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THE ECOLOGY OF SCHOOL IMPROVEMENT: NOTES ON THE SCHOOL IMPROVEMENT INDUSTRY IN THE UNITED STATES

ABSTRACT. This paper explains how organizations other than schools and governing agencies affect the scope and pace of change in American education. In particular, the paper discusses a set of organizations operating in what can be called the school improvement “industry” in the United States, that is, a group of organizations providing schools and governing agencies with information, training, materials, and programmatic resources relevant to problems of instructional improvement. The paper shows how the structure and functioning of these organizations explain patterns of change in American education – including why schools in the United States experience wave after wave of innovation and reform while at the same time maintaining a stable core of instructional practices.

A great deal of research suggests that educational change in the United States is faddish and has little real or lasting impact on the core function of schools – instruction. During most of the 20th century, for example, American schools experienced wave after wave of innovation and reform – almost all of it touting the promise of fundamental change and improvement in instructional practice. Few of these efforts appear to have produced real and lasting change in instruction however. After decades of educational reform and innovation, most analysts agree that instructional practices in American schools look very much like they did a century ago.¹

Two lines of argument have been used to explain this pattern of change in American education. One focuses on issues of school organization, culture, and leadership, arguing that schools are inherently conservative institutions and that deep and lasting change can come about only through transformational leadership and a fundamental restructuring of school as organizations.² Another line of argument blames patterns of educational change on the decentralized and pluralistic nature of educational governance in the United States. In this argument, patterns of educational governance in the United States are seen as promoting multiple and incoherent reform efforts that lead to loose coupling within schools and the key to lasting change in education is seen as lying in the development of “systemic” policy arrangements that produce coherent and focused education reforms.³

Neither of these arguments fully explains the unique pattern of educational change observed in the United States. The literature on Amer-



ican schools, for example, contains a number of case studies showing how changes in school organization, culture, and leadership can produce dramatic instances of school improvement. But the majority of studies in this area find that the efforts of transformational leaders and/or programs of school restructuring more typically lead to results that are weak and inconsistent from school to school.⁴ Similarly, after a decade of systemic reform in the United States, there is some evidence of positive changes in student outcomes, but only in some of the states pursuing systemic reforms. Overall, research suggests that instruction and instructional outcomes in U.S. schools are not dramatically different than they were a decade ago, even in states vigorously pursuing systemic approaches to educational reform.⁵

All of this suggests that something is missing from the dominant theories of educational change in the United States. But what could this missing element be? In this paper, I argue that what is missing is attention to a large set of organizations in the U.S. education sector that exist alongside of, and that interact regularly with, schools and governing agencies. The paper develops a theoretical perspective that explains how these organizations (rather than schools and governing agencies) affect the scope and pace of change in American education. In particular, I focus on a set of organizations that together make up what I call the school improvement “industry” in the United States; that is, a group of organizations that provides schools and governing agencies with information, training, materials, and programmatic resources relevant to problems of instructional improvement. Included among this group of organizations are: (a) the many for-profit firms that provide schools with important goods and services, including textbook and test publishers, instructional program vendors, and other service providers in the K–12 education sector; (b) the diverse set of membership organizations in American education, including professional associations, advocacy groups, and organizational networks that serve as important conduits of information and training in American education; and (c) the numerous, non-profit organizations, including universities, research firms, and quasi-governmental agencies that provide research, development, technical assistance, and programmatic innovations in education. Understanding how these organizations are structured and function, and how they interact with schools and governing agencies, should help round out our knowledge about school change processes in American schools – including why schools experience wave after wave of innovation and reform while at the same time maintaining a stable core of instructional activities.

Mine is not the first attempt to call attention to these kinds of organizations and the role they play in school improvement.⁶ In fact, many scholars and policy analysts have argued that organizations other than schools and governing agencies play a critical role in the process of educational – and especially instructional – change. Scholars of American education, especially, have argued that textbook and test publishers affect instructional practice, that professional and trade associations can either stimulate or resist change in education, and that research, development, and technical assistance play an important role in educational improvement.⁷ Yet, when taken together, current arguments about the role of organizations other than schools and governing agencies in American education do not provide a coherent theoretical perspective on the problem of educational change, nor do they provide a persuasive explanation for the unique pattern of change so frequently observed in American schools. What is needed, I argue, is an integrating framework that provides a new kind of understanding about the role of organizations, other than schools and governance agencies, in the production of school improvement.

Currently, the closest things we have to such a perspective are the acerbic critiques of American education developed by policy analysts operating from the political right. These analysts tend to see the path to educational improvement as resulting, not from the efforts of local schools alone, nor from the positive direction of government agencies, but rather from the relatively chaotic and unregulated transactions occurring in the education marketplace. Market forces, these authors assert, provide the fuel for educational change.⁸ The approach to educational change that I develop bears some resemblance to this perspective – especially in its attention to the relatively diffuse and unregulated market forces operating in American education. However, I seek a more balanced and complex view of how markets and other institutional forces influence the scope and pace of change in American education.

The argument I make about American schools is based on two premises. First, I argue that the instructional core of schools – not only in the United States, but everywhere – is built around the extensive use of texts and tests obtained *outside* of schools. In the United States, especially, economic conditions in the publishing industry force schools searching for textbook and testing resources to engage in market transactions with publishing firms that exist in a highly concentrated industry, where firms succeed by achieving economies of scale through pursuit of a national marketing strategy. In this environment, textbook and testing firms tend to invest a great deal in new product launches, to be quite slow to innovate, and to be quite unresponsive to the unique, local demands arising in schools. As a

result, local efforts at instructional change often bump up against inertial forces in the publishing industry, producing the pattern of stability so often observed in the instructional core of American schools.

A second premise is that schools – everywhere – look outside their boundaries for information, training, and program development resources germane to instructional improvement. In the United States, the organizations that provide these resources almost always exist in an extremely pluralistic and heterogeneous environment in which new organizational forms, while easy to found, are also quick to fail. In this situation, local schools looking to gain new information, devise new training schemes, or adopt new programs confront a social environment in which critical information, training, and program development resources are extremely heterogeneous and short-lived because the organizations providing such resources either come and go quite rapidly or change directions on a dime. This situation, I argue, produces much of the renowned “faddishness” observed in American education – the constant swirl of innovation and reform. But as we have seen, while innovation is ever-present and much sought after locally, it cannot much affect the instructional core of schools, since activities in the core are substantially stabilized by transactions with large, stable, firms adapted to economic conditions in the publishing industry.

The critical question for this paper is why these conditions obtain in the United States. Why, for example, is the textbook industry in the United States so concentrated? Why do firms in the textbook publishing industry pursue a national marketing strategy? And why are the firms in this industry so slow to adapt to local demands? Moreover, why are the organizations providing schools with information, training, and new programs so quick to be founded, so quick to fail, and so enamored with adapting quickly to changes in the marketplace for ideas? To answer these questions, I argue, one needs to move beyond the analysis of schools and governing agencies and to look more closely at what I call the school improvement industry.

BACKGROUND

My analysis of the school improvement industry grows out of a set of ideas about what organization theorists call “societal sectors.”⁹ A societal sector is a domain of activity involving the production and distribution of a given service or product in society. In all societies, a given sector of activity is composed of many different kinds of organizations, including not only those that produce the main service or product that defines the sector, but

also the populations of suppliers, consumers, and governing agencies that regularly interact with and support these organizations. In organization theory, this diverse group of organizations is typically analyzed at several levels of analysis. Within the sector, organization theorists often look at distinctive “populations” of organizations, each performing a particular function. But these diverse populations are also organized into a larger “community” of organizations that has its own distinctive structure arising out of the various relationships that exist among component populations.

In any society, including the United States, we can define the education sector to include: (a) the diverse populations of public and private organizations that provide instructional services to clients; (b) the governing agencies that support these organizations and regulate the markets in which they operate; and (c) the auxiliary organizations that provide information, resources, and support to organizations and groups in the sector. However, in contrast to the education sector in many other nations of the world, the education sector in the United States has a particularly distinctive community structure, one that is organized around the principles of classic “liberalism.” The central state is deliberately weak in education, resulting in much political fragmentation, pluralism, and diversity in educational governance. In this context, social relations among the various organizations in the education sector are often organized around economic exchanges taking place in relatively “free” markets, where a minimum of government direction is preferred. Finally, organizations in the American education sector tend to have diverse political interests, arising from the complex and differentiated internal structure of organizations operating in the sector and from the diversity of organizational populations existing in the sector. As a result, the community of organizations in education – as a whole – is characterized by many cross-cutting political and ideological cleavages that mitigate against the formation of a few, large, coherent, and tightly structured coalitions. Instead, the community tends to be pluralistic, and political participation tends to be issue-driven.¹⁰

THE K–12 EDUCATION SECTOR IN U.S. SOCIETY

The size and importance of the K–12 education sector in the United States is striking. The core organizations in the sector are the roughly 88,000 public and private K–12 schools in the United States, as well as the 14,800 public school districts providing the first line of governance in public education. Together, this core group of organizations spends approximately \$340 billion per year educating students – roughly 5% of the gross domestic product in the United States. Moreover, support for

the system of K–12 education constitutes about 20% of *all* spending by state and federal governments in the United States. As a result, the K–12 education sector is an important, and constant, target of state and federal policy.¹¹

Many discussions of educational improvement never go beyond these facts about schools and governing agencies. But there is much more to the K–12 education sector that warrants the attention of any serious student of educational change. There is, for example, a thriving, and by all accounts growing, market for educational services provided directly to K–12 students outside of regular school hours. According to one source, this is now a \$17 billion market that is estimated to grow at about 10% per year in the near future.¹² As the *1997 Economic Census* shows, there are (literally) thousands of establishments operating in this market, including establishments providing exam preparation and tutoring services, language instruction, and so on.¹³

In addition, organizations in the K–12 education sector constitute one of the largest employer groups in the U.S., with K–12 schools and districts alone employing just over 3 million faculty and another 3 million or so administrative and support specialists, including clerical, skilled, and unskilled workers performing a variety of maintenance and support functions.¹⁴ This large and diverse workforce gives rise to much additional organizing in the K–12 education sector – organizing that once again occurs outside of schools and governing agencies. There are, for example, several hundred occupational and professional associations in education. These include, of course, the large and influential National Education Association (NEA), with membership in the millions. But there are literally five hundred or more other membership-based organizations operating in the field, including disciplinary societies, associations of administrative and specialist occupations, trade unions, coalitions of organizations, and so on.¹⁵

The vast cadre of employees in K–12 education also creates a huge demand for “professional development” and other forms of employee training. To meet this demand, institutions of higher education each year graduate roughly 200,000 individuals with degrees in education.¹⁶ Alongside this enormous enterprise, however, there is also a lively and constant market for other continuing education opportunities. In this market, training opportunities of all sorts are provided not only by schools, governing agencies, and universities, but also by hundreds of private firms and membership associations in the field. In fact, private firms alone do millions of dollars of business in this market each year, a figure that is

far outmatched by the expenditures on training and development made by institutions of higher education and governing agencies.¹⁷

The very scale and complexity of the U.S. educational system also gives rise to a large class of businesses oriented to providing support services of all kinds to schools and school systems. These include a large number of organizations providing “back office” services (such as accounting, insurance, and so on), others providing more visible food, transportation, architectural services, and even (as we shall see) a small set of firms that contract with school systems to provide instructional services directly to students. Overall, more than 80% of all local education agencies in the United States contract with outside sources for professional and technical services in a given year, services that are provided by over 3700 business establishments earning over \$3.7 billion per year. Quite apart from all of this activity, the U.S. education sector also spurs demand for research services, with over 400 establishments (apart from universities) providing roughly \$550 million dollars in education research and development in the sector. Finally, the sector is served by a large number of manufacturing firms catering to the needs of schools and school systems for manufactured goods, including office supplies, textbooks, furniture, heating and cooling systems, and so on. Here, textbook publishers alone ship over \$1.85 billion worth of goods to schools each year, with other manufacturing organizations adding to this total.¹⁸

THE SCHOOL IMPROVEMENT INDUSTRY

While the size and diversity of the U.S. education sector is striking, the point of this paper is not to analyze the sector as a whole. Instead, I want to focus on a particular subset of organizations in this sector, a group of organizations that constitute what I call the K–12 school improvement “industry.” In coining this term, I mean to denote a group of organizations in the education sector whose aim is to provide goods and services directly relevant to school – and especially instructional – improvement. Obviously, this group includes schools and governing agencies, but I propose to highlight the role of less discussed organizations in the school improvement industry, especially: (a) for-profit firms, including both publicly- and privately-held firms that operate primarily as suppliers and contractors to schools and school systems; (b) membership organizations, which I define as organizations that rely primarily on dues or subscription fees and that exist largely to serve the interests of their members, including various occupational and/or professional associations, trade associations, and/or networks of organizations; and (c) not-for-profit (often quasi-

public) organizations that secure a large portion of their funding from fee-for-service arrangements and/or government or foundation grants.

To argue that there is a subset of organizations comprising a school improvement “industry” is to argue that the organizations in this industry seek to produce something of value or relevance for consumption by local schools systems and/or governing agencies interested in school (and especially instructional) improvement. But what could this package of goods and services be? Throughout this paper, I call attention to four large classes of commodities produced by the school improvement industry: information, training, materials, and programs. With respect to information, I will be concerned mostly with the provision of information deriving from research, advocacy, and other forms of analysis, especially as these bear on problems of instructional improvement. The boundary between information and a second commodity of interest – training – is loose, but in the sense implied here, training involves the direct use of information to socialize or instruct others, as in programs of professional development and/or training. Materials, for our purposes, can be defined as the usual array of instructional materials – textbooks, software, tests, manipulatives, maps, etc., as well as the supplementary guides and users manuals associated with these. Programs, for my purposes, are defined as deliberate and conscious efforts to combine information, training, and materials into a package of instructional activities designed to be enacted by a school.

ORGANIZATIONAL NICHES AND POPULATIONS IN THE SCHOOL IMPROVEMENT INDUSTRY

As a first step in understanding how the school improvement industry operates, I propose to borrow a set of ideas from organizational ecology (and from closely related work on strategic groups within industries).¹⁹ An important idea advanced by organizational ecologists is that various industries have a structure that exists at the level of populations or “strategic groups” of organizations. In this view, all organizations in a particular population or group have a similar structure and pursue a similar business strategy, in large part because all of them are operating in a similar social environment, where each seeks to exploit similar resources and is therefore subject to similar economic and competitive forces.

In organizational ecology, the key to understanding how this process unfolds lies in the idea of a “niche.” A niche is typically defined as a multidimensional resource space, that is, a set of resources upon which the organizations in a given population depend for survival. Following ecological analysis more generally, organizational ecologists assume that

organizations operating in the same niche have a similar structure and pursue a similar business strategy due to processes of natural selection. Over time, if groups of organizations with different forms and strategies are operating in the same niche, ecological analysis predicts that a single form will come to dominate. That is, one form (and/or business strategy) will be selected for, and others will be selected against.²⁰

NICHES IN THE SCHOOL IMPROVEMENT INDUSTRY

In the analysis presented here, I analyze two main resource dimensions to define “niches” in the school improvement industry, where resources are defined (at least initially) as sources of monetary funding used to operate an enterprise. The first dimension of a niche involves what I call the *primary resources* of a given population, that is, resources used to establish an enterprise in its earliest stages, and at later points, to extend or expand the enterprise. Here, I identify three such resource sets. One source of primary resources is *capital*, raised privately or through issuance of shares in one of the U.S. stock markets. As we shall see, there are a large number of enterprises in the U.S. school improvement industry that rely on this resource. A second primary resource is *membership subscriptions*. This is the primary resource out of which most occupational groups in education (and other sectors) create associations, but this resource can also be derived from fees paid by organizations when they join organizational networks (like the League of Great City Schools). A final kind of primary resource is some sort of *endowment*, obtained either through private or public giving or accumulated through the establishment of an equity fund derived from receipts. Endowments are typically the major source of “capital” for non-profit organizations, which are limited in how such equity funds are established and maintained. Moreover, the equity funds in non-profit organizations (what I am calling “endowments”) differ from the equity of for-profit organizations because shareholders in for-profit organizations expect a return on equity, whereas non-profits are under no such expectation.

The second dimension of resources defining niches in the school improvement industry consists of what I call *transactional resources*. These are resources that accrue to organizations as a result of the economic exchange relationships they have with other organizations or constituencies in the education sector. For the purposes of this paper, I will define three common sources of transactional resources in American education. The first are resources gained through *exchanges with local school systems*, where school systems make budget outlays in exchange for infor-

mation, materials, training, or programs supplied by an organization in the school improvement industry. A second set of transactional resources can be derived from *exchanges with education employees*, where the employees make outlays from their private budgets for goods or services related to instructional improvement in schools. The third set of transactional resources is derived from *exchanges with granting agencies*, for example, government agencies or private foundations, where these agencies or foundations make budget outlays in exchange for goods or services relevant to instructional improvement.

SOME FUNDAMENTAL PREMISES ABOUT NICHES IN THE SCHOOL IMPROVEMENT INDUSTRY

Table I shows how the two dimensions just described can be used to define nine potential niches in the school improvement industry. In the table, the rows list types of primary resources, the columns list types of transaction-based resources, and the cells define joint occurrences of resources, that is, the various niches in the school improvement industry. There are two points to be made about this table, both of which are fundamental premises of the arguments that follow. The first is an assumption I make about the foremost niches in the school improvement industry. My central argument is that these are to be found along the diagonal of Table I. Put differently, I hypothesize that capitalized firms primarily seek to exploit resources derived from transactions with school systems, that membership-based organizations primarily seek to exploit employee-based transactions, and that endowment-based organizations primarily seek to exploit transactions with granting agencies. This hypothesis should not be interpreted as saying that niches lying off the diagonal are completely unoccupied. However, as we shall see, they do present more risk of failure for organizations than do niches running down the diagonal of the table.

The second point to be made about Table I is that niches running down the diagonal of Table I should be thought of, not as mere analytic abstractions, but rather as outcomes of a long series of historical processes, many of which began *before* the founding of the current K–12 education system. This is not to say that the resource arrangements and organizational forms that define a niche are immutable. In fact, it seems far safer to assume that niches in the school improvement industry are constantly subject to a variety of disequilibrating forces, including the emergence of new organizational forms, the sudden alteration of competitive or cooperative relationships, the intervention of governments, and the fortunes of economic and social change. As I argue below, many of the disequi-

TABLE I
Fundamental niches in the school improvement industry

	Transactions with school systems	Transactions with education employees	Transactions with granting agencies
Capital-Based	1	2	3
Membership-Based	4	5	6
Endowment-Based	7	8	9

librating forces now in operation in these niches are the stuff of current policy analyses and the focus of much current debate about pathways to school improvement in contemporary American education. But in the midst of such debates, it is wise to remember that the niches defined in Table I cannot be recreated *de novo*. They are the products of unique (and often long) institutional histories.

To understand this point better, consider cell 1 in Table I. As I discuss below, the dominant organizations operating in cell 1 of the school improvement industry are textbook publishers. In the United States, the widespread use of textbooks in instructional practice, and its fundamental importance as a tool of instructional improvement, dates to the early 19th century, well before the formation of today's highly bureaucratized, public school system.²¹ Thus, transactions among publishers and school systems are foundational to the American educational system and as such are highly institutionalized, even taken-for-granted. However, this historical fact alone cannot explain why textbook publishing exercises the kind of effect it does on the scope and pace of instructional change in the United States. As we shall see, these effects can only be explained in reference to selection processes in the niche defined by cell 1.

I will make a similar case about cell 5 of Table I. Here, the dominant organizational form is the membership association, an organizational form that dates to the earliest professional societies in education, which were in turn modeled after even earlier forms of association.²² From the early 1800s onward, the central functions of membership organizations in education have been to represent the interests of association members and to provide them with information and training that advances their "craft", and this historical fact explains a lot about why today's membership organizations tend to be important providers of information in the school improvement industry. But this historical legacy does not explain why the information provided by membership associations in American education is so pluralistic and issue-driven in content. The explanation of that pattern

lies again in the selection forces under which these organizations operate, forces which have a great bearing on the faddishness of educational change efforts in the United States.

Finally, my discussion will examine the niche defined by cell 9 of Table I. Of the three niches running along the diagonal of the table, this is the one with the least history. Its origins can be traced to the work of private foundations at the turn of the 20th century, but rapid expansion in this niche occurred only in the 1960s, when the U.S. federal government became active in promoting educational research and development.²³ Of the three niches running along the diagonal of Table I, this is also the most dynamic, and its constantly changing nature, I argue, goes a long way toward explaining the faddishness so frequently observed in American education.

THE FUNDAMENTAL NICHES IN THE SCHOOL IMPROVEMENT INDUSTRY

With that as background, let us now proceed to a more detailed examination of the niches defined by cells running along the diagonal of Table I.

Capitalized firms and local schools

As we have seen already, all kinds of for-profit firms in the education sector engage in economic transactions with local school systems. This is not surprising. Capital-based organizations are in the business of generating profits and increasing shareholders' returns, and school systems are very desirable customers for these firms because, for most of the 20th century, school system budgets have not only been reasonably stable, but also growing. As a result, capital-based firms have been *especially* interested in exploiting resources emerging from transactions with local schools.

As we shall see, several kinds of capital-based firms operate in cell 1 of the school improvement industry, but by far the most significant in terms of centrality to instructional improvement are textbook publishers. A central feature of these firms is that profits are achieved mainly through economies of scale. As a result, firms in the textbook industry compete relentlessly to gain market share, and the industry as a whole tends to move toward concentration. Today, for example, there are only six, major publishing firms in the K–12 textbook market, each firm having been created through the merger of several formerly independent firms. Moreover, these major firms make a good deal of their profits from a limited number of products

– mostly textbook *series* designed for use in the major academic subjects taught in schools. While small in number, the dominant textbook firms are large in scale, economically dominant in their markets, and politically powerful.²⁴

As a direct result of economic concentration in the textbook market, local schools and school systems lack power and control in the market place. This results, in part, from patterns of educational governance in the United States, which allow the concentrated power of textbook suppliers to be exercised against the dispersed demand of local school systems. In this situation, any single school system is far more dependent on textbook suppliers than are textbook suppliers dependent on a given school system.²⁵ As a result, textbook publishers don't need to be particularly sensitive to the unique demands of local school systems. In theory, at least, the power of textbook companies might be counteracted through concentrating consumer demand through state-wide textbook adoptions. In fact, adoption laws were designed early in the 20th century at least in part to achieve this aim, and 32 states now adopt textbooks on a state-wide basis. But most analysts agree that statewide adoption laws do little to defuse the power of textbook publishers.²⁶

Despite enormous power in the marketplace, textbook publishers are not completely insulated from variations in local demand, largely because they are in fierce competition with other dominant publishers for market share. To fend off competitors and maintain economies of scale, the few firms producing textbook series adopt a national marketing strategy in which unique, local demands are accommodated simply by expanding existing texts. In this way, American textbooks end up being a “mile wide and an inch deep.” K–12 textbooks in the United States are larger in size than textbooks from most other nations, containing both more topics, and more diverse topical coverage.²⁷ But this is a logical outcome of market dynamics and should not be seen solely as the conscious instructional preference of school systems. Moreover, because of their dominant market position, major textbook producers avoid radical changes in their products, not so much in response to the inherent conservatism of local school systems – although that is a factor that publishers keep in mind – but more importantly because radical, new products present publishers and their shareholders with higher levels of risk. As a result, textbook publishers are a classic case of what organizational ecologists call K-strategists – organizations that launch new products slowly and only after careful investigation and copious investment of resources.²⁸

This is not to say that innovating organizations are completely driven out of the niches defined by cell 1 of Table I. In fact, the large and powerful

publishing firms just described exist alongside a number of other, much smaller and more innovative publishers of instructional materials, firms which actually outnumber the dominant firms. But these smaller publishers of educational materials survive in the niche defined by cell 1 as a result of what organizational ecologists call “resource partitioning.” Since dominant firms make profits largely from economies of scale, they avoid many of the smaller, and more specialized markets in education. Their avoidance of these markets, however, provides business opportunities for other firms.

One sort of business opportunity arises from the need for texts and other materials in academic subjects with generally low enrollments – foreign languages, industrial arts, fine arts, and so on. Another niche grows out of the creation of compensatory and special education budgets in local schools, budgets which for many years were kept separate (“partitioned”) from regular school system budgets in accordance with federal law. Some of the most innovative computerized and multimedia curriculums in American education have been spawned by firms exploiting these niches, and it is therefore worth explaining why these firms behave so differently than the dominant firms in the industry. One reason is that firms operating in marginal niches are less well-capitalized than the dominant firms, and succeed, not on the basis of huge investments in stable products marketed nationally, but rather by quick movement into newly opening markets. In organizational ecology, firms using this business strategy are often called *r*-strategists to denote the fact that they are founded at high rates (since they do not require heavy capital investment), and that they fail at high rates (as a result of operating in marginal, and potentially risky, markets). Exploitation of marginal markets represents one source of real innovation in the instructional core of schools. However, in American education, this group has not been a source of *lasting* innovation for two reasons. First, marginal firms that manage to develop a profitable market niche are often purchased by dominant firms and thus adopt the *K*-strategy preferred by these firms. Moreover, firms operating in marginal markets often fail (precisely because their markets are marginal). As a result, their innovations cannot have much lasting impact on schooling.

MEMBERSHIP-BASED ORGANIZATIONS AND PRIVATE TRANSACTIONS

I move now to a description of a second important niche in the school improvement industry, one in which organizations relying on membership subscription fees seek to capitalize on resources derived from transactions with employees in the field. The first thing to recognize about this niche

is that numerous organizations in American education use membership fees as their primary resource base. The American Society of Association Executives (ASAE), for example, lists 567 such organizations in the field of education, but for a number of reasons, this probably under-represents the actual number of membership-based organizations operating in the field.²⁹ Despite uncertainty, it seems safe to conclude that there are many hundreds of membership-based organizations operating in K–12 education today, some catering to individual members, and others catering to institutional members.

As an organizational form, dues- or subscription-based organizations are among the very oldest of organizational forms in American education. In fact, Paul Mattingly traces the emergence of such organizations to the 1830s, a time that pre-dates the founding of the current, state-organized education system in the United States.³⁰

Originally, membership-based organizations in education pooled practitioners in the field, offering them a forum within which to advocate for their enterprise and a place where they could create and share knowledge about their practice. Usually, this was done through the convening of annual (or more frequent) meetings – which provided opportunities for both political action and continuing education – and additionally through publication of a journal or newsletter. Today, these basic attributes continue to define the main form of membership-based organizations, demonstrating the enormous stability and legitimacy of this form, not only in American education, but also in society at large.

What is interesting about membership-based organizations in American education is their central role as information providers in the school improvement industry. For example, with few exceptions, the market for education periodicals in the United States is dominated by the publications of these organizations – *not* by publications produced by capital- or endowment-based organizations. There is, of course, a ready explanation for this. In the competition among organizational forms to secure a private subscription base for periodicals, membership organizations have an inherent competitive edge over all other organizational forms – ready access to built-in membership lists and the ability to fold the costs of publication into membership fees. This gives membership-based organizations a natural advantage in the market, and (to the extent that their membership base remains stable) allows for low rates of failure. Other organizational forms, by contrast, face difficulties raising the capital or endowment to launch new periodicals, in large part because such ventures face considerable risk. As a result, membership-based organizations are numerous in this market.³¹

This is not to say that periodicals are the exclusive source of information about school improvement, since books published by for-profit firms and endowment-based organizations (such as universities and research organizations) are also important. Still, periodicals, by their very nature, focus on leading trends and innovations in a field, and are more widely read than most books. It is also the case that traditional print journals and periodicals face competition from newly emerging web-based publications, and here too, endowment-based organizations and for-profit firms are active. The impact of this new form of publication is, in fact, a subject of lively discussion, not only in education, but in other fields as well, and the creation of the internet serves as another instance of a potentially disequilibrating force in the niches under examination in this paper.

A second major function of membership-based organizations in the school improvement industry is the provision of training. Here, too, membership-based organizations have an advantage in a particular niche, the private market for school improvement training; that is, school improvement-related training paid for through the private budgets of education employees. In this niche, however, membership organizations face competition, especially from universities. As a result, a kind of resource partitioning has emerged. Employees in education interested in markedly improving their salaries – especially teachers and administrators – often purchase degrees or credit-hour instruction from universities, taking advantage of the financial incentives provided in most of the salary schedules of local school systems. On the other hand, employees interested in much less intensive training look to their membership associations, where short-term, and low-cost, training programs are readily available. Of course, membership associations often contract with for-profit firms or endowment-based organizations to provide training, but this does not detract from the main point – that membership organizations are very active in the direct marketing of school improvement-related training to education employees in the United States.

Interestingly, membership-based organizations do not actively seek to expand their niche outside of transactions with their members. Thus, membership-based organizations do not frequently seek contracts with local school systems to provide training, nor are they particularly entrepreneurial in seeking transactions with granting agencies. As a result, in the market for providing training and technical assistance to school systems, for-profit and endowment-based organizations are the main competitors, with both forms competing successfully in this market. My own estimate, based on data from the *1997 Economic Census*, suggests that anywhere between 1000 and 2000 for-profit and not-for-profit enterprises provide

training and technical assistance to local school systems (apart from training provided by universities), with receipts totaling millions of dollars. The vast majority of such enterprises are small, however, and there is a distinct lack of economic concentration in the field. The point, however, is that the market for training contracts with local school systems is not one that membership-based associations seek to exploit.

One important point should be emphasized about the information and training provided by membership-based organizations. In general, these organizations develop information and training that deliberately caters to the extreme specialization of their membership bases. In American society, specialization among membership-based organizations is not uncommon, as the tendency for specialization among labor unions more generally shows.³² In education, as in other economic sectors, specialization arises from multiple sources. One is the progressive differentiation of occupational specialties within organizations in education, a trend resulting from the increasing scale and bureaucratization of enterprises. The specialization of employees leads to a corresponding diversification of interests among education employees and a corresponding tendency for the founding of new, and specialized, membership organizations. Added to this is the diversity among organizations in the education sector, leading to the emergence of an additional set of specialized organizations built around institutional memberships – for example, trade associations and the like. The end result is a kind of hyper-pluralism in membership-based organizations in the field of education in the United States, with hundreds of such organizations catering to the interests and needs of specialized memberships.

Secondarily, few large, integrating organizations capable of projecting a unified voice in the field of education emerge. For example, the largest and most powerful employee-based organization in education is undoubtedly the National Education Association (NEA). But this organization, which originally served as a unifying voice in the field, has seen the exit of almost all education specialists but teachers from it. Moreover, while the NEA is a major voice of the teaching profession, it is not the exclusive voice of teachers. Disciplinary societies – such as the National Council of Teachers of Mathematics, or the National Council of Teachers of English – also project an important point of view in the field.

All of this, of course, has very important implications for the process of school – and instructional – improvement in U.S. education. The hyper-pluralism of membership-based organizations, and their important role in the provision of information and training in the school improvement industry, contributes to the sheer cacophony of the reform environment

in American education, as hundreds of narrow problems are surfaced by specialized interests and placed on the reform agenda through the publications of periodicals and the provision of brief training sessions at annual meetings. More importantly, the very nature of the niche in which membership-based organizations thrive contributes to the faddishness of reform efforts. Most membership-based organizations lack an ample source of working capital. As a result, they have little to invest in sustained program development, and they thrive by catering to the temporally-emergent needs of their members. In this sense, most membership-based organizations resemble r-strategists. They move quickly – in their publications and in their training programs – to capitalize on fresh ideas and new trends – in large part because their position in the competitive periodicals and training markets depends on such actions. This is not to say that membership-based organizations are unimportant to educational reform. Indeed, their actions sometimes gain very high visibility (as with NCTM's efforts to push reforms in mathematics education). But, as a whole, the niche that membership-based organizations try to exploit in American education seems to "select against" organizations pursuing a stable, long-term strategy of school improvement and to instead favor organizations that cater to temporal variations in the specialized interests and needs of diverse groups of employees.³³

ENDOWMENT-BASED ORGANIZATIONS AND THE GRANTS-BASED ECONOMY OF SCHOOL IMPROVEMENT

The final niche discussed in this paper is the one in which endowment-based organizations seek to exploit transactions with granting agencies (cell 9 of Table I). The most visible organizations in this niche include universities engaged in sponsored research and technical assistance projects, but there are also numerous "think tanks" providing educational analysis and advocacy, hundreds of non-profit research and development organizations, and a host of quasi-governmental technical assistance agencies.

The number of endowment-based organizations operating in this niche easily numbers several hundreds – not including universities. In educational research, for example, the *1997 Economic Census* lists 236 non-profit establishments providing \$297 million in educational research and development in education.³⁴ This figure excludes universities involved in such work, however, and while it is difficult to pinpoint the actual number of universities involved in education research, the U.S. Department of Education reports spending roughly \$530 million on educational

research programs at universities in 1999, an amount that is no doubt increased by education-related research supported by other federal and state agencies and private foundations.³⁵ Finally, there are the hundreds of non-profit and quasi-governmental organizations providing information, advocacy, and technical assistance in the K–12 sector. Among these are dozens of highly-visible think tanks and advocacy groups, a large and diverse network of technical assistance centers and information clearing-houses supported through federal funding (e.g., the regional education laboratories, comprehensive assistance centers, equity assistance centers, Eisenhower regional math and science consortia, regional technology assistance centers, regional resource centers for special education, and the ERIC clearinghouses), as well as hundreds of organizations providing well-packaged, instructional improvement programs.³⁶

As the discussion to this point demonstrates, the population of endowment-based organizations is extremely diverse. Moreover, these organizations provide a very wide range of school improvement “products” and exploit many different kinds of transaction-based resources. As a result, endowment-based organizations often face competition from for-profit and membership-based organizations. For example, endowment-based organizations often provide school improvement-related information to the K–12 education sector. As we have seen, however, the marketplace for information is crowded with providers, including not only endowment-based organizations, but also – and perhaps more prominently – membership organizations, and, to a lesser extent, for-profit organizations. Clearly, endowment-based organizations lack a competitive advantage in providing information to education employees, especially in comparison to membership-based organizations. As a result, they avoid this market and seek to disseminate information either to local school systems or, more diffusely, to consumer groups and policy makers. Here, federally-funded organizations are especially aggressive in disseminating information to school systems, with the various regional assistance centers, education labs, and ERIC clearinghouses working this niche. In doing so, however, the federally-funded organizations appear to leave the market for consumers’ attention mostly to think tanks and research organizations.

While endowment-based organizations are interested in providing information, they are probably more important to the school improvement industry as producers of educational research and development, and to a lesser extent, as providers of technical assistance and program development resources to school systems. In the research arena, the *1997 Economic Census* shows that there are roughly 100 for-profit enterprises operating alongside university-based and other non-profit providers. In

this arena, however, for-profit providers do not appear to be mounting a competitive threat to endowment-based organizations. Data from the *1997 Economic Census*, for example, show that for-profit firms providing research and development in education are generally smaller than not-for-profit enterprises in this arena, garner only a small fraction of the overall market (about \$128 million), and are less successful than non-profits in gaining grants-based funding, which is by far the largest single source of support for educational research and development in the United States.³⁷

Similarly, endowment-based organizations compete with other organizational forms to provide technical assistance and program development resources to local school systems. Here, endowment-based organizations might have a competitive advantage, even though the sheer number of endowment-based organizations distributing technical assistance and programs is less than the number of for-profit operators in this arena. The lower size of the population of endowment-based organizations in this market is probably due to their heavy dependence on grants-funding, which has a limited capacity to support an extremely large number of operators in this market.

Still, in direct competition with other forms, endowment-based organizations are likely to have an advantage over for-profit firms in providing technical assistance and instructional program resources to local school systems. For example, endowment-based organizations can use their grant funds to provide local school systems with products at a fraction of their real cost, and sometimes even for free, especially if they cover program development and/or transaction costs with grant funding. For-profit organizations do not have this capacity and thus are forced to be relatively high-cost operators in the field. Still, for-profit organizations – especially when properly capitalized – often can pursue a national marketing strategy, whereas the resource poor, grants-funded projects of endowment-based organizations are often limited to a very local market.

Despite the wide variation in products and potential niches occupied by endowment-based organizations, the high dependence of such organizations on the grants-based economy leads most to be marked by a distinguishing organizational form – what I call the “project-based” form of organization. In this respect, endowment-based organizations are classic cases of what organizational ecologists call r-strategists. Recall from our earlier discussion that r-strategists are organizations that move quickly into newly opening markets, in large part because they make little investment in new start-ups. R-strategists also suffer very high failure rates. This seems especially true of the “projects” originated by endowment-based organizations. Within these organizations, grant-funded projects come and

go with great frequency. Thus, while many endowment-based organizations are themselves quite stable, the products they market in the school improvement arena turn over at a rapid pace.

All of this seems counterproductive to the production of real and lasting change in education, but as we shall see, the grants-based niche is structured in such a way as to encourage this form of organization. In particular, grants-based funding in American education has two important features. First, it is marked by much temporal variation. More importantly, however, this temporal variation is “coarse-grained” in the sense that grants-making agencies frequently change priorities, abandoning some areas of interest to move into other areas. In this environment, organizational ecologists predict that r-strategists (organizations that can move quickly to exploit emerging opportunities) have a competitive advantage over K-strategists (that are better adapted to more stable and fine-grained environments). The long-run consequence of this selection process, however, is that research, technical assistance, and program development “projects” in the United States come and go in great numbers as a result of heavy reliance on transactions with granting agencies.

There is a second sense in which the grants-based environment is coarse-grained. While the overall amount of grant funding available to endowment-based organizations has been growing over time, funding has been increasingly spread over an ever-larger number of priorities, keeping the amount of resources devoted to any single priority small in comparison to the total amount of grants funding available. As a result, endowment-based projects operating in the grants-based environment face a kind of double jeopardy. Not only do they run the risk of having their project funding terminated, but as a result of multiple funding priorities among granting agencies, the amount of funding available to the typical project is often small. In this environment, projects often are forced to pursue a local marketing strategy and to forego investment in activities that stimulate long-term development in favor of achieving more visible, short-term successes.

We have thus arrived at a second explanation for the “faddishness” of educational change efforts in American education. The grants-based economy promotes the development of large populations of r-strategists. Many small, short-term, local, and resource poor projects are founded, and most fail (i.e., go out of existence). But this is a natural outcome of the grants-based environment, for funding for national, long-term projects with heavy development costs is difficult to come by, promoting a preponderance of project-based organizations whose very survival is enhanced by use of an r-strategy. This pattern of organization is especially prominent

in areas where endowment based organizations play the dominant role in the school improvement industry – in the provision of research and development services, but it is also prevalent in their provision of technical assistance and programmatic interventions as well.

There are exceptions to this rule, of course – but they are just that, exceptions. The most successful strategy for promoting the long-term survival of an endowment-based project is to spread the project's resource dependence beyond the grants-based niche, usually by attempting to exploit the more stable resources associated with school system budgets. But exploiting school system budgets produces a new kind of risk. Now, endowment-based organizations will face direct pricing competition with the for-profit providers, and this threatens their price advantage in the market place. In addition, endowment-based organizations often lack the marketing sophistication of for-profit firms, making it hard to compete directly, especially in a national market. Still, we can point to several stunning examples of endowment-based “projects” that have pursued just such a strategy with much success. For example, in the current market for comprehensive school reforms, such well-known programs as Accelerated Schools, America's Choice, and Success for All, among others, have shown remarkable success. Each of these programs was originally developed through grants of various sorts, and each now is engaged in direct transactions with local school systems. In fact, schools directly working with these programs number in the thousands today, a figure that approaches the number of schools using various for-profit “contract learning” programs discussed earlier in this paper.

THE ECOLOGY OF SCHOOL IMPROVEMENT AND EDUCATIONAL CHANGE

Having discussed in some detail the organizational ecology of the school improvement industry, we are now in a position to return to the central problem of this paper – developing an explanation for the peculiar pattern of educational change in the U.S. school system. Earlier I argued that educational change in the United States is marked by two seemingly contradictory tendencies – a tremendous amount of innovation (even faddishness) – coupled with a great stability in core instructional processes. What explains this pattern of change?

I have argued that the organizational ecology of the school improvement industry – the processes of natural selection occurring within various niches in the K–12 education sector – seems to be a central dynamic in explaining patterns of change in American education. Educational faddish-

ness in the United States, I argue, results from the niches inhabited by two important organizational forms in the K–12 sector: membership associations and endowment-based organizations. The extreme specialization of membership associations in American education, and their interests in responding quickly to the emergent needs of their constituencies when marketing publications and training programs, produces a kind of issue-driven, hyper-pluralism and temporal “faddishness” in American education. Similarly, selection processes operating within the grants-based economy produce a high rate of innovation, but also a high rate of failure in research and development projects, technical assistance projects, and the production and dissemination of innovative instructional programs. When coupled with funding constraints, most grant-funded projects end up being marketed locally, for a very short period of time, adding to the hyper-pluralism of educational change efforts.

Still, the school improvement industry in the United States does produce a lot of truly innovative and potentially effective technical assistance and instructional innovation, a lot of which is adopted by local school systems. But all of this innovation confronts (and ends up being inconsistent with) the stable features of instruction in these school systems – especially the textbooks and tests manufactured by the K–12 publishing industry in the United States. The importance of standardized texts and tests in American schools cannot be over-emphasized. They are a basic feature of the core technology of schooling, and figure in upwards of 80% of all instructional activities. They influence both the content of lessons in classrooms, and the methods teachers use to teach lessons. Thus, the stability of textbooks is an important part of our story.

The argument I have advanced in this paper suggest that the stable features of texts and tests in American education are not completely the result of forces operating within local schools. Rather, stability results from economic forces operating on publishers, forces that select for publishing enterprises that can achieve economies of scale through national marketing strategies and conglomeration. All of this leads to slow product cycles, a lack of locally-tailored products, and the concentration of market power in the hands of textbook producers, not consumers. It is the industry – not the local schools – that produces this stability.

In the United States, there seems to be little that state intervention can do to moderate these trends, especially given the fundamental liberalism of American society. Thus, efforts by the state to intervene directly in the textbook publishing industry would confront resistance, both political and legal. To be sure, attempts by state boards of education to enhance the market power of textbook consumers through the development of state-

level textbook adoption rules has some potential for balancing consumer power against producer power in the textbook market, but in the United States, the textbook companies are national in scope while adoption policies are formulated at a state level, and states (and localities within them) jealously guard their autonomy and prerogatives to pursue unique curricular agendas. This does not auger well for a unified consumers' union to balance the power of consumers against the power of the textbook oligopoly.

We might also look to grants-making agencies to reform their ways – especially government agencies, which often lead in this arena. These agencies could, for example, be asked to reform their grants making procedures by stabilizing funding, directing it to longer-term, strategic uses, and providing more resources to each grant-funded project. But that would be bad politics in American society, not only at the federal level, but also within states, since pluralism at every level of the system requires politicians to attend to a welter of issues, and to dole out resources in small, and local bundles. Thus, the chances of fundamentally transforming the grants-based economy in this way also seems limited.

All of this suggests that our usual theories of educational change – both the ones that proclaim the power of local school system autonomy and the ones that call for unified, state-directed reform – are lacking in major respects. In this light, a new image of educational change in the United States is needed, one that sees educational change as arising out of what Chester Finn (1997: 248) calls “a decentralized universe of diverse models, multiple providers, and consumer choices.” But in this revamped imagery, we must understand that the consumers making choices are not simply parents choosing among public and private schools, but also a wide variety of schools choosing among many different school improvement products; we must also understand that the providers in this system are not simply public and private schools, but also the very large number of for-profit organizations, membership-based organizations, and endowment-based organizations providing information, materials, technical assistance, and new programs to these schools.

It is the market for *school improvement* services, and the characteristics of the school improvement industry more generally, that I am arguing must be confronted, and understood, in developing explanations of the peculiar scope and pace of educational change in the United States. But this would seem to call for different kinds of research on educational change, as well as attention to different areas of education policy. With respect to education policy, I would argue that we need to expand our attention beyond efforts to shore up the bureaucratic supply of instructional services to students

through efforts to further regulate public schools, and to look beyond efforts to shore up the market supply of instructional services through policies supporting school choice. While these efforts are worth exploring further, it is the case that both public *and* private schools are consumers in a broader market for school improvement services. Attention to this market – that is, to the ways in which market and government forces can be used to encourage organizations operating in the school improvement industry to produce goods and services that promote innovative and lasting change in instruction – seems essential to understanding school improvement. New policies directed at the school improvement industry, policies directed at how investments are made in the organizations operating within the industry, how market failure in the provision of goods and services can be counteracted, or how political provision of services can be made more effective – might produce the kind of disequilibrating shocks that I argued are the source of educational change in a system governed by principles of organizational ecology.

There is a problem, however, in developing new policies in this area. We simply don't know enough about the school improvement *industry* at this point to formulate wise policy about it. Therefore, I would argue that more – and different – kinds of research on educational change and improvement are needed. Especially important in this regard would be empirical tests of the ideas I formulated about organizational ecology and its role in explaining educational change. Such research could proceed in two directions. The first would involve intensive studies of the school improvement industry in the United States, studies that would shed more light on historical developments, perhaps through case studies of various niches in the school improvement industry and/or analyses of how developments within these niches explain patterns of educational change. Another important direction would be cross-national studies. If societies other than the United States have differently configured textbook industries, different grants-based economies, and different patterns in the formation of membership organizations, then patterns of educational change in these countries should differ from those observed in the United States. Research comparing the school improvement industries in different nations is badly needed if we are to confirm the hypotheses I have advanced in this paper and thereby develop a more complete understanding of the dynamics of educational change.

NOTES

¹ The work of Larry Cuban and David Tyack is especially helpful in illustrating these points. For a discussion of change efforts in American education over the past century, for example, see Tyack and Cuban (1995). For evidence on the stability of instructional practices in American schools, see Cuban (1993).

² The classic argument on the inherent conservatism of school cultures is Sarason (1996). Schein (1985) describes the conservative influence of organizational culture on change efforts in organizations more generally. Arguments about organizational and leadership factors involved in promoting organizational change in education can be found in Fullan (1991) and Murphy and Louis (1994). The 1990s also saw the emergence of a large literature on school restructuring as a source of educational change. Good discussions here are Elmore and Associates (1990) and Murphy (1991).

³ An important early statement about how patterns of educational governance in the United States affect school change can be found in Meyer and Rowan (1978) and in Meyer and Scott (1983, especially Part III). A more recent argument, paying special attention to the problem of *instructional* change can be found in Cohen and Spillane (1992). The classic argument in favor of systemic reform is Smith and O'Day (1991).

⁴ Some recent case studies of positive change in instruction and student achievement resulting from leadership and restructuring are discussed in Meier (1995) and Elmore and Burley (n.d.). For a broader set of cases, however, see the program of research on school restructuring conducted by researchers at the University of Wisconsin during the 1990s. These researchers studied a national sample of schools nominated for their exemplary efforts at school restructuring. The overall findings of this research are discussed in Newmann and Wehlage (1995), but especially noteworthy is the finding reported by Berends and King (1995). Only 25% of the schools in this nationally-nominated sample had broken away from traditional patterns of instruction and school organization as a result of their exemplary efforts at school restructuring.

⁵ Temporal trends in student achievement in the U.S. have been analyzed by David Grissmer and colleagues (see Grissmer et al., 1994; and Grissmer et al., 2000). In general, Grissmer's work shows that achievement in the U.S is increasing, in large part because of changes in family composition, but that increases in achievement above and beyond what would be predicted by changes in family composition are also evident. Grissmer's work shows that additional improvement due to moves toward "systemic" reforms in some states occurs, but only in *some* states pursuing this approach. In fact, state-level variables other than "systemic" reform seem to be more important in explaining the patterns of educational improvement observed by Grissmer and colleagues.

⁶ In formulating my ideas about the importance of the organizations discussed above, I have been particularly influenced by an early contribution in this area by Cohen (1982).

⁷ Concerns about the role of textbooks in educational reform in the education literature extend to the early 1900s. Good overviews of this textbook "problem", both in earlier and current times, can be found in Elliot and Woodard (1990), Altbach et al. (1991), and Tyson-Bernstein (1988). There is also a very large literature on the role of teachers associations in education reform. Two recent discussions of this issue, which draw opposite conclusions, are Kerchner and Kopich (1997) and Lieberman (1997). Concerns about the impact of educational research on school improvement seem more recent. For historical perspectives on educational research and its role in school reform, see Travers (1983) and Vinovskis (1999). Current views about the role of educational research in improving schools are also

summarized in an article published by the American Educational Research Association (1999).

⁸ Some especially cogent examples of analyses emphasizing market processes in educational reform are Chubb and Moe (1990) and Finn (1997).

⁹ For a detailed discussion of this idea, see Scott and Meyer (1983).

¹⁰ My discussion in this paragraph is based on Jepperson and Meyer (1991).

¹¹ The statistics cited here are from the *Digest of Education Statistics*, published by the U.S. Department of Education, National Center for Education Statistics (1999).

¹² The data cited here come from Moe, Bailey, and Lau (1999).

¹³ The relevant data here can be found in U.S. Census Bureau (1999), *1997 Economic Census* – professional, scientific, and technical services series.

¹⁴ The statistics cited here are from the U.S. Department of Education (1999), *Digest of Education Statistics*.

¹⁵ Estimates on the number of membership associations in education were taken from the web site of the American Society of Association Executives (www.asae.org).

¹⁶ See the U.S. Department of Education (1999), *Digest of Education Statistics*.

¹⁷ See the U.S. Census Bureau (1999), *1997 Economic Census* – Professional, Technical, and Scientific Services Series.

¹⁸ The figures cited here are from the U.S. Census Bureau (1999), *1997 Economic Census* – Manufacturing series and U.S. Census Bureau (1999), *1997 Economic Census* – Professional, technical, and scientific services series. The estimate that 80% of all districts contract for one or more service is from DeSchryver (2000).

¹⁹ The best known statement on organizational ecology can be found in Hannan and Freeman (1989a). For a good review of empirical research in this tradition, see Baum (1996). For a critique of organizational ecology as a theoretical perspective, see Young (1988), as well as the rebuttal by Hannan and Freeman (1989b). For work on “strategic groups” undertaken from a different perspective, see Porter (1980).

²⁰ This is a simplistic statement about natural selection, but one that is stated in this way for purposes of emphasis. In fact, in the short run, many different kinds of organizations can be operating in a niche, and, as I describe below, even in the long run, resources within a given niche can be “partitioned” in such a way that multiple organizational forms can coexist within the same general niche.

²¹ For a good discussion of the role of textbooks in the earliest phases of American schooling, see Church and Sedlack (1976).

²² For a discussion of the earliest professional associations in U.S. education, see Mattingly (1975).

²³ A useful history of the federal government’s role in educational research can be found in Vinovskis (1999).

²⁴ It is impossible to get the most current data on concentration in the textbook industry, as data on concentration in the textbook industry has not yet been published from the *1997 Economic Census*. However, the *1997 Economic Census* report on the “information” industry (found in the manufacturing series) does show that there were just 30 establishments shipping \$1.85 billion of textbooks to schools in 1997, with about half the revenue coming from shipments to elementary schools and the other half coming from shipments to secondary schools. While these data suggest that a few firms are doing a very large business in this industry, they do not provide unambiguous evidence of concentration. For that, information provided by Sewell and Cannon (1991) are more useful. These authors used a variety of sources to estimate that the top three textbook publishers in the United States (MacMillan, Harcourt Brace Janovich, and Simon and Schuster) controlled about

45% of the textbook market in the 1990s, a fairly high degree of concentration. We should be careful, however, not to overstate the case here. Most analysts agree that there is still competition among firms in the textbook industry, although the amount of such competition probably varies by market niche. For example, Sewall and Cannon (1991) observe that about 45% of all sales in the elementary school market are basal reading series, and another 25% are mathematics series. Moreover, they observe that for the past two decades, the number of firms competing in this market has been dwindling. There is probably more competition in the markets for textbooks in more specialized niches, allowing textbook publishers who do not compete in the mass market for textbook series to profit by operating in more marginal markets. It is worth noting also that high levels of concentration in the U.S. textbook industry are not new. Sewall and Cannon (1991) note that in 1890, a trust composed of five large firms controlled roughly 75–80% of the textbook market. However, widespread exposure of the corrupt business practices of these firms, plus market pressure from the roughly 170 other firms in the industry at the time, apparently turned the tide toward more competition in the textbook market over the next several decades. By the 1960s, however, the industry was moving back toward concentration. A major point, then, is that the textbook industry in the U.S. apparently naturally evolves toward concentration. Today, a very small number of firms operate in the K–12 textbook industry, and only a few firms dominate the *mass* markets for textbooks in K–12 education.

²⁵ For the logic of this argument, see Thompson's (1967) analysis of power and dependence in inter-organizational exchange relations.

²⁶ Brief histories of state-level textbook adoption rules can be found in Sewall and Cannon (1991) and Apple (1991). State adoption laws were adopted in some states, at least in part, to combat the textbook trust. However, such laws were widely seen as ineffective – even corrupt – as Apple (1991) discusses. More recent discussions of state adoption laws and procedures can be found in Tyson-Bernstein (1988) and Tulley and Farr (1985).

²⁷ These features of American textbooks have been discussed in Schmidt, McKnight, and Raizen (1997).

²⁸ Although my discussion to this point has dealt exclusively with textbook publishing, it should be noted that the major textbook publishers in American education also have, for the most part, acquired the major achievement test publishers. Thus, all of the market dynamics discussed with respect to texts apply equally as well in an analysis of test publishing.

²⁹ All of the lists of membership organizations in education that I have examined are both incomplete and under-represent the local and or regional nature of many membership associations.

³⁰ See Mattingly (1975). For a discussion of early models of professional organization in the United States, see Haber (1991).

³¹ As an example, consider the major trade publication in the field of K–12 education, *Education Week*. This periodical was launched in part through sponsorship of the Carnegie Foundation. But the initial grant from the foundation provided insufficient capital, and as a result, the venture was purchased by its editors. The difficulties in getting the capital to found an education periodical in large part accounts for the lack of entrants into the niche by private firms, except as subcontractors to membership organizations. Despite these difficulties, many endowment-based organizations like universities and research organizations publish journals or circulate newsletters to educators, and private firms also develop periodicals. But, here too, the number of such periodicals is dwarfed by the numbers published by membership organizations, arise largely in well-defined fields of scholarship, and experience low subscription rates and high pricing.

³² For data on specialization in labor unions, see Hannan and Freeman (1989).

³³ An exception to this rule is the National Education Association, which appears to have pursued a stable reform agenda since the 1960s. However, the NEA is unique among membership associations in education in that it has gained the ability to deduct membership dues directly from members' paychecks. This no doubt has contributed to the NEA's substantial financial capital, as Lieberman (1997) observes.

³⁴ The relevant data on profit and not-for-profit research organizations in the United States (excluding universities) can be found in U.S. Census Bureau (1999), *1997 Economic Census* – professional, scientific, and technical services series, where data on organizations providing educational research and development are listed separately within the data.

³⁵ The data here are from the U.S. Department of Education, *1999 Digest of Education Statistics*, data on federal funding in education.

³⁶ A list of federally-funded assistance centers can be found on the U.S. Department of Education website under "education resource organization directory." Lists of organizations providing full-blown instructional programs to school systems are a bit more difficult to come by. However, for the 1980s, a partial list of such organizations – and the programs they operate – can be found in U.S. Department of Education's publication, *Programs that Work*. The number of programs in this bulletin was always in the hundreds, and these lists included only programs that were receiving funding from the National Diffusion Network (NDN). Because the NDN was terminated as a federal program in the 1990s, I have taken a more recent estimate of the number of program providers operating nationally from a list of programs receiving funding under the Comprehensive School Reform Demonstration (CSRDA) Act, as published on a web site maintained by the Southwest Educational Development Laboratory (www.sedl.org). Here too, over 100 programs are listed, but the reader is cautioned that, once again, this is simply a list of programs receiving federal support under CSRDA. The interesting point is that both lists suggest that, at any point in time, there are probably 150–200 federally-supported school improvement programs being vended by endowment-based organizations on a national basis.

³⁷ The data here are from the U.S. Census Bureau (1999), *1997 Economic Census*, professional, scientific, and technical services series.

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