ORGANIZATIONS EVOLVING

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1 Introduction and Themes

I had three goals in mind when I began this book. First, I wanted to write about *organizations*, not just organization theory. And, I wanted to write about all organizations, not just the largest and most powerful ones. Organizations are fascinating social units, of many shapes and sizes, but most of them are overlooked by the field of organization studies. Driven by understandable pressures, contemporary books and journals tend to focus heavily on publicly traded firms, numbering less than 20,000 businesses in the United States. The millions of organizations that are neither listed on any stock exchange nor staffed by graduates of business schools appear infrequently in our research, except in sub-fields like entrepreneurship. Of course, I do not mean that my book is a handbook of organizational statistics, devoid of theoretical interpretation, and I will not focus solely on small businesses. I do mean, however, that I will do the best I can to ground the book in the substance of organizations in all their diversity, rather than to write as if the Fortune 500 were the only creatures in the organizational zoo. I focus primarily on businesses, but other kinds of organizations are also covered.

Second, I wanted to write about the *emergence* of organizations, not just their existence. Organizational scholars have done an excellent job in explaining how things work in organizations that have been around for a while, but not how they came to be that way. In contrast, I am interested in the genesis of organizations, organizational populations, and communities. Even really large organizations started small, usually, but the absolute miracle of their creation does not seem to interest most organization theorists. It should. Without understanding why and how new social units emerge, we miss the connection between the on-going creative ferment in human societies and the particular realizations of it in organizations. Thus, I give more attention to the early days of organizations, populations, and communities than most other organization studies' books and articles.

Third, I wanted to write about the *process* through which new organizations, populations, and communities emerge, using an evolutionary approach that cuts across academic disciplines. I have been disappointed that most research on organizations focuses on structure and stability rather than emergence and change. By ignoring the question of origins, researchers have also avoided the question of why things persist. In contrast, the evolutionary approach treats origins and persistence as inseparable issues. In doing so, evolutionary models encompass many levels and units of analysis and thus typically take an inter-disciplinary perspective on change processes.

I have always been fascinated by the eclectic nature of organization studies, which draws scholars from economics, history, political science, psychology, sociology, and elsewhere. Disciplinary boundaries have never meant much in organization theory, and members of particular theory groups publish in topical as well as discipline based journals. In using a cross-disciplinary approach, I follow the legacy of Donald Campbell. Although educated as a psychologist, Campbell never let his academic home restrain his forays into issues of evolutionary epistemology, ethics, creativity, altruism, and other issues he approached from an evolutionary framework.

I use an evolutionary approach, as I explain in Chapter 2, because it is a generic framework for understanding social change. Applicable at multiple levels, it directs our attention to the processes of variation, selection, retention, and struggle that jointly produce patterned change in evolving systems. In the early chapters, I use it to portray how new organizations emerge as people mobilize resources in pursuit of opportunities. I focus on time measured in weeks and months. In later chapters, I focus on time measured in years and decades, as I examine the historical context in which organizations, populations, and communities evolve. I show how an evolutionary approach helps us connect history and social structure.

In keeping with my theme of depicting the full variety of organizations in industrial societies, I present some information on the organizational landscape. I show the similarity in organizational size distributions across societies, as well as the enormous disparity between the tails of the distributions. Finally, I describe my plan for the book, indicating the topics I will cover in each chapter and the logic underlying their order.

Organizations: An Overview

After I explain the three dimensions of my definition of organizations, I consider arguments for why organizations are an important class of social units to study.

Definition of Organization: The three dimensions

What are organizations? A simple definition is that organizations are goal-directed, boundary-maintaining, and socially constructed systems of human activity (Aldrich, 1979). This definition focuses attention on the social processes involved in the genesis and persistence of organizations. Some definitions add other criteria, such as a deliberate design, the existence of status structures, patterned understandings between participants, orientation to an environment, and substitutability of personnel (Meadows, 1967; Scott, 1998). However, I believe these other features follow from the three key processes marking off organizations from other types of social units, such as families and friendship circles. Organizational analysis of other types of social units is certainly possible, but I focus on goal-oriented organizations.

Goal-directed Goal-directed behaviors and the deliberate design of activity systems are distinctive features marking organizations off from other collectivities, such as families and small groups. Organizations are purposive systems in which members behave as if their organizations have goals, although individual participants might personally feel indifferent toward those goals or even alienated from them. Comparisons of actual outcomes to desired targets have a substantial effect on whether organizations will continue a line of action or change it (Simon, 1955). Many actions are deliberately designed, within the limits of members' abilities, to move organizations closer to the desired targets. Concerted collective action toward an apparent common purpose also distinguishes organizations from social units such as friendship circles, audiences, and mass publics. Such social units typically do not have a focused agenda and are easily deflected into aimless or purely sociable activities. Because many organizational forms are now institutionalized in modern societies, people readily turn to them or construct them when a task exceeds their own personal abilities and resources (Meyer and Rowan, 1977; Zucker, 1988). For example, people raising funds for social or political causes almost always set up a voluntary association, complete with a charter, officers, a bank account, and regular meetings (Knoke, 1990).

Goal setting by owners or leaders must take into account potentially conflicting preferences of other organizations and individuals supplying their resources. For example, participants must be enticed or coerced into contributing to the organization's activities: businesses pay people to work for them, and many non-profit organizations offer more intangible benefits, such as sociable occasions. Because organizations need resources from their environments, they are subject to diverse uncertainties, and may be vulnerable to exploitation or external control if they depend on outsiders (Pfeffer and Salancik, 1978). Contemporary research often focuses on how these external dependencies are managed by organizations, thus highlighting the second dimension of my definition: the boundary between organizations and their environments.

Boundary-maintaining Organizations share their feature of socially constructed boundaries with other types of collectivities. The establishment of an organization implies a distinction between members and non-members, thus setting organizations off from their environments (Weber, 1947). Boundaries may be permeable. Thus, maintaining this distinction requires boundary-maintenance activity. Many organizations establish an authoritative process to enforce membership distinctions. For example, large businesses have human resource management departments that select some people and exclude others, creating a strict distinction between "employees" who are entitled to organizational benefits and "non-employees," who are not. Voluntary associations have membership committees that perform similar functions. Distinctive symbols of membership may include unique modes of dress and special vocabularies. For example, in leisure parks, such as Disney World, employees' personal identities disappear under their costumes and they become "cast members" and "performers" (Van Maanen and Kunda, 1989).

From an organization’s perspective, autonomy depends on its ability to control its boundaries. Using the criterion of boundary-maintenance, friendship circles or casual associations would not be considered organizations, whereas most social clubs and fraternal associations would be. Circles or casual groupings of people are relatively easy to enter and exit, possessing a fleeting existence, at best. Boundary-maintaining processes become visible on occasions when they are severely tested. For example, they became visible when ethnic minorities in the United States first sought admission to exclusive social fraternities, country clubs, and elite law firms (Smigel, 1964).

In some theories of organizations, boundary maintenance includes stripping away or attempting to control those aspects of personal identity and external commitments that would interfere with rational decision making (Weber, 1947; Simon, 1976). Emotional attachments cloud judgment and may lead people into “irrational” decisions. Organizations are thus structured in ways to suppress or at least compensate for the excess baggage that people bring with them. Such theories build on assumptions about human behavior that feminist theorists, among others, reject. Mumby and Putnam (1992: 471–474) argued that *bounded rationality* isolates and suppresses "the emotional/physical self from the process of organizing.” They argued for an alternative model of *bounded emotionality*, in which “nurturance, caring, community, supportiveness, and interrelatedness are fused with individual responsibility to shape organizational experiences.” Their critique highlighted the difference between models of organizations generated by management theorists, concerned with organizational effectiveness, and more encompassing models, concerned with understanding how and why organizations have evolved. For my purposes, the concepts of bounded rationality and bounded emotionality both emphasize the embeddedness of organizations in their environments.

Activity-systems Organizations have activity systems for accomplishing work, which can include processing raw materials, information, or people. Activity systems consist of bounded sets of interdependent role behaviors – sets of routines and bundles of activities (Nelson and Winter, 1982). The interdependencies are often contingent upon the techniques used (Thompson, 1967). I use the term *routines* as a generic term, following Levitt and March (1988: 320): “the forms, rules, procedures, conventions, strategies, and technologies around which organizations are constructed and through which they operate.” The concept of routines in organizational studies is still evolving, as shown in a progress report by evolutionary theorists using a cognitive psychology perspective (Cohen *et al*., 1995).

Many routines are inter-personal, but many others require that humans interact with non-humans (e.g., machines and other artifacts), and the study of such interactions has spawned an extensive literature on technology and innovation (Cohen *et al*., 1995; Thomas, 1994; Zuboff, 1988). Indeed, Latour (1993) argued that sociologists have been unable to really understand organizations because such complex units are more than just the sum of their human members. He asserted that theories must take account of people in organizations interacting with non-people, such as products and technologies.

Under their own power, machines often act without discernible human intervention, and the results of their actions can pose constraints for the machines' nominal owners.

The division of labor between activities in organizations leads to role differentiation and specialization of functions. In smaller organizations, *role differentiation* – people fulfilling different roles in the organization – may involve simply a difference between a leader or manager and other members. Larger organizations are typically highly differentiated, and during the 1960s and into the 1970s, researchers investigated the relation between organizational size and role differentiation (Blau, 1972; Child. 1973). They found that organizational growth produced problems of coordination and control that generated attempts at simplifying structures, such as through creating new subunits and divisions.

Within organizations, goal direction and boundary maintenance manifest themselves as issues of coordination and control, as authorities construct arrangements for allocating resources or integrating the flow of work. These internal structures affect the perceived meaning and satisfaction of individual participants by, for example, differentially allocating power and affecting the characteristics of jobs. *Control structures* – arrangements that shape the way participants are directed, evaluated, and rewarded – are constrained by participants' multiple external social roles. Some complement but others conflict with organizational roles. Over the past few decades, organizational sociology has gradually expanded its scope to include more of the external uncertainties associated with organizational life.

With few exceptions, organizations are not self-sufficient. They must thus depend on interchanges with their environments for their sustenance. Environments include technical elements – information and other resources – directly tied to the accomplishment of work, and cultural or institutional elements – rules, understandings, and meanings about organizations – that are shared in the wider society (Meyer and Scott, 1983). Early attempts to theorize about relations between organizations and environments attempted to sharply demarcate the two, searching for taxonomies or typologies of environments (Emery and Trist, 1965). Under the influence of institutional and social network theorists, we now recognize that organizations are strongly embedded in environments and environmental influences penetrate organizations in many ways.

The Importance of Organizations

Why are organizations important? Organizations are the fundamental building blocks of modern societies and the basic vehicles through which collective action occurs. Their products constitute the infrastructure of societies, shaping the context for organizations of succeeding generations. Through organizations, people pursue activities too broad in scope to be accomplished by individuals or families acting on their own (Abrahamsson, 1993). Accordingly, organizations mediate the influence of individuals on the larger society. For example, most news headlines in the mass media concern the actions of organizations, such as the International Monetary Fund, the World Cup Organizing Committee, or the Microsoft Corporation. Wherever an organization succeeds in attracting enough people and resources, centers of potential social action are created. They mold the social landscape, as individuals affiliate with or abandon them (Ahrne, 1994). We need to know more about how organizations emerge and grow.

Opportunities for the creation of special-purpose organizations increased with urbanization and with economic, political and social differentiation. The resources required to construct organizations grew more abundant with the development of a money economy and the spread of literacy (Stinchcombe, 1965). The spread of legal and political institutions created a stable, predictable context within which entrepreneurs could look forward to appropriating the gains from organizational foundings. Consequently, organizations, rather than individuals or families, became the units of stratification in modern societies. Families now gain or lose wealth through their organizational affiliations, not their historic lineage. When stratification rankings are contested, such as during political revolutions, the greater resource base of organizations, as opposed to families, increases the ferocity of political conflict (Stinchcombe, 1965).

Organizations are shaped by the contexts in which they are established, and thus contemporary organizations reflect the impact of their historical origins in societies characterized by growing affluence and competition over the control and distribution of wealth. Innovations in organizational structures, made possible by the growth of supportive legal, financial, and logistical infrastructures in 19th century industrial societies, spurred the development of huge organizational projects. In the United States, for example, large national railroads emerged as people struggled to find methods of overcoming the problems of coordinating the passage of shipments across hundreds of miles of rugged terrain (Chandler, 1977). In the 20th century, the production of mass-market consumption goods, such as automobiles and televisions, was made possible by the rise of large vertically integrated manufacturing firms (Lawrence and Dyer, 1983).

Similarly, in the public sector, welfare-state social policies are now implemented through large government agencies that can process thousands of cases on an impersonal and universalistic basis (Orloff and Skocpol, 1984). When the United States found itself behind in the “race into space” in the early 1960s, President Kennedy committed the nation to putting a man on the moon within the decade, and he created an enormous organization – the National Aeronautics and Space Administration – to accomplish the task. In many industries, employment agencies and brokers affect the allocation of well-paying jobs and structure the careers of workers in the industry. For example, elite talent agencies in Hollywood have had a significant effect on the employment rates and earnings of television and movie writers (Bielby and Bielby, 1999).

Major tasks in many domains are addressed not by single organizations, but by sets of interdependent organizations. The production of scientific research now takes place largely in *technical systems* consisting of government agencies, laboratories, private firms, and universities (Shrum *et al*., 1985). *Policy domains* consisting of government bodies, corporations, political groups, and nonprofit associations, collectively influence governmental policy formation and agenda setting (Laumann *et al*., 1985). The National Cooperative Research Act of 1984 allowed businesses that normally compete with each other to establish research and development consortia for conducting research on processes or products that benefit an entire industry (Aldrich and Sasaki, 1995). Interorganizational arrangements between hospitals, doctors, and university laboratories have been created by the National Cancer Institute to coordinate cancer research and treatment, and interorganizational arrangements have replaced asylums for the delivery of mental health services at the community and societal levels (Scott and Black, 1986).

The concentration of power in organizations contributes not only to the attainment of large-scale goals, but also to some of the most troublesome actions affecting us (Coleman, 1974). Some of the negative consequences of organized action arise as by-products in the normal course of business, whereas others are the result of callous disregard of the public interest. Hazardous waste contamination, as in the “Love Canal” episode in Buffalo, New York, was the result of the careless disposal of unwanted hazardous materials by chemical manufacturers (Levine, 1982). New York State and the U.S. government spent millions of dollars cleaning up the problem (Brown, 1979). Price-fixing scandals in the heavy electrical equipment industry (Baker and Faulkner, 1993; Geis, 1967), insurance fraud in the health care industry (Vaughan, 1983), and the collapse of the savings and loan industry in the 1980s are other examples of the capacity of organizations to do harm as well as good. Complex technical systems managed by organizations, such as airline transportation or nuclear power plants, periodically have “normal accidents” with catastrophic consequences (Perrow, 1984).

Not all marginal, non-competitive, or troubled organizations disband quickly. By *disband*, I mean that an organization ceases to exist as an operating entity, for whatever reason. Many marginal organizations linger on, declining or deteriorating over a period of years or even decades (Meyer and Zucker, 1989). For organizations that permanently shut down, dramatic events such as organizational bankruptcy may stigmatize owners and managers (Sutton and Callahan, 1987). Owners and managers are not the only people affected by organizational disbandings, as losing one’s job at a declining or downsizing organization can also be a traumatic experience for workers (Loving, 1976; Slote, 1969). Because many workers’ identities and sense of self-worth are bound up in their jobs, business closures severely shake their self-confidence (Aiken *et al*., 1968).

At the end of the 20th century, we seem to have an ambivalent feeling about the organizations in our lives (Smelser, 1998). First, we might consider organizations as our servants, making possible an infinitely more varied and full life than would otherwise be possible. Optimistically, history shows organizations serving *our* needs. Second, we might view the growth of an organizational society as a record of people enslaved and dominated by organizations, subject to arbitrary and impersonal dictates, and nearly powerless to fight back (Christensen, 1985; Perrow, 1991; Roy, 1997; Weber, 1963: 203–204). Some have even argued that, in postmodern society, the issue is no longer relevant – individuals have ceased to exist (Baudrillard, 1983). These contradictory images motivate much of the literature on organizations, in the scholarly and popular press. Writers assert that the tension between individuals and organizations can be a liberating, alienating, or destructive force. Whatever the answer, organizations constitute the dominant feature of the modern social landscape.

The Organizational Landscape

In keeping with a central theme of the book, we should know the contours of the organizational landscape before theorizing about it. Discussions of organizations in books and journals often nourish an aura of unreality among scholars, conveying an image of organizations as monolithic behemoths with massive power. On the contrary, the vast majority of organizations are small and short-lived, coming and going on a much shorter time scale than the humans who create and run them (Kaufman, 1985; Starbuck and Nystrom, 1981). A comprehensive understanding of organizational evolution must recognize this reality. We can start by recognizing the limitations of information currently used in our research.

Historically, the broad field of organizational studies has examined many types of organizations. Researchers have studied government agencies (Blau, 1955; Selznick, 1949), churches and nonprofit organizations (Gusfield, 1963), educational institutions (Clark, 1970; Stinchcombe, 1964) and various forms of for-profit organizations. However, much contemporary research shows a bias toward large, publicly held organizations, and this bias affects the kinds of organization theory we build (Clegg and Hardy, 1996). A similar problem of selection bias affects research on other events which are the outcomes of historical processes, such as comparative studies of political systems (Geddes, 1990).

Corporations constitute a minority of all businesses, and publicly traded firms are a minority of all corporations. In the United States, publicly traded firms have their stock listed on the New York Stock Exchange (NYSE), the American Stock Exchange (ASE), or other regional exchanges. They are also traded over the counter through the National Association of Security Dealers (NASDAQ). Roughly 3000 firms are listed on the NYSE, a little over 5000 are traded through NASDAQ, and over 700 are available on the ASE. Adding in regional exchanges in Denver, Boston, and elsewhere still brings the total to less than 20,000, amounting to less than one-half of one percent of all organizations using a corporate form.

Limiting our investigations to this small fraction of the business world means that we ignore much of the historical process that generated such firms. Many organization researchers, especially those interested in financial performance measures, rely on this small set of publicly traded firms because data is readily available in reports filed with the Securities and Exchange Commission, the Federal Trade Commission, and other organizations. Strategy researchers are interested in how events such as chief executive succession or strategic reorientations affect a firm's market valuation, and entrepreneurship researchers want to know how venture capitalists decide to price a deal for an initial public offering (Black and Boal, 1994; Reed and DeFillippi, 1990). Such questions are important and highly relevant in an economy where publicly traded corporations account for most of the assets and revenues of business firms. However, when only the oldest and largest firms constitute our samples, many historical details are lost. We miss the process by which organizations aged, evolved through periods when competitors were eliminated, and developed the distinctive differences that made them more hardy than their peers.

How can we learn more about the actual organizational landscape? Detailed information on businesses in the United States and other countries has been rather spotty in the past, but it has improved as governments have sought more detailed information on which to base economic policy decisions. In the United States, the Small Business Administration (SBA) has assumed most of the responsibility for collecting and publishing data on businesses, using information from other government agencies as well as the private sector. Because the various agencies involved have used somewhat different definitions and cover slightly different target populations, comparability across data sources and years is highly problematic. In Appendix I, I briefly review the kinds of data that are publicly available, to give readers a sense of what we know and how we know it, and what gaps remain in our knowledge.

Industrial societies contain a large number of organizations, but most are quite small. Over 5 million businesses with at least one employee were active in the United States in 1990, and there are thousands of governmental, nonprofit, membership, and voluntary associations (DiMaggio and Anheier, 1990; Knoke, 1986). About two-thirds of all Americans belong to at least one voluntary association and one-third belong to more than one (Knoke, 1986: 3). Figures are similar for nations in the European Union (ESNR, 1993) and elsewhere (Curtis *et al*., 1992). Appendix II contains detailed information about the number of nonprofit organizations in the United States, as of 1994, as well as information on the size distribution of business firms. In this section, I highlight several aspects of this information.

I examine three characteristics of the organizational community. First, the size distribution of businesses and nonprofit organizations is highly skewed, with a small number of very large organizations. Second, although the number of large organizations is small, they achieve a dominant share of revenues and assets. Third, smaller organizations have a relatively large share of all employees.

Most organizations are small First, the size distribution of business firms is log-normally distributed, as is the size distribution of voluntary associations (Collins, 1973; Simon and Bonini, 1958). At one tail of the distribution, there are a very large number of small organizations. At the other tail, a small number of very large organizations exist. In 1990, the SBA, using information from the Census Bureau, estimated that 89.4 percent of the approximately 5 million *firms* with employees in the United States employed fewer than 20 workers, as shown in Table 1.1. Over 98 percent of all firms employed fewer than 100 employees.

Table 1.1 Size of Firms by Industry: United States, 1990

	Percent of Firms in Size Class			
	Size Class 1-19	Size Class 1-99	Size Class 100+	Percent of employees working in firms with 100 or more employees
All	89.4	98.3	1.7	60.8
Agriculture, Service, Forestry, Fishing	95.2	99.4	0.6	20.1
Mining	83.2	95.6	4.4	7.23
Construction	91.5	99.1	0.9	27.1
Manufacturing	72.8	93.4	6.6	78.4
Transportation, Communications, Public Utilities	86.2	97.2	2.8	74.5
Wholesale Trade	84.5	97.0	3.0	48.6
Retail Trade	88.3	98.6	1.4	55.8
Finance, Insurance, Real Estate	91.8	98.0	2.0	68.1
Services	91.1	98.2	1.8	57.7
Unclassified	98.6	99.8	0.2	11.8

Source: Small Business Administration (1994), Table 2.5, p. 34-35.

The largest firms were found in the manufacturing sector, but even there, over 93 percent of all manufacturing firms employed fewer than 100 workers. In the European Union (EU), small firms were also the largest share of the business population, as shown in Table 1.2. Over 99 percent of EU-based firms employed fewer than 100 employees, and about 93 percent employed fewer than 10 workers, although this proportion varied by country.

The size distribution of voluntary associations is skewed in a way similar to businesses. Most voluntary associations have fewer than 50 members (McPherson and Smith-Lovin, 1986), according to numerous case studies carried out at community and state levels. For example, using a representative sample of adults living in Nebraska in 1977, McPherson (1983b) estimated the size distribution of voluntary associations, adjusting for their differential probability of appearance in a sample of memberships. A substantial number of very small associations – under 50 members – coexisted with a very small number of large

Table 1.2 European Union: Employment Share by Member State and Employment Size, 1988, Selected Nations

	Percentage Employment Share of Firms with:				
Nation	0-9 employees	10-99 employees	100-499 employees	500+ employees	Total Percent
Denmark	22	37	17	24	100
France	28	25	14	33	100
Germany	17	28	17	38	100
Greece	59	21	11	9	100
Italy	48	24	10	19	100
Spain	36	30	17	17	100
United Kingdom	26	21	18	35	100
All EU Nations*					
Employment Share	29.6	25.1	15.8	29.5	100
Percent of Firms	93.2	6.3	0.4	0.1	100

* "All EU Nations" includes, in addition to those shown, Belgium, Ireland, Luxembourg, The Netherlands, and Portugal.
Excludes agriculture, hunting, forestry, fishing, and some "non-market services."
Source: ENSR (1994), Tables 2.1, 2.2, 2.6, and 7.1.

associations. Because some of the associations were quite large, such as unions and fraternal organizations, average membership size in Nebraska was close to 200.

Large firms are economically dominant Second, measured by assets, large firms dominate the corporate world. In 1994, most of the 4.3 million corporations in the United States had less than $100,000 in assets, and they accounted for less than 0.3 percent of all corporate assets. By contrast, the top .002 percent of corporations with a quarter of a billion dollars or more in assets held about 83 percent of all corporate assets. About 91 percent of the active corporations in 1994 held assets of less than 1 million dollars, and this large group of approximately 3.9 million firms accounted for just over 2 percent of all corporate assets. The largest 9 percent of all corporations therefore controlled over 97 percent of all corporate assets.

Detailed information reveals that concentration varies over time within particular corporate sectors. For example, in the banking sector of the United States in 1980, the top five banks held about 12 percent of all banking assets, whereas in 1998 they held about 25 percent. The top 100 banks held just over half of all banking assets in 1980, whereas they held about three-fourths in 1998. In 1980, eight out of approximately 1,800 insurance companies held half of the assets in that industry (Kerbo, 1983). The merger and acquisition movements of the past several decades led to further consolidation in some industries, but the overall concentration of corporate assets has apparently not increased very much (Merrill Lynch, 1992; Stearns and Allan, 1996).

Small organizations are significant employers Third, measured by employment share, large firms still have a very large share of total employment. Nonetheless, small firms play an important role in labor markets. In the United States, about 61 percent of all employees work in firms that employ 100 or more. In three industries, more than 70 percent of the workforce works in large organizations: (1) mining, (2) manufacturing, and (3) transportation, communications, and public utilities. In the agricultural, forestry, and fishing sector, and in construction, substantially less than half of the employees work in firms with fewer than 100 workers. In Japan's manufacturing industry in 1978, about 42 percent of all employees worked in establishments of more than 100 workers, but only about 13 percent worked in establishments of more than 1,000 workers (Granovetter, 1984). In the EU, firms with 100 or more workers employ about 45 percent of the private sector labor force, but variation across countries is substantial. In Germany and the United Kingdom, large firms employ more than half the labor force, whereas Greece and Italy have very large small-firm sectors, with firms over 100 employing only 20 percent of the work force in Greece and 29 percent in Italy.

At the very top of the size distribution by number of employees, a handful of huge firms employ a very large proportion of all workers in the United States and Europe. In 1982, the Small Business Administration located about 10,000 firms that operated on a national basis and owned more than 415,000 subordinate establishments or places of businesses. These employed 44 million people, or 53 percent of the non-government American workforce (Small Business Administration, 1982: 39). About 15 percent of the workforce was employed in small establishments – defined as having under 100 employees – owned by large firms. In 1988, there were 12,824 firms in the United States with 500 workers or more, employing almost 40 million people. In the European Union (EU) in 1988, curiously enough, there were also about 13,000 firms employing 500 workers or more (ENSR, 1993). In the United States by 1990, there were 14,023 firms with 500 workers or more, employing over 43 million people (SBA, 1994). At the very top, 484 enterprises employed 10,000 or more workers. Most business strategy writers and many organizational theorists appear to have this small number of very large firms in mind when they discuss organizations and organizational change in industrial societies. Large firms appear in business case studies, in textbook examples, and in samples drawn from publicly traded firms. The millions of ordinary firms are invisible.

In contrast, a representative sample of all organizations would yield predominantly small ones. Studies show that small organizations are founded and disbanded at a high rate (Reynolds and White, 1997). In the United States, in the late 1990s over one million people a year were involved in taking action to start new business. Only about half of the hopeful founders succeeded in creating an operating business and fewer than 1 in 10 of the businesses grew (Duncan and Handler, 1994; Reynolds and White, 1997). Research in other nations shows comparable levels of activity. For example, in Austria, about 25 percent of new firms registering with the Chamber of Commerce in 1990 had disbanded by 1995 (Wanzenböck, 1997).

Taken individually, such organizations have a relatively small effect on their environments. However, analyses at the population or industry level often show that small individual effects can cumulate into sizable collective effects. For example, Barnett and his colleagues studied telephone companies in Southeast Iowa, active between 1900 and 1917, and telephone companies operating in Pennsylvania between 1877 and 1933 (Barnett and Carroll, 1987; Barnett and Amburgey, 1990). They found that small firms – taken individually – consistently had the smallest effects on other firms. However, taken at the population level, small firms in both studies consistently had the strongest effects because of their greater numbers. More important, from an evolutionary perspective, large organizations have their roots in small ones. They do not burst onto the scene fully formed, but rather emerge from among cohorts of peers, many of whom do not survive the startup process and most of whom do not grow to textbook-salient size.

Plan of the Book

I use an evolutionary approach to explain the genesis of organizations, population, and communities in modern industrial societies. While offering a framework for understanding, I also wish to keep images of organizational reality in the foreground. Accordingly, I draw on many case histories and extended examples. I emphasize that the processes of emergence are grounded in local and historical contexts, but also that certain generic regularities are apparent.

The book is organized into five sections. The first introduces the evolutionary approach and puts it in the context of other approaches. The second section contains three chapters that use an organizational level of analysis and focus on the role of individuals and groups in organizational foundings. In the third section of the book, I examine the transformation of organizations and make the transition to a population level of analysis by exploring the historical context of organizations and social change. The fourth section includes two chapters at the population level of analysis, with the first focusing on the emergence of new populations and the second on the reproduction of established populations. In the fifth section, I move to a community level of analysis, drawing upon the earlier chapters to explore how entrepreneurship and relations between populations affect the dynamics of community emergence. In the last chapter, I offer summary comments and suggestions for further work.

Plan for the Chapters

In the first section of the book, Chapters 2 and 3 set the stage for what follows by describing the evolutionary approach and how it relates to other perspectives. In Chapter 2, I examine four issues. First, I define and explain the four generic processes that drive evolution and generate the critical events occurring in the life histories of organizational entities: variation, selection, retention, and struggle. Second, I review and rebut several common criticisms of evolutionary models. In particular, evolutionary models are not deterministic but instead celebrate indeterminacy in social life. I argue that an evolutionary outlook can be a useful antidote to the fallacy of retrospective reconstruction. Third, many unsettled issues remain, including the question of the unit of selection in evolutionary processes. Some evolutionary analyses focus on activities and structures on which evolution operates, whereas others favor the bounded entities that carry activities and structures. Fourth, I note that the evolutionary approach is applicable across multiple levels of analysis, thus setting the stage for a review of approaches that focus on different levels and units of analysis.

In Chapter 3, I argue that that a diversity of approaches to organizational studies is not only tolerable but also necessary, given the subject matter. Because the evolutionary approach is an overarching perspective, I believe that it is flexible enough to serve as a framework within which other approaches are acknowledged and appreciated. Evolutionary models do not specify the engines driving variation, selection, and retention, and thus they depend upon ideas from other approaches for their power. I review six approaches: institutional theory, the interpretive approach, organizational learning theory, population ecology, resource dependence, and transaction cost economics. I consider how each approach deals with variation, selection, and retention. I also explore the position each takes with regard to the likelihood of organizational transformation and the conditions, if any, under which it occurs. Using an evolutionary lens, I discuss a few of the key issues and debates surrounding each approach, as well as the contributions each makes to understanding organizational evolution.

In the second section of the book, Chapters 4, 5, and 6 take up the question of the conditions under which organizations emerge and coalesce as social units. Organizations display a bewildering variety of forms because they have been created in response to a wide range of problems and have emerged under widely varying environmental conditions. In Chapter 4, I explore the process by which new organizations are founded. People who initiate activities that might culminate in a viable organization are called *nascent entrepreneurs.* In applying an evolutionary perspective, I focus on two aspects of the process by which nascent entrepreneurs move toward creating a fledgling organization: their pursuit of organizational knowledge, and their mobilization of resources around an activity system. Most organizations start small, with little in the way of capital requirements, and thus social support and knowledge gained through social networks figure heavily in their ability to keep the activity going. In many cases, an initial idea cannot be realized because founders' intentions were misguided, they could not mobilize the resources they needed, or they could not achieve the level of control necessary to gain mastery over organizational boundaries. Thus, many organizing attempts fail.

Chapter 5 continues the theme of emergence by asking how founders and other participants solve two related problems. First, they must discover how to maintain organizational boundaries, and second, they must learn how to reproduce their portion of organizational knowledge. These discoveries must endure from day to day, and over generations of members. Boundary maintenance is problematic because members play ambivalent roles in organizations: as users of what organizations offer because of their control over resources, and as supporters of what organizations must do to reproduce themselves. I pursue these themes by focusing on the processes by which new organizations attract, recruit, and hire applicants, and construct reward systems. I draw extensively on social psychological research in this chapter to explain how the boundaries of groups and organizations become real, taken-for-granted reference points.

In Chapter 6, I examine how *members* emerge out of the communities of practice that develop around organizational tasks, driven by local exigencies as well as authoritative directives. I argue that founders spend much of their time hiring employees and centrally allocating some roles. At the same time, other roles are emerging through the creation of idiosyncratic jobs. Under these conditions, an organization's coherence as an entity is problematic because founders' activities are constrained by the relations members establish with one another. Through their interaction, members must learn and share organizational knowledge, and use it on a daily basis. I present a view of organizational knowledge as grounded in interaction between members and members' cognitive *schemata*, which are cognitive structures that represent organized knowledge about a given concept or type of stimulus. I review two ethnographic studies to illustrate the usefulness of a behavioral approach to understanding how schemata evolve. The image of organizations as boundary-maintaining systems raises the issue of the extent to which organizations become internally homogeneous. Using Martin's (1992) analysis of organizational culture, I argue that multiple strands of meaning run through most organizations, especially after they have become bounded entities.

In the third section of the book, I examine the issue of transformation within organizations and within cohorts of organizations experiencing large-scale social change. The issue of how frequently and under what conditions organizations change has provoked some of the most spirited debates in organizational studies. For example, strategic choice theorists have argued for managerial autonomy and adaptability, whereas ecological and institutional theorists have tended to stress organizational inertia and dependence. If, after they are created, organizations are relatively inert, then new organizations are the primary source of variety in populations. Organizational founding processes would be responsible for populations tracking changes in their environments over time. If, however, organizations change significantly and frequently over their life course, then existing organizations are the major source of diversity in populations.

Of course, we know that organizations sometimes change. The key questions are how often do they change, to what extent, and under what conditions? Moreover, even if organizations do change, they may not change fast enough to keep up with changing environments. Some organizations adapt readily to every environmental challenge, whereas others succumb to the first traumatic event they face. In Chapter 7, I offer a definition of transformation as a major change occurring along three possible dimensions: changes in goals, boundaries, and activities. Major changes involve a break with routines and a shift to new kinds of competencies that challenge existing organizational knowledge. The evolutionary framework calls our attention to several dimensions of the transformation process, including the extent of member involvement in them. I also consider the conditions under which transformation disrupts organizations and thus potentially threatens organizational coherence and survival.

Some organizational transformations occur not only within populations but also across entire communities of populations, occurring on a sweeping historical and geographical scale. Some are dramatic, one-of-a-kind historical events that are earth shattering in their implications, such as those accompanying cataclysmic wars and revolutions. Others are mundane, repetitive events that are individually insignificant but that have substantial cumulative effects. Most transformations lie somewhere in between. All are time-dependent historical processes. In Chapter 8, I argue that we must embed our explanations in an historical context to study population-level transformations, and I present a framework for classifying and interpreting historical transformation processes. I borrow from population demographers a conception of history as comprising age, period, and cohort effects. I offer a simple framework for making history, rather than “time,” a key feature of an evolutionary explanation.

In the fourth section of the book, I focus on a population level of analysis, examining the dynamics of new population emergence and the persistence of established populations. In Chapter 9, I examine the social processes surrounding the emergence of new populations, from pioneering ventures through early stages of growth, until a new form proliferates and the population becomes established. Organizational forms reflect the knowledge and resources available to nascent entrepreneurs during a specific historical period. Resource availability is historically contingent, based upon conditions during a particular historical epoch, and thus certain kinds of organizations cannot be founded until the relevant competencies and routines are available. Competencies and routines used in organizing are culturally embedded and historically specific, and thus populations founded in different eras embody different organizational forms (Stinchcombe, 1965). In constructing new populations, nascent entrepreneurs either develop new competencies and routines, or else combine old ones in novel and innovative ways.

Chapter 10 is based on the observation that populations of organizations in modern societies are constantly undergoing processes of expansion, contraction, and change. If all newly founded organizations lived forever, then the study of organizational evolution would be confined to issues of founding, adaptation, and inertia. However, we know that organizations disband at a fairly high rate, and a sizable literature has grown up on organizational mortality (Baum, 1996; Carroll, 1984b; Singh, 1990). Organizations can cease to exist as separate entities in two ways: by completely dissolving – the process by which the vast majority of organizations disband – or by becoming part of a different entity through merger or acquisition. Less than 1 percent of the incorporated firm population in any given year disappear because of mergers (Merrill Lynch, 1992), but about ten percent of the businesses in the United States cease to exist as separate entities each year (Small Business Administration, 1986). Similar rates have been found in other Western capitalist economies, such as the United Kingdom (Ganguly, 1982). I emphasize factors affecting the three dimensions along which new organizations emerge and disband: (1) the intentions of entrepreneurs, (2) their access to resources, and (3) their boundary-maintaining capabilities.

In the final section of the book, I move to the community level of analysis. An organizational community is a set of populations linked by ties of commensalism and symbiosis. The evolution of communities depends on the simultaneous processes of variation, selection, retention, and struggle at the population level, aggregated across the many populations constituting an organizational community. The dynamics of community legitimization also affect the course of organizational evolution. Thus, the same evolutionary model used to explain organizational foundings and the emergence of new populations can also be applied to community development.

Mutual interdependence between different units and competition and cooperation between similar units sort populations into differentiated niches, and dominant populations drive others into subordinate positions and ancillary roles, resulting in community-level differentiation and integration. In Chapter 11, I build on Hawley's conception of the community level of analysis, focusing on relations between populations. I offer a typology of eight forms of population interdependence, ranging from full competition to full mutualism or symbiosis. Dominance and power relations also play a role in community structure, especially when entrepreneurs struggle to carve out new niches and gain legitimacy for their organizations and populations. I examine two aspects of this process: (1) entrepreneurs' roles in building new populations from discontinuities in technology, norms and values, and laws and regulations, and (2) collective action by interest groups and associations that builds community level legitimacy, especially directed toward the state..

In the concluding chapter, I identify a few critical issues raised in my attempt to advance the cause of evolutionary analysis. At the theoretical level, questions remain concerning units of selection, co-evolutionary models, population level learning, and cross-disciplinary borrowing. At the methodological level, issues remain concerning the construction of multi-level models, how to encourage more dynamic study designs, and whether the gulf between ethnographic studies and other research designs can be closed. Finally, at the topical level, I hope researchers will conduct more community level studies, find ways to dynamically animate social network and interorganizational research, and make common cause with researchers in other nations studying similar topics.

First Call

As you read this book, I hope you will keep my three goals in mind. First, this book is about organizations, not just theories of organizations. You will find empirical generalizations about organizations, based on replicated studies with large numbers of cases, as well as insights generated by case studies of a few organizations. Evolutionary theory places heavy emphasis on the historical context of organizational change. Thus when I report findings from research, I give the years to which they apply whenever that information is available. Although the added detail lengthens the description of each study, it helps me avoid the sense of free-floating universal timelessness conveyed by many organization theory texts. I wanted to emphasize the diversity of organizations in modern societies and accordingly, I devote as much attention to newer and smaller organizations as to the older and larger ones. Whenever possible, I report research results from nations outside North America, although the book still focuses mainly on American-based research.

Second, this book is not only about the existence of organizations, populations, and communities, but also about their emergence. Separate chapters are dedicated to the genesis of units at each level of analysis. I pay special attention to the conditions under which new organizations simply reproduce the existing routines and competencies of their predecessors versus adding new ones to our stock of organizational knowledge.

Third, I use an evolutionary approach to explain the process through which new organizations, populations, and communities emerge. Evolutionary models hold out the promise of treating the origins and persistence of organizations as inseparable issues, thus closing the gap between studies of "structure" and "process" that have plagued the field of organization studies. Following the legacy of Donald Campbell, I use a cross-disciplinary approach, although I never completely escape my sociological roots. Despite forays into social psychology, history, economics, and political science, I remain a sociologist at heart!

In using an evolutionary framework to study organizations, I am following up on ideas developed in my 1979 book, *Organizations and Environments*. At that time, I wrote "Proper application of the variation-selection-retention model presents a challenge to traditional conceptions of organizational analysis, for it requires a great deal of collaboration with other social science disciplines (especially history, economics, and political science). Fortunately, there are signs of a growing interest in such cross-disciplinary cooperation, and students of organizational change in the coming decade will benefit from the halting steps made in that direction in the 1970s." It is time to take stock of what we have accomplished in the two decades since I wrote those words.