) himself acknowledged that 'there is a limited amount of empirical work explicitly extending and testing resource dependence theory and its central tenets,' while Casciaro and Piskorski (2005) lamented the largely metaphorical role of the theory in organizational discourse. Two issues in particular deserve more attention: how resource dependence ought to be defined, and whether dependence or ordinary market-driven forces generate various forms of interorganizational relations.

One definitional issue concerns whether dependence is an objective or perceived state of affairs. Pfeffer and Salancik (1978) used objective measures of environmental conditions, such as four-firm concentration ratios and the number of alternative sources of a resource, in their models of constraints on organizational transformation. An interorganizational relationship may objectively be one of dependence of a subordinate on a dominant organization, but this may only be a *potential* problem for the dependent organization (Aldrich, 1979: 272–273). The effects of dependence may only be felt when a dominant organization makes demands upon a subordinate organization. Thus, the effects of dependence may be invisible unless the subordinate organization perceives its situation of potential dependence. As Fligstein and Freeland (1995: 31) noted, 'In murky social worlds, perceiving interdependencies is not always a straightforward task. Moreover, even if this occurs, actors must be able to impose their interpretation of the strategic contingency on others.'

Another definitional issue concerns the theoretical dimensions that underlie the concept of resource dependence. Casciaro and Piskorski (2005) argued that two dimensions in Emerson's (1962) framework have commonly been conflated in past empirical studies: (1) *power imbalance*, reflecting the power differential between two organizations; and (2) *mutual dependence*, reflecting bilateral dependencies within a dyad. Each underlying dimension has distinct implications for organizational efforts to manage resource dependence. Analyzing mergers and acquisition (M&A) activity among U.S. public companies between 1985 and 2000, Casciaro and Piskorski found that mutual dependence between firms promoted M&A events. By contrast, power imbalance served as a deterrent, because neither power-advantaged nor power-disadvantaged organizations had an incentive to enter such relationships.

With regard to alternative interpretations of resource dependence research, Donaldson (1995: 161) questioned explanations based on power and political processes. He argued that much of the evidence offered by resource dependence theorists in support of their position could be re-interpreted as being the result of market forces. A condition of asymmetric dependence in the marketplace might simply reflect specific supply and demand conditions, with no residual compliance obligations remaining after completion of the market-based transaction. From this point of view, an organization would suffer only a temporary disadvantage in most dependent relations, as the dominant organization extracts its price when the transaction is completed but gains no long-term advantage. Similarly, Zajac (1988), after examining interlocks across boards of directors, observed that researchers investigating interorganizational relations should be cautious in inferring that they truly represent an organizational strategy for dealing with dependence. Instead, the observed relations may simply be a consequence of unrelated actions. Research on interlocks has also generally ignored their historical and spatial context, focusing on their consequences rather than their causes (Mizruchi, 1996; Kono et al., 1998).

## Contributions

The resource dependence perspective has influenced research on a variety of organizational issues centered on interorganizational relations, as Galaskiewicz (1985) noted in his review of studies of resource procurement and allocation, political advocacy, and organizational legitimation. Mizruchi (1992: 64–66) observed that research on interlocking directorates has often used resource dependence explanations, although the cross-sectional nature of most studies has somewhat undercut their value. Scott (2003: 118–119) credited the resource dependence perspective with discerning and describing strategies used by organizations to change and adapt to their environments. For example, Burt's (1982, 1992) structural theory of action and power is grounded in a resource dependence view of relationships. Fligstein and Freeland (1995) argued that scholars influenced by the resource dependence perspective have generated important criticisms of the rational adaptation approach to organizational change. Unlike the ecological and institutional views of organizations, resource dependence theorists take a very active view of organizations' relations to their environments. Active subjects are usually apparent in their work, and thus resource dependence principles are potentially a bridge across the action versus structure divide in organization studies (Reed, 1988).

Resource dependence resembles the interpretive perspective in treating organizations as marketplaces of incentives and arenas of conflict between contending interests. In some versions, it also resembles institutional theory in its stress on the powerful constraining influence of socially constructed truths on organizational actions. Fligstein (1990, 1996) built his political-cultural approach to organizational analysis by drawing on resource dependence and institutional theory principles. He emphasized the political processes inherent in interorganizational relations and the stabilizing influence of widely held and legitimated cultural understandings. However, the extremely diverse use theorists have made of resource dependence raises the question of the coherence of its intellectual core. Unlike ecological theory, which has accumulated a set of empirical generalizations by vigorously pursuing a narrow set of issues, resource dependence seems permanently fixed upon Emerson's initial insight – that power and dependence are intimately related. As such, it has the status of an auxiliary theory that is invoked in the context of specific research questions, but not one that itself benefits from any theory group's sustained research program.

## The transaction cost economizing approach

The transaction cost economizing approach, or TCE, focuses on how managers decide to solve the dilemma of choosing between markets and hierarchies in organizing economic activity. TCE treats transactions as its basic unit of analysis and focuses on the specific selection pressures driving organizational change in competitive environments (Williamson, 1994). Organizational arrangements governing any particular exchange depend on the cost effectiveness of those arrangements, compared with alternatives (Hesterly et al., 1990). Given 'human nature as we know it' (Williamson, 1981), the ultimate explanation for the structuring of transactions is the constraining effect of external conditions on social actors.

Owners and managers of organizations face, at the extreme, two choices about how to structure their activities. Should they purchase the goods or services they need on the open market, or should they bring the production of such necessities inside their organization? They can obtain what they need by engaging in transactions with other independent actors in the market, or they can internalize the production of the needed resource, thus subjecting it to their own hierarchical control. TCE theorists recognize that organizations actually comprise a mix of market- and hierarchy-based activities. They recognize intermediate forms in between markets and hierarchies, such as professional societies and hierarchical contracts (Bradach and Eccles, 1989; Powell, 1990). Hodgson (2002), however, rejected the notion of intermediate forms, arguing that if organizations are truly bounded entities, then organizations and markets represent a simple dichotomy, not a continuum.

### Variation, selection, and retention

In dealing with variation in organizations, TCE posits actors who have rational intentions but who also face constraints on their capabilities. TCE emphasizes the serious limits to human information-processing and monitoring capabilities, and takes a rather jaundiced view of human nature. Two assumptions derived from the Carnegie school tradition of March and Simon (1958) dominate TCE thinking about social behavior: actors operate within the constraints of *bounded rationality*, and much of human behavior is driven by *opportunism*. Most actors are intendedly rational, but they are denied textbook rationality because of human limitations. They are precluded from making optimal choices by cognitive deficiencies and peculiarities, limits on information availability, and constraints on information processing. Information search costs, in particular, lead most actors to choose satisfactory, rather than optimal, alternatives. Actors must also contend with the tendency of other actors to behave opportunistically, pursuing their own self-interest at the expense of others.

Williamson's treatment of opportunism differs from Simon's (1985: 303), as Simon treated lack of trustworthiness in humans as a result of 'frailties of motive and reason,' whereas Williamson's explanation is much less benign. He noted that opportunism 'can take blatant, subtle, and natural forms' (Williamson, 1994: 81), with Machiavelli's advice to the Prince constituting one end of the spectrum and bureaucrats' tendencies to feather their own nests at the other end. In the middle is strategic opportunism, which is only effective if carried out subtly. 'Self-interest seeking with guile' is Williamson's clever description of the normal state of human affairs. In short, actors tend to lie, cheat, and steal to further their own ends. They withhold information or distort it, conceal preferences, and practice a variety of other deceptions.

Given a resource-scarce environment, actors will be under pressure to find ways to economize on transactions' costs. TCE models make selection a matter of matching organizational actions to organizational goals. 'Goals' are typically defined as the efficient use of resources in the competitive context of a market. Selection processes posited by TCE turn on the consequences of human shortcomings. Given bounded rationality and opportunism, transactions with other actors are almost always problematic and potentially quite costly. Williamson (1981) hypothesized that three dimensions to transactions are particularly important to the type of relationship established: the frequency of the transaction, uncertainty surrounding the transaction, and

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the level of *transaction-specific investments*. The more frequently an actor enters into transactions with specific other actors, the greater the pressure to find economical ways for handling the relationship. One-time spot transactions are not worth bothering about, and indeed would not be legitimately described in terms of the language of relationships.

Bounded rationality and opportunism produce uncertainty in transactions, thus requiring actors to expend more resources than they might prefer, given their gains. Uncertainty need not result from strategic opportunism by others, but may simply result from honest disagreements between 'honest, ethical people who disagree about what event transpired and what adjustment would have been agreed to initially had the event been anticipated' (Alchian and Woodward, 1988: 66). Hodgson (2004b) made a similar point, arguing that misinterpretation, misunderstanding, and disagreement are significant sources of contract non-compliance. In the language of evolutionary theory, transaction structures that reduce uncertainty by preventing misunderstanding and disagreements will have a selective advantage over those that do not, if the structures cost less than simply tolerating the uncertainty. Managers ignoring selection pressures would waste resources on inefficient structures and thus put their firms in peril, as Silverman et al. (1997) found in their research on the longevity of trucking firms.

Retention, in TCE models, is anchored in the transaction-specific investments made by the parties to a relation, in black-letter contracts, and in the mutual monitoring and enforcement that accompanies repeated transactions. *Transaction-specific investments* refer to the resources actors invest in a relationship to keep it going. For many one-time, market-based transactions, maintenance of the relationship is not a relevant issue. If, however, one of the parties to a transaction has an interest in ensuring that it persists, then that party must invest some resources in maintaining the relationship itself. Otherwise, purely self-seeking behavior will destroy rather than sustain the relationship (Swanson, 1971).

Institutional and interpretive theories treat transaction-specific investments as induced or motivated by purposive or solidary incentives (Clark and Wilson, 1961), whereas TCE theorists stress materialistic or self-serving motives. As Loasby (1995: 475) pointed out, TCE theorists 'follow the standard American practice in construing self-interest as narrowly focused selfishness,' and mostly neglect other motivations and incentives, such as trust. However, surveys of the American public suggest that TCE theorists may have accurately captured the real level of trust people are willing to place in others they do not know. Bellah et al. (1996: 510) noted that 'the proportion of Americans who say that most people can be trusted fell by more than a third between 1960, when 58 percent chose that alternative, and 1993, when only 37 percent did.'

Williamson acknowledged that 'farsighted contracting,' which he recommended to deal with critical contingencies, should not be taken to extremes. Noting that economists make the assumption that 'economic actors have the ability to look ahead, discern problems and prospects, and factor these back into the organizational/contractual design' (Williamson, 1994: 88), he argued for 'plausible farsightedness,' rather than hyper-rationality. Moreover, because actors are contracting for an incompletely known future, their *ex ante* agreements must allow room for *ex post* realignments, when new situations are encountered (Nickerson and Silverman, 2003). The reasoning of contemporary TCE theorists sounds very much like evolutionary thinking, differing primarily in the greater confidence they place in 'farsightedness.'

## Issues under debate

Granovetter (1985) strongly criticized TCE, arguing that it reflected two contradictory assumptions about human behavior. He argued that TCE draws on an *under-socialized* conception of humans because individuals are presumed to behave atomistically, as isolated actors. Under-socialized people act without regard to the social damage they do, or the impressions they leave with others. However, TCE also draws on an *over-socialized* conception when it assumes that individuals will voluntarily refrain from completely ruthless behavior. Do actors only follow the rules in playing competitive games if they have thoroughly internalized the norms of 'civilized' behavior? Nilakant and Rao (1994) agreed with Granovetter that agency theory and the other new institutional economics models probably overstate the role of individually oriented economic incentives in organizations and understate the importance of social exchange: reciprocity, cooperation, and trust.

Williamson (1994: 97), responding to criticisms that TCE neglects trust, noted that 'trust' has many functional substitutes, as credible commitments can be reached through the use of bonds, hostages, disclosure rules, agreements on how disputes will be resolved, and so forth. 'Albeit vitally important to economic organization, such substitutes should not be confused with (real) trust.' Although this concession opened the door to a possible compromise with Granovetter's approach, Williamson went on to argue that 'calculated risk' and 'calculated trust' occupy distinct places in social and economic life. 'Calculated trust' – of the real kind – is found in people's personal lives, and 'calculative risk' is found in their commercial lives. In contrast, Jones et al. (1997: 922) detected a point of common ground between Granovetter and Williamson, because both emphasize that frequency and reciprocity of contacts create conditions for informal control – building on trust – within relations.

The development of TCE as an empirical field within organization studies has been hampered by several problems. Theorists have had difficulty in operationalizing the concept of transaction costs *a priori*, and they have also been reluctant to conduct dynamic analyses of organizations actually adapting to their environments (Shelanski and Klein, 1995). TCE research has also been troubled by a fundamental ambiguity about whether organizations are really units of analysis (Hirsch et al., 1990). Most research has been descriptive, rather than hypothesis testing, using cross-sectional designs, and has focused on very large publicly held corporations (Hesterly et al., 1990). David and Han (2004) conducted a meta-analysis of 63 journal articles that tested TCE hypotheses, selected after a systematic search of articles abstracted in ABI/Inform and EconLit. They found surprisingly little agreement among researchers on how to operationalize TCE's constructs and propositions, and how to test them. They also found low levels of empirical support for TCE's core argument, with many results not supportive of TCE.

Transaction cost models have the potential of generating falsifiable hypotheses, to the extent that transactions' costs can be spelled out *a priori*. However, the lack of a strong research tradition, and disagreement on how to measure key constructs, inhibits TCE from accumulating a stock of reliable and valid empirical generalizations. Moreover, with its reliance on cross-sectional observations and its eagerness to attribute existing structures to the constraining effects of markets, it mostly ignores evolutionary issues. Hesterly et al. (1990) pointed out that much of TCE theorizing is



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implicitly functionalist. Functional thinking can be helpful in leading us to consider the benefits of a current structure, which can then direct our search for historical explanations (Dennett, 1995: 124–145). However, functionalist explanations fall short to the extent that they infer the origins of a structure by only examining its consequences, rather than the processes that brought it about.

### Contributions

TCE has played a constructive role in pushing ahead the frontiers of organization theory. Williamson has worked unceasingly on creating a formalized, deductive scheme from which propositions may be derived. Beginning with plausible assumptions about human behavior, Williamson and his followers have crafted a strong challenge to non-economic theories. He has pushed theorists from other perspectives to consider alternative explanations for the organizational forms they observe, asking them to examine the costs and benefits of various arrangements. In his concern with ‘the main case’ – a theory’s claimed domain of applicability – he has challenged others to ‘sort the wheat from the chaff’ and develop the ‘refutable implications’ of their arguments (Williamson, 1994: 86).

As economic thinking and rational choice models have continued to attract organization theorists’ attentions, TCE has achieved a solid foothold in organization studies (Perrow, 1986: 219–257). David and Han (2004: 37) found that references to TCE in the Social Science Citation Index had grown faster than references to institutional theory, population ecology, and resource dependence. Even investigators whose studies were not conducted within a TCE framework sometimes feel compelled to mention it, anyway (Pennings et al., 1994). Among some economic historians, TCE has been recognized as offering ‘the most promising framework for approaching the general rise of the modern business corporation’ (Schmitz, 1993: 84), such as the emergence of vertical integration in the U.S. auto industry (Langlois and Robertson, 1989). Other historians have been less sanguine (Coleman, 1987). Regardless of problems in its research program, TCE has shown continued vitality as a well-developed, clearly articulated theory of comparative economic organization, with adherents ready and willing to answer attacks from their critics.

### Summary: the six perspectives

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Evolutionary theory is not a closed, logical deductive system, but instead comprises an overarching metatheory with a set of concatenated principles. Applied across multiple levels of analysis, it is open to multiple approaches for explaining particular kinds of changes. Over the past several decades, at least six viable perspectives on organizations have emerged that provide a rich set of ideas and principles on which evolutionary explanations can draw. In this chapter, we have reviewed the collective judgments, as represented in books and articles, that have emerged from negotiation and debate among the practitioners of these six approaches. In the rest of this book, we will draw upon these ideas in constructing evolutionary explanations.

Ecological analysis reminds us of the volatility of organizational populations, focusing on foundings and disbandings over a population’s life cycle. By taking a long-term view, ecology makes salient the significance of historical events for population and

community development. Because the scholars pursuing ecological research focus on building empirical generalizations through replication of key findings, they have laid much of the groundwork for evolutionary analysis. Institutional theorists emphasize the socially constructed nature of organizations and populations. Institutionalization as a process of instilling socially constructed entities with value occurs at all levels of analysis, and thus institutional theory allows theorists to link events at multiple levels. Institutional theory has also served as a counterweight to arguments from strategic management and TCE theorists about 'choice' by reminding us that inherited traditions, custom, and habits drive many organizational and managerial behaviors.

Interpretive approaches treat people as active agents influencing their own fate, as does much of the work in the organizational learning approach. People often disappear in other perspectives. By contrast, many interpretive theorists construct their explanations by doing direct observation of organizational life in the field. By focusing on the social-psychological processes involved in creating and sustaining meaning, the interpretive approach allows room for the play of chance and creativity in organizations. Transaction cost economics makes assumptions about human behavior that trouble many sociologists, and it has challenged proponents of other views to make their assumptions and propositions explicit. TCE provides evolutionary analysis with a framework in which to examine the costs and benefits of alternative organizational arrangements that might be selected via evolutionary forces.

Several approaches give a prominent place to human agency, but the resource dependence perspective is the most vigorous advocate of aggressive intervention. It emphasizes the strategies used by organizations to change or even control their environments, while recognizing the severe limits on such action. Like the institutional and organizational learning approaches, resource dependence models allow theorists to link multiple levels of analysis by tying the interests of organizational coalitions to organizational strategies, which in turn reflect judgments about an organization's position in its environment. Resource dependence is the most overtly political model of the six, but institutional theorists have also tackled many issues involving power and dominance. The organizational learning approach contains, in many respects, a parallel set of concepts and principles to those of the evolutionary approach. Although not made explicit in every article or book, the variation-selection-retention model is the foundation for analyses of learning in any context, whether by individuals, groups, or organizations. Because much of the work in organizational learning theory is grounded in social psychological and cognitive theories of human behavior, it allows researchers to formulate clear propositions about the conditions under which people act as agents of their own fate.

## Conclusions

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Each of the six approaches offers something of value to an evolutionary perspective on organizations. In practice, an evolutionary analysis borrows selectively from them, as befits its eclectic nature. Evolutionary theory remains open to the unexpected and the improbable, thus sharing something in common with interpretive and organizational learning approaches. As in the institutional approach, its explanations cut across levels of analysis and encompass both the short and the long run in organizational life

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cycles. Evolution is a locally adaptive process whose course is not predetermined and thus has something in common with ecological and TCE approaches that also stress local selection processes. Finally, the evolutionary approach emphasizes that few people know exactly what they are doing, or why. Consistent with resource dependence theory, organizations are therefore vulnerable to the influence of aggressive agents who know what they want, and are willing to work hard to get it.

In return for this eclectic borrowing, the evolutionary perspective adds value to each of the approaches. It suggests how approaches that highlight very different features within organizations might be integrated with one another. It also suggests how relatively specific processes – such as entrepreneurship, opportunism, coalition-building, and conformity – can be analyzed using a general framework of variation, selection, and retention mechanisms. The evolutionary perspective thus offers hope for an holistic understanding of organizations and improved accumulation of knowledge across diverse substantive areas.

### Study Questions

1. We use the evolutionary approach as a metatheoretical framework to integrate the various perspectives on organizations. Are there some perspectives that fit more comfortably within an evolutionary frame than others? What features of the six perspectives reviewed in the chapter influence how well they can be conceptualized in evolutionary terms?
2. Recall the three research design issues raised in Chapter 2: choice of unit of analysis, definition of novelty, and selection biases. To what extent do you think these will affect empirical work conducted under the rubric of each of the six theoretical perspectives?
3. Consider your own views on the issue of theoretical pluralism in organizational studies. Is this a sign of intellectual vitality in the field? Or a major impediment to theoretical accumulation and integration?

### Exercise

1. Choose a recent journal article on some aspect of organizational change and identify if the authors used one of the six perspectives we discussed in this chapter. If yes, to what extent does the article exhibit the strengths and weaknesses we noted? If no, did the authors use another perspective or create an eclectic perspective of their own? Why?