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ABSTRACT

The environment within which an organization must operate is expected to influence its administrative and program characteristics. Since public schools operate in more complex and conflicting environments than do private schools, it is predicted that they will exhibit greater administrative complexity and less curricular coherence. These predictions are tested and largely confirmed by a review of previous research and in a new study using data from a six-county survey of a sample of private, public, and parochial schools and districts in the San Francisco Bay area. A 53-item reference list and 8 data tables are appended. (Author/TE)

ENVIRONMENTAL LINKAGES AND ORGANIZATIONAL COMPLEXITY:

PUBLIC AND PRIVATE SCHOOLS

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Abstract

The environment within which an organization must operate is expected to influence its administrative and program characteristics. Since public schools operate in more complex and conflicting environments than do private schools, it is predicted that they will exhibit greater administrative complexity and less curricular coherence. These predictions are tested and largely confirmed by a review of previous research and in a new study utilizing data from a six-county survey of a sample of private, public and parochial schools and districts in the San Francisco Bay area.

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Introduction

Much like watching the Queen Elizabeth change course in mid-ocean, we can now discern a slow but perceptible shift in the direction of studies pursued by organizational researchers generally and studies of educational systems more specifically. In broad terms, the shift involves increasing attention to the external context as a basis for explaining internal features of organizations. Early signs of this development may be found in the emergence of general systems theory in the 1950s, but clear and strong efforts to revise organizational models did not appear until well into the 1960s. These contributions, most notably by Katz and Kahn (1966) and by Thompson (1967), served to effect a change in the dominant perspectives from closed to open systems models stressing the interdependence of organizations and environments. (For a detailed review of these changes, see Scott, 1981).

A second change, a more modest adjustment in course, is currently underway as attention is shifting from technical aspects or views of organization-environment interdependence to more social and cultural views of this relation. Earlier emphases on the distribution of requisite resources and/or information in the environment and the strategies employed by organizations to secure them (Dill, 1958; Lawrence and Lorsch, 1967; Pfeffer and Salancik (1978) have not been supplanted but have begun to be supplemented by approaches that stress that environments are more than stocks of resources and technical know-how. Environments as contexts supplying legitimacy and meaning coded in cultural symbols; environments as political systems comprised of more and less dominant interests as well as arenas within which selected interests are currently contending; environments as storehouses containing the remnants and survivors of earlier times and processes; environments as stratified and differentiated labor markets; environments as constructers of rational myths and institutionalized forms and procedures; environments as increasingly

structured systems of organizations--these are among the new images that are shaping the current agenda of organizational research. (See, for example, Meyer et al., 1978; Karpik, 1978; Rogers and Whetten, 1981; Baron and Bielby, 1980; Meyer and Scott, 1983b).

This paper attempts to continue and extend this more recent emphasis by focusing on the environment of schools, noting the extent to which that environment is itself organized, and attempting to discern what effects these more general organizational frameworks have on the structure and operation of particular organizations within them, e.g., individual schools and school district offices. The organizational environment of schools may be expected to vary by place (e.g., across national systems or among the several states within a society), by time, by type of school (e.g., elementary, secondary) and by auspices (e.g., private and public). We focus here on differences between private and public school systems.

Private and public organizations differ in a number of respects, but we emphasize the extent to which these labels are associated with rather distinctive administrative contexts or organized environments. We argue that at least some of the variation in the internal organization of public and private schools can be attributed to differences in the structure of the environments to which they relate. Although the potential range of environmental variables to be examined is substantial, we limit attention here to selected properties of administrative systems and funding arrangements. Our general predictions are that organizations operating in more complex and conflicted environments will exhibit greater administrative complexity and reduced program coherence. The evidence regarding environmental arrangements and their organizational consequences, which is often illustrative rather than definitive, comes from two sources: a review of the existing literature on school organizations and their environments, and from data gathered through a small-scale survey of public and private schools in one area of California. The entire enterprise should be viewed primarily as a hypothesis generating rather than a hypothesis testing effort.

All of our own data and the other studies reviewed pertain to the United States. Important changes have occurred within this country in

recent years in the organizational environments of schools--particularly schools in the public sector. We briefly review these changes in the next section, first for public schools and then for private, and attempt to conceptualize the environments of schools in terms that highlight their organizational significance. Then we examine associated characteristics of educational organizations, in particular, their administrative components, at varying system levels: districts, schools and the nature of administrative work. Finally, we examine the effects of environmental complexity on the educational goals and programs of schools.

The Environments of Public and Private Schools

Public School Environments

The environment of public schools in the U.S. has become increasingly complex and disorganized over the past few decades. A series of reforming and centralizing forces have created many new sets of legitimate authorities over the public schools without integrating them with one another or with previous authorities. At the same time, a growing number of varied stakeholders and claimants whose rights are explicitly defined in law are entitled to representation, due process, and to having their demands heard if not met. It is important not simply to recognize the extent to which the environments of organizations themselves become increasingly organized, but to attempt to characterize the particular shape and form of that evolving order. The concepts employed to characterize changes in the environments of schools are: centralization, federalization, and fragmentation.

Centralization. If centralization is defined as "the extent to which decisions are made at higher rather than lower levels within a sector" (Scott and Meyer, 1983; 143), then there is little doubt that the public school system has become more centralized over the past few decades. Historically, decision-making in the educational sector has been highly decentralized in this country. Although the U.S. Constitution granted the individual states primary responsibility for education, it has traditionally been the case that local educational authorities (LEAs)--school districts and individual schools--have dominated educational decision-making.

Throughout most of their history, schools have been governed by local community authorities and responsive to local clienteles and interest groups. While states vary greatly in the competence and energy with which they exercise their constitutionally-defined oversight functions, most state departments of education (SEAs) have, until quite recently, been small, weak and ineffectual. And, until the 1960s, the federal government took virtually no role in elementary and secondary education, recognizing the rights of LEAs and SEAs in educational governance.

This situation changed dramatically in 1965 with the passage of the Elementary and Secondary Education Act. Aimed primarily at achieving greater equity for certain targeted groups such as the economically disadvantaged, this legislation introduced a strong federal voice into educational affairs. Subsequent legislation extended services to additional disadvantaged groups--e.g., educationally handicapped and bilingual students--or attempted to stimulate educational reform and innovation--e.g., creation of the Teacher Corps and grants to improve state and local planning. Although at its peak level in the late 1970s, federal aid accounted for only 9.2 percent of total educational revenues, most observers agree that the use of categorical funding targeted to the support of particular groups and programs allowed the federal government to exercise disproportionate influence on education. (See Berke and Kirst, 1975; Levin, 1977).

Moreover, it appears that the federal presence has stimulated and strengthened SEAs both directly and indirectly. Directly, states were not only delegated power to supervise the implementation of the federal programs but were allocated federal funds to augment their staffs to perform these functions. As a consequence, the SEAs have grown dramatically: "they have doubled and tripled in size since the mid-'60s, and the amount they receive from the federal government for their administrative budgets has grown to an average of 40 percent of the total" (Murphy, 1981:127). Indirectly, increased size and power have attracted more competent and aggressive personnel at the state levels who have been able to both encourage and benefit from the political efforts of the 1980s to use block grants and other revenue sharing proposals to retur more power and discretion to the state level.

And, while the federal role in financing education did not change appreciably during the decade of the 1970s, the states' contributions have increased relative to local funding. Funds controlled by states increased from about 39 percent of the total expenditures for schooling in the early 1970s to about 45 percent by the end of the decade, bringing them to a par with local revenues (Sergiovanni et al., 1980). These trends have accelerated during the 1980s as states have continued to oversee the

distribution of federal funds and to increase their funding and programmatic authority in relation to local LEAs.

Thus, beginning at the national level, but continuing now at the level of the states, new administrative units have emerged and grown within the educational sector, shifting some types of decisions formerly made within a local community to the state or national level.

Federalization. However, to argue that new decision centers have emerged is not necessarily to conclude that former authorities have atrophied. Up to the present, the authority of LEAs and the influence of local interests have not been displaced but only supplemented by the growth of power at the state and national levels. One set of authorities has been layered over another, with each claiming legitimacy to make some types of educational decisions--the federal agencies basing their claims on overriding "national interests," the states standing on their constitutional grounds, and the communities affirming continuing faith in the "religion of localism," a dogma with many adherents in the realm of education. Thus, increasing centralization of educational authority at the state and federal levels has been associated with federalization: "the explicit establishment of independent authorities with both separate responsibilities and overlapping jurisdictions" (Scott and Meyer, 1983:134). This doctrine within education, it is important to note, receives legitimacy and support from its congruence with wider political beliefs prevalent in the U.S. regarding the need to divide and juxtapose powers in order to prevent their abuse. (See Grodzins, 1966; Scott, 1983; 171).

The practice of pitting educational authorities against each other at various levels is characteristic not only of administrative agencies but also of the system of courts, an institution that has played an increasingly active role in education since the early 1950s. Beginning with the landmark decision of 1954 that no student be denied equal educational opportunity because of race, both the federal and the state courts have become involved in every major area of education policy. (See Levin, 1977; Kirp, forthcoming). Meyer (1983) has called attention to the disorganizing effects of these more centralized efforts to deal with

perceived shortcomings and malfunctions, given the current still highly decentralized educational system. Both the courts and the administrative agencies, operating relatively independently at local, state and national levels, are important sources of complexity and disorganization in the environment of public schools.

Fragmentation. In addition to the complexity generated by the existence of multiple uncoordinated layers of educational authorities, additional complexity is associated with the fragmented nature of educational authority. Fragmentation refers to the extent to which authority is "integrated or coordinated at any given level" of the educational sector (Scott and Meyer, 1983:145). The independent operation of courts and agencies is a prime example of fragmentation at each level--national, state and local--as well as of federalization--the lack of integration across levels.

Numerous observers have called attention to the extent of fragmentation that characterized educational administration at all levels in the early 1980s. Sergiovanni and his colleagues (1980:162-164) have described fragmentation at the federal level:

> One could, in fact, question whether it is even accurate to speak of 'federal policy' in education. Certainly there is no single center of planning and coordination within our nation's capital. Programs which bear upon education emerge, rather, from literally dozens of agencies and congressional committees.

They note that in addition to the Office of Education, located at that time within the Department of Health, Education and Welfare, and the independent National Institute of Education,

> There are countless pockets within other agencies and departments that exercise control over highly significant programs. The Office of Civil Rights has been instrumental in enforcing desegregation guidelines. Head Start, Follow Through, and Upward Bound programs make their home in the Office of Economic Opportunity. Dependents' schools on overseas military bases are administered by the Department of Defense, and many Indian children attend schools administered by the Bureau of Indian Affairs within the Department of Interior.

As might be suspected, the fractured character of SEAs is not unrelated to fragmentation at the federal level. Consistent with predictions that organizational structures tend to reflect the characteristics of the

environments to which they relate, McDonnell and McLaughlin (1982:24) report:

> During their time of greatest growth, most state departments developed organizational structures that matched that of ED/USOE (Department of Education, formerly the U.S. Office of Education) and faithfully replicated, unit for unit, federal program categories.

Such isomorphism no doubt reflects a number of converging pressures, including mimetic strategies used by institutionalized organizations confronting uncertainty (see DiMaggio and Powell, 1983) as well as a response to federal audit requirements to which compliance is easier if "positions supported with federal funds are isolated from that part of the agency that deals with state-supported services and programs" (McDonnell and McLaughlin, 1982:24).

Moreover, linkages among governmental levels take a variety of forms that adds to the complexity and fragmentation confronting any particular layer. According to Berke and Kirst (1975:224):

> The United States Office of Education exercises control through regulations which have the force of law and guidelines which interpret these regulations. These guidelines also contain a mixture of advice and suggestions that are not legally binding. Additionally, some Office of Education programs utilize periodic and supplementary program memoranda, which presumably clarify regulations but in fact are effectively legal mandates. These three different instruments of federal control--regulations, guidelines, and memoranda--confuse state and local education agencies and permit slippage and evasion...

In addition, in the period under consideration, different officials associated with distinct offices were engaged in monitoring compliance. The interpretations of the rules and regulations by U.S. Office of Education officials was found to sometimes vary from that of HEW auditors working out of the ten HEW regional offices. (See Goettel, 1976).

Summary. Centralization can be associated with the consolidation and unification of authority resulting in a more simplified and direct system of administration. Some societies have developed such highly centralized and unified ministries of education in which the chain of command is clearly from the top down with the local school systems functioning as "branch offices" carrying out orders in a uniform manner. (See Meyer, 1983). As suggested, however, the system of public education

in the U.S. has not followed this model, and while centralizing processes have been evident in recent decades, they have not replaced traditional powers long established at local levels, nor have they succeeded in overcoming the divisions among authorities competing with one another at each level. The resulting system is one of considerable complexity and disorder.

Private School Environments

Discussion of the environment of private schools is rendered difficult by three conditions. First, much less information is available about private schooling in this country than about public education. There are questions about the accuracy of existing data on the number of private school students and schools--rather fundamental facts--and private schools have been surprisingly neglected by organizational researchers up to the present time. (See Erickson, 1983). Part of the responsibility for the present lack of accurate information lies with the schools themselves, some of which are small and short-lived while others seek to evade identification or examination.

A second barrier to understanding is posed by the great variety of private schools. While Catholic schools--which themselves vary in type from parish and diocesan to order--make up about half of the population (and account for about 65 percent of the students), a large variety of other types of religious schools comprise an additional 30 percent while the remaining 20 percent are independent or secular in orientation. Moreover, the composition of the population of private schools has been changing, with Catholic schools declining precipitously since the mid-1960s, while high-tuition independent schools have experienced steady growth, and fundamentalist schools have grown rapidly during the past decade (Erickson, 1983).

Third, private schools receive varying levels of public support and are subject to varying degrees of public regulation so that it is incorrect to distinguish too sharply between the environments of public and private schools. Estimates are that, on the average, nonpublic schools receive approximately 26 percent of their total income from government, about half of which is derived from indirect tax deductions or exemptions and the

other half from direct program expenditures (Sullivan, 1974:93). The latter programs include transportation, textbooks, and health and welfare services available in many of the states and compensatory education, child nutrition, instructional materials and aid to handicapped students from the federal government. While most private schools take advantage of the tax benefits, a smaller number receive direct categorical aid, virtually all of which is designed to serve targeted student populations (Encarnation, 1982). Participation in state and federal aid programs is strongly associated with type of school, as described below. In sum, variety, change and a blurring of boundaries between public and private systems all contribute to the complexity of the scene.

The same dimensions used to characterize the environments of public schools can be employed to describe those of private schools. The blurring of boundaries between public and private systems is ignored in this discussion, but will be considered later. Also, it is important to note that environmental variation for private schools is related strongly to school type.

Centralization. Private schools vary in the extent to which decision making has been centralized. Some, like Catholic and Lutheran schools, belong to hierarchical systems, while others belong only to loosely organized federations, such as the National Association of Independent Schools, and still others operate as completely independent units. Little research has been done on governance in private school systems. (See Bridges, 1982).

Federalization. Private schools may experience federalization since they are subject to control exercised by both local and state authorities. Although there is great variation across the 50 states, private schools are subject to state regulation such areas as minimum educational standards, attendance reporting, licensure and teacher certification (O'Malley, 1981). Other agencies regulate private schools as a business subject to "state and local building, fire, health, sanitation, child welfare, and zoning codes" (Encarnation, 1982:25). Private schools applying and qualifying for more direct forms of public aid, such as textbook or compensatory educational programs, are subject to review by public authorities. Because the

programs are defined as benefiting targeted student populations, the great majority of them are not administered by the private schools but by public LEAs, usually local districts (Encarnation, 1982).

Private schools vary by type in the degree to which they participate in larger private educational systems and hence are subject to additional controls at more than one authority level. Catholic schools no doubt represent the most highly developed system of private education with the possibility of control exercised at the parish and diocesan levels. Most other private school systems are much less complex. In general, it appears that the extent of federalization experienced by private schools is relatively low since although they may be subject to more than one level of control, these authorities do not overlap greatly in jurisdiction.

Fragmentation. Similarly, private schools appear to be confronted by less fragmented environments than their public counterparts. Sources of funds are fewer and programmatic authority is more likely to be located at the school level. What variation exists is likely to be associated with the receipt of public funds, as discussed below.

Environments and Educational Organizations: Predicted Relations

The pattern of fragmented and federalized centralization that characterizes the educational sector in the U.S. provides the environment within which individual educational organizations must function. What are the consequences of this type of environment for educational organizations? We have argued that several organizational effects are expected (Meyer, 1983; Scott and Meyer, 1983), two of which are emphasized here:

1) Administrative Complexity

A widely accepted proposition in open-systems theory is that organizations located in more complex and uncertain organizational fields will exhibit more complex internal structures. When the environmental units take the form of funding and regulatory bodies, organizational complexity is likely to develop particularly at the administrative level, where boundary-spanning activities are centered. Even more particularly, when the external pattern exhibits centralization of funding flows combined with fragmentation and competition among regulatory bodies, we expect to see environmental controls exercised through accounting and statistical mechanisms. The result within organizational units will be an expansion of the numbers of accountants, bookkeepers and clerks hired. We would also expect general administrators to report spending more time in tracking and overseeing the functioning of those programs linked to special funds and reporting requirements. Specific hypotheses to be tested are:

1a) School organizations exposed to an increased variety of funding and programmatic authorities are expected to have larger administrative components than those relating to less complex environments.

1b) School organizations exposed to an increased variety of funding and programmatic authorities are expected to have a higher proportion of business, accounting and financial personnel in their administrative staff than those relating to less complex environments.

1c) General administrators in school organizations exposed to an increased variety of funding and programmatic authorities are expected to spend a greater proportion of their time overseeing such programs than

general administrators in school organizations relating to less complex environments.

1d) Federal funds and programs, because they are more likely to be fragmented and federalized than comparable state funds and programs, are expected to generate larger administrative components in school organizations than state programs.

1e) Public school organizations are expected to exhibit larger administrative components than private schools because of the relatively greater complexity of the fiscal and regulatory environments they confront.

2) Curricular Coherence

As more authorities emerge within an arena claiming the right to speak on behalf of particular groups or interests, it becomes increasingly difficult for those who administer specific organizations to retain control over its policies and programs (Meyer and Scott, 1983a; Meyer, 1983b). Authorities in education arising at higher levels do not, as noted, completely displace the authority of officials at lower levels, but can impose some policies and programs on local jurisdictions. In this manner, local administrators are less completely in control of the educational programs they are expected to manage: some of the complexities and inconsistencies of environmental groups are built in to the structure of local organizations with the result that these programs are expected to be less coherent, less unified, less "rational" than those of similar organizations less subject to these pressures. Our specific hypotheses are:

2a) Officials in school organizations exposed to an increased variety of funding and programmatic authorities are expected to share more decision-making authority with external groups than officials in organizations relating to less complex environments.

2b) The curricular goals of school organizations exposed to an increased variety of funding and programmatic authorities are expected to be more elaborated and less coherent than the goals of organizations relating to less complex environments.

2c) Public school organizations are expected to exhibit more elaborate and less coherent goals than private schools because of the relatively greater complexity and contradiction of the environments they confront.

Environments and Educational Organizations: Evidence

Preliminary Concerns

Before reviewing evidence relating to these predictions three matters require brief attention. We need to confront the issue of organizational levels; we must consider alternative explanations for our dependent variables; and we must report on the nature of our sample of public and private schools.

Organizational Levels. When dealing with a sector such as education it is obvious that school organizations vary in the extent to which they are components of hierarchical structures with different organizational units located at higher or lower levels of the system. Indeed, an important characteristic of any societal sector (e.g., education, medical care) is the number and location of levels at which organizational units have developed. (See Scott and Meyer, 1983:141-142). In education in the U.S., the most wide-spread pattern among public schools is differentiation of forms at the school, district, state, and national levels. Catholic schools follow two patterns: school, parish and diocesan levels; and school and order levels (e.g., the Jesuit system). Some private schools relate to a central office in a two-level hierarchy, but many exist as independent schools with no formal hierarchical linkages.

When a multiple level system exists, an important question to be addressed is where, at what level, are the predicted organizational effects likely to be manifested? If complex and conflicted environments are expected to be associated with administrative complexity of the component organizational units, which units are most likely to be affected? It is possible to argue either that all organizations will be affected--complexity at higher levels producing complexity at lower levels throughout the system following principles of isomorphism--or that only some levels will be affected, organizational forms at one level serving to manage or absorb complexity in the environment and acting to buffer lower, subordinated units from its effects. We can offer no theoretical basis for

selecting among these competing possibilities and so will simply observe and report on the empirical situation in the U.S. educational sector.

Alternative explanations. Our perspective focuses attention on environmental sources of administrative complexity and curricular coherence. More conventional organizational arguments view administrative complexity as primarily the product of internal characteristics, either size (see Blau, 1970) or technical complexity and interdependence (see Thompson, 1967; Galbraith, 1973). There is considerable controversy over whether size tends to be associated with a relatively larger or a smaller administrative component (see Scott, 1981, pp. 235-44 for a summary of the conflicting arguments and evidence); but in any case, we will want to control for the effects of organizational size on administration in assessing our own propositions.

There is also inconsistent evidence regarding the extent or the conditions under which the performance of more complex and interdependent work is associated with more elaborated and enlarged administrative systems (see Scott, 1981, pp. 212-32 for a summary). Several studies (e.g., Hickson, Pugh and Pheysey, 1969; Comstock and Scott, 1977) report that more proximate structures--e.g., teams or work groups--are more likely to reflect differences in technical complexity, developing more elaborated control and coordination mechanisms, than are more distant organizational structures. This generalization received support in our earlier study of elementary schools (see Cohen et al., 1979), in which teaching groups that used more differentiated curricular materials were found over time to develop more elaborate collaborative arrangements, e.g., teaching teams that engaged in joint planning and instructional activities. However, complexity of work within the classroom was neither affected by nor had an effect on administrative complexity at the school or district levels.

For our study of private and public schools, we did not attempt to directly assess technical or instructional complexity and interdependence, except that the distinction between elementary and secondary schools or, alternatively, the number of grades included within the school organization, may be interpreted as reflecting in part this dimension.

Turning from factors that might affect administrative complexity to the second type of dependent variable, curricular coherence, it is possible that the latter might also be responsive to size differences, particularly to the extent that size is associated with internal heterogeneity. For example, if there is wide variation in student composition, this could affect the unity of curricular goals.

Public and private school study. Data on a sample of public and private schools, public school districts and Catholic school dioceses in the six country San Francisco Bay Area were collected in the spring of 1981 by an interdisciplinary team of researchers at IFG. Since the study was expected to serve multiple objectives, its design was complex. Chambers and Lajoie (1983) provide a description of the study objectives and general design. A detailed discussion of the private and public school sample and its relation to the characteristics of the population of schools in California and in the U.S. is reported by Gilliland and Radle (1984). Table 1 reports sample size and return rates for public schools and districts and for the various categories of private schools surveyed. Return rates for the entire sample averaged only about 30 percent, with significantly lower rates characterizing public middle and elementary schools, independent schools (not associated with a parish or diocese), and other types of private religious schools. Moreover, the absolute numbers of both "other religious" secondary private schools and Catholic independent elementary schools responding were tiny.

For purposes of our analyses, respondent schools were divided into three categories by auspices: public, Catholic, and private--Catholic independent schools being assigned to the private category since in their organizational environments they were more similar to the other private schools than to those Catholic schools that were part of a parish or diocese structure. Four categories of schools were identified by grade level: elementary, middle, secondary, and comprehensive. These categories and the numbers of schools in each are reported in Table 2. As is clear from Table 2, the middle school is primarily a public school form, while the comprehensive school is a private school type. Also, private schools

were more likely than either public or Catholic systems to combine junior and senior high programs into a single school type.

Most of the data reported in this paper are based on questionnaires mailed to schools and district offices. Differentiated but comparable survey instruments were prepared for each type of school included within the study (see Chambers and Lajoie, 1983). A survey form was mailed to principals and superintendents with the request that it be completed by the recipient or a person designated by him or her as knowledgeable in the areas covered. Initial return rates were disappointingly low, but were somewhat improved by telephone follow-ups. Data on Catholic diocesan activities were collected by interview.

Administrative Complexity

District Level. There is no question but that the administrative staffs within public school districts have grown from very small and simple to relatively complex structures. Rowan (1981: 47) reports that:

> In 1932, the earliest year for which records on the number of administrators in the public school system are available, there were only .23 local administrators per district. By 1970 that number had increased to 6.8 administrators per public school district.

By 1982, in our six county sample of school districts in the San Francisco Bay Area, the average number of administrators was 12.80. What factors are associated with this increase?

Of course, the consolidation movement has contributed to district size: as larger territories with more schools are created, the number of administrators per district is likely to increase. It is also possible that the work performed within schools--the "technology" of schooling--has become more complex requiring more administrative input. While this is possible, there is little evidence to suggest that district administrators are closely connected with the instructional work of schools. Indeed, what evidence we have suggests the opposite. (See Hannaway and Sproull, 1978-79.) Another possibility is that the work confronting school districts is not so much how to manage students as how to manage schools themselves, and that schools as organizations have become more complex over time, and perhaps also more interdependent, requiring more administrative attention and coordination. It is clear that considerable administrative growth at the district level is related to such internal organizational

changes. In virtually all districts, the budgeting process has become highly centralized; and in most districts, critical personnel decisions are made at this level. Note, however, that these types of changes are largely a result of change in school environments, not of internal processes. Thus, budget decisions are more centralized largely because a greater proportion of school funds come from outside the district, and districts are held accountable according to standards set and enforced by these external authorities. And personnel decisions are more centralized partly in response to the pressure of professional associations and unions and to state licensure requirements that are external to any specific district.

In order to focus attention on effects of environmental changes on the administrative structure of school districts, we and our colleagues at Stanford have carried out several empirical studies. The first, based on data collected in a survey of 20 elementary school districts in the San Francisco Bay Area in 1975 (see Cohen et al., 1979, for details of sampling procedures), was conducted by Rowan (1981). After controlling for district size, measured by average daily attendance, Rowan found a strong positive association between the amount of special federal and state funds received per student and size of district administration, measured as the number of full time equivalent (FTE) administrators per student. These effects were much greater than those associated with measures of internal district complexity (whether the district was administering only elementary schools or was unified, managing both secondary and elementary schools) and of interdependence (whether there existed a district-wide reading program).

A second study, conducted by Bankston (1982), examined in depth a single large school district in an urbanized location within the San Francisco Bay Area. For the fiscal year 1979-80, the district received 8 percent of its funding from the federal government, 69 percent from the state, and the remainder from local sources. Combining both state and federal special programs, 20 percent of the district's funding came from categorical programs while 80 percent was received as block grants. While only one-fifth of the district's income was associated with categorical programs, one-third, 17 of 53 central district officers, were funded by these programs. And although only 8 percent of the funding was derived

from the U.S. Department of Education, Bankston estimated that about 30 percent of the required annual reports were directed to this source. Finally, not only the activities of the administrative staff but their titles and the structural differentiation of the district office reflected the patterning of external funding packages and reporting requirements. Thus, Bankson's descriptive study, although based on a single case, provides strong evidence in support of the view that school district organization is shaped by the structure of its administrative environment.

A third study, also conducted by Rowan (1982), utilized data from a random sample of 30 city school districts that existed in California in 1930. Using published data at five year time intervals, Rowan analyzed changes over time in the composition of district staff. He observed that

> The most pronounced tendency of districts in the sample was to differentiate positions with business and personnel functions. The proportion of districts with these specialities rose from 0% in 1930 to 83% with business positions and 67% with personnel positions in 1970. Such a marked pattern of growth reflects not merely the growth in scale of operations within school districts, but also an increased concern with financial accountability and with credentialing and labor management contingencies (Rowan, 1982: 49).

These results are consistent with our arguments that changes in the organizational environments of schools are associated not simply with larger administrative components within educational organizations but also with the addition of certain types of administrative personnel, in particular, business and accounting specialists.

Turning now to the data from our private/public study, we examine first the results based on survey responses from 49 public school districts. Questionnaires were mailed to superintendents who were asked to respond personally or to locate a knowledgeable associate who could do so. As the principal measure of environmental complexity, respondents were asked to indicate from a list of 22 federal and state programs all those in which the district currently participated. The number of external programs in which the district was involved was regarded as an indicator of environmental fragmentation. The locus of the programs--whether federal or state--was taken as an indicator of environmental centralization. The average Bay Area district reported participating in 11.1 programs. (For a description of the major types of public programs and information on the

number of schools in the Bay Area sample participating in each type, see Gilliland and Radle, 1984: 41-44.)

Throughout these analyses, our primary measure of administrative complexity is simply the number of FTE administrators in the district. (Administrators reported as "part time" were considered as .5 administrators.) At the district level, we included as administrators all professionals involved in either general administration or in the administration of specialized programs. We use total number of administrators rather than administrative ratios (e.g., administrators as a proportion of the total professionals or teachers within a school district) as our dependent variable in order to avoid the problems of definitional dependency that occur when ratio measures are used that incorporate some measure of size in the denominator and are then correlated with the same or some related indicator of size (see Freeman and Kronenfeld, 1974).

Multiple regression was used to determine which factors were associated with size of the district's administrative staff and to assess the relative impact of each factor. Table 3 reports, in both standardized and unstandardized regression coefficients, representative results for three equations (columns 1-3). We note that size, whether measured in total district enrollment or in number of schools within the district, was highly associated with size of district administration , as expected; and that the correlation between schools and district administrators was somewhat higher than that between students and district administrators. This is consistent with the expectation that district size is more a function of complexity in managing schools than students.

Two more direct measures of amount of complexity confronted within the district are whether the district was unified--involving both elementary and secondary schools--and whether the district was restricted to elementary or to high schools. Like Rowan (1981) we found no effect on number of district administrators of whether the district was unified; but districts administering high schools--known to be larger and more complex systems than elementary or middle schools--were observed to have larger administrative staffs. In sum, internal complexity as represented by number of schools and by the complexity of the individual schools

themselves, was found to increase district administration over and above that associated with numbers of students enrolled.

With respect to our central concern, we found that environmental fragmentation, as measured by the number of public programs in which districts participated, was consistently and significantly associated with larger district administrative staffs. Related results (not reported in Table 3) showed no differences between the effect of participation in special state programs or federal programs, an index of centralization. Each was significantly associated with size of district staff although this result reflects high covariance (the correlation for districts between number of federal and of state programs in which they were involved was .70).

As noted in our earlier discussion of the environments of private schools, although individual schools may participate in one or more public programs, the responsibility for administrative oversight is placed on the public school districts. In our Bay Area sample of districts, the average number of programs for private schools administered by public districts was 1.98. If we take into account the effect on district administration of participation in programs for public schools, then no additional effect was observed for administering programs for private schools. And if only administration of private programs is considered, then no significant effect on administrative size was observed.

The combined effects of size, internal complexity and environmental complexity accounted for approximately 90 percent in the observed variance in number of administrators among public school districts (see Table 3).

Administrators are not the only types of personnel within district offices. Two other general categories of staff include non-administrative professionals and classified personnel. The first category includes various types of personnel providing support services to schools including counselors, social workers, librarians, psychologists and resource specialists. These personnel are located at the district level because they provide only "staff" services to teachers and students or because they serve more than one school. Classified staff includes secretaries, bookkeepers, clerks and similar administrative support personnel. The only

significant predictor of numbers of classified staff at the district level was size, whether measured by district enrollment or number of schools. The measures of internal and environmental complexity were not significantly associated with size of the classified staff. To our surprise, number of professional staff at the district level was significantly associated not only with the district size measures but also with the number of private programs--but not the number of public programs--administered by the district. Apparently, although private programs are not associated with an increase in district administrators, they do allow public districts to augment the size of their non-administrative professional staff.

Finally, as noted, yet another way in which administrative systems may respond to increasing environmental complexity is for existing administrators to devote more of their attention to this aspect of their work: attention and energies are diverted from internal to external issues and demands. To examine this possible, we collected not observed measures of time allocation by administrators, but reported behavior. After obtaining information on the number and types of public programs in which the district participated, we asked district respondents to estimate on a scale of 1 (high) to 5 (low):

> How much of your time and the time of other administrators in your district is devoted to administering all of these publicly funded programs?

The average district did not report particularly high levels of time devoted to managing public programs ($\bar{x}$ = 3.6; s.d. = 1.01); and multiple regression equations similar to those reported in Table 3 revealed no significant and consistent effects on administrative time by district size, type of district or number of public or private programs administered. Apparently, the augmentation in staff occasioned by participating in public programs was sufficient to absorb the requirements entailed in administering those programs.

In summary, it appears that school districts are strongly influenced in their size and composition by involvement in public programs. After taking into account the size and internal complexity of the district, the larger the number of public programs managed, the larger the number of

district administrators; and the larger the number of public programs managed for private schools, the larger the number of non-administrative professionals. But neither the number of classified staff nor the reported amount of administrative time devoted to public programs was significantly related to extensiveness of involvement in public programs.

County Level. In addition to district administrative development, other public administrative staff are located within the office of the county superintendent of schools. We did not attempt to examine developments at this level systematically but call attention to it as another important locus of administrative services for schools. In order to obtain some sense of the scale of operations at this level and the types of services provided, we conducted interviews with officials in two Bay Area county offices, one in a smaller county encompassing 16 school districts, and the other in a larger county encompassing 19 districts. The smaller county office contained a staff of 65 professionals and 191 clerical workers. The types of functions reported included the administration of development centers for handicapped students and court schools; the provision of in-service classes for teachers and other professionals, such as training in computers; and the performance by contract of specific functions for schools, such as training workshops and payroll services. In addition, the larger of the county offices reported that they provided liaison with private schools, the county serving as the "representative of the SEA," collecting private affidavits every fall and occasionally serving as an intermediary between private and public schools for joint programs.

Diocesan Level. Turning now to the private sector, only one type within our sample, the Catholic parochial schools, were organized into a larger system at the "district" level--the diocese. (One other non-religious private school in our sample reported that it belonged to a state-wide regional system.) All of the parochial schools in our sample were incorporated within one of three systems--two diocesan and one archdiocesan. Interviews with schools administrators located in each of these offices revealed the presence of relatively modest administrative staffs. In the smaller diocese, only two full time administrators and one

part time clerical person exercised oversight for a system containing 32 schools--28 elementary and 2 secondary. In the second diocese, four full time administrators, four secretaries, a bookkeeper and an accountant managed 57 elementary schools and 4 secondary schools. And in the larger dioceses, seven administrators and two clerical persons administered a system containing 94 schools--75 elementary and 19 secondary.

Given the size of these central offices, it is not surprising that diocesan administrators reported carrying out primarily staff functions--collecting system-wide data on academic performance and teacher qualifications and credentials, conducting training workshops, and consulting on curricula. All these offices reported having at least informal contact with the independent private Catholic schools within their areas. No state funds were received, and any federal funds were administered by public districts and routed directly to qualified schools. Parochial schools were reported to be receiving ESEA Title 1 (now Chapter I) funds, ESEA Title IV-B (now part of Chapter II) library and learning resource funding, ESEA Title VII (also part of Chapter II) bilingual education funds, and National School Lunch Program funds. While not involved in the administration of these programs, two of the three diocesan officers reported conducting regular on-site inspections of those schools participating in publicly funded programs.

In sum, by comparison with the public system, private schools are much less likely to be organized at a regional or district level, and those that are exhibit only relatively small and rudimentary administrative staff functioning at this level.

School Level. Another of our colleagues, Ann Stackhouse (1982) utilized data from a survey of a ten percent sample of U.S. secondary schools conducted in 1977 by NIE (see Abramowtiz and Tenenbaum, 1978) to test hypotheses similar to those we have advanced. Stackhouse expected fragmentation within the environment of secondary schools to increase the size of the administrative component of the school. The primary measure of fragmentation was similar to our own: the number of types of special categorical funds from which a school was receiving funds. The two primary measures of administration were the number of general administrators and

the number of specialists (e.g., special education teachers, resource teachers, media specialists) on the staff of the school. After controlling for school size, region and urban location, her findings were that fragmentation in the funding environment of secondary schools was significantly and positively related to the number of specialist personnel but not to the number of regular administrators.

Whereas fragmentation was expected to be positively associated with administrative elaboration, Stackhouse's second prediction was that the integration of decisionmaking authority at the state level would not be associated with increased administration but should lead to leaner administrative components within schools. Her chief indicators of state-level integration were Wirt's (1977) index of centralization of decisionmaking power at the state level and the proportion of funding for local schools provided directly by the state. Again, controlling for size, regional and urban location, there was a significantly negative relation, as predicted, between extent of state integration and numbers of both specialists and administrative personnel within secondary schools.

Stackhouse had no data on school district staff, but attempted to control for the effect of this level by including in her analysis as a control variable the principal's reports of the frequency of meetings with district staff. She found that schools reporting more extensive contacts with district staff were likely to have more specialist personnel but that there was no effect on number of regular administrators.

Turning to our own study of public and private schools, we first categorized the sample into seven relatively homogeneous classes, by level and type: three classes of elementary schools--public, Catholic and private; public middle schools; and three classes of secondary schools--public, Catholic and private. Recall that the category of Catholic school refers only to those schools with direct ties to the local Catholic hierarchy, that is, to parochial and diocesan schools. Independent Catholic schools were assigned to the private school category.

As Table 4 demonstrates, enrollment varied greatly by both level and school type. Secondary schools were, on the average, from two to three times larger than elementary schools; and public schools were, on the

average, from two to three times larger than private schools. Catholic schools were intermediate in size between public and private schools; and middle schools were sized between elementary and secondary schools.

Table 4 also contains information on staff : student ratios. The category of administrator was defined to include principals or heads, assistant administrators or vice-principals, instructional or program administrators, and general or business administrators. The category of professional included teachers, counselors and psychologists, social workers, librarians, nurses, chaplains, resource specialists and other types of student support services professionals. Size of both types of staff was calculated as the number of full time staff members plus half the number of part time members.

There was a slight tendency for staffing ratios to be higher in the more complex types of schools: secondary and middle schools had more administrators per student than did elementary schools, and Catholic and private (but not public) secondary schools had more teachers per student than did elementary schools. But these differences by level were overwhelmed by the staffing differences by type of school. The private schools in our sample had, on average, almost three times as many administrators per student as did the public schools, and the Catholic schools, nearly two times the number of the public schools. Similarly, private schools contained a significantly higher number of professional staff per student than public schools, with Catholic schools being intermediate. The only exception to these general patterns was that Catholic elementary schools in our sample contained fewer professional staff members per student than did public elementary schools.

Although the relative differences in staffing ratios by school type were substantial, the absolute numbers of administrators at the school level were small. The typical elementary school in our sample contained between one and one-and-a-half administrators: 1.07 for public schools; 1.45 for Catholic schools, and 1.43 for private schools. The average middle school contained only 2.45 administrators. And the average high school contained between three-and-a-half and four-and-a-half

administrators: 4.43 for the public secondary school, 3.68 for the Catholic schools and 3.53 for the private high schools in our sample.

Parallel to our examination of the factors affecting size of administration at the district level, we examined similar regression equations at the school level. As expected given the staffing patterns just described, dummy variables used to indicate a Catholic or a private school were significantly associated with a larger administrative component. Similarly, a dummy variable to indicate secondary vs. elementary school--an indicator, among other things, of internal organizational complexity--was significantly associated with size of administration. Given these differences, we sought to determine, for a given type and level of school, whether school size and complexity of the school's external environment was associated with size of administrative staff. Two measures of size were employed: number of students enrolled and number of grades within the school. No attempt was made to directly measure internal school complexity (although number of grades can be regarded as an indicator of complexity as well as of size). Rather, we attempted to control for this variable by distinguishing between and conducting separate analyses for elementary, middle and secondary schools. Two measures of external environment were employed, both indicators of fragmentation. First, as with districts, we determined for each school the number of public programs in which it was currently participating. Second, we asked an informant in each school to respond to the following question:

> In your opinion, how well integrated or coordinated are the administrative and reporting requirements of the public programs in which your school or your students participate? For each set of programs, rank the level of integration of these requirements on a scale ranging from "5" if very well integrated to "1" if not well integrated. If program involvement by your school and students is not adequate for you to answer this question, indicate with NA.

The three types of programs listed were:

> Coordination of state program requirements
> Coordination of federal program requirements
> Coordination of state with federal program requirements.

Since responses to the three programs were highly correlated,--for example, for public schools in our sample, the association between perceived integration of state-federal programs with perceived integration of state

programs was .82 and with perceived integration of federal programs was .83--we limit attention in the analysis presented here to perceived coordination of state and federal programs.

Table 5 is similar in form to Table 3 in that each column represents a regression equation including the variables listed in the rows. In order to control for school type and level, separate equations were estimated for each type of school examined. Catholic secondary schools are omitted because of the small number of these schools in our sample. Given the exploratory nature of this analysis and the small numbers involved for some of the schooltypes, we identify associations significant at the .10 level as well as the .05 and .001 levels.

Size of school as measured by enrollment was generally associated positively and significantly with size of school administration although there are exceptions--enrollment and size of administration were negatively correlated for our sample of public meddle schools, but the association was not statistically significant. The second measure of size, number of grades within the school, was substituted for enrollment in an alternative set of equations. These results, not reported in Table 5, are easily summarized: there was no significant association between number of grades and administrative size in any of the types of schools examined.

Turning to the measures of environmental complexity, number of public programs was positively associated with size of administrative staff across all the types of schools studied, but this association was statistically significant only for public middle and secondary schools and for Catholic elementary schools. Further, as expected, perceived integration in the administrative and reporting requirements imposed by participation in state and federal programs was negatively associated with size of the school's administrative staff. Five of the six coefficients were in the expected direction but only two--those for public secondary and Catholic elementary schools--were statistically significant.

Other data pertaining to the composition of the support staff for administrators indicated that public and Catholic, but not private, schools, that participated in a larger number of public programs employed higher proportions of accountants and bookkeepers to other types of

supporting staff members. Moreover, these results held just for all public and for federal programs, not for state or local programs.

Just as with districts, we included a question asking school officials to estimate on a five point scale how much administrative time was devoted to managing publicly funded programs. But unlike the findings for public school districts, we found consistent evidence in a series of multiple regression models that the higher the number of public programs in which the school was involved, the greater the amount of time devoted to administering these programs. With respect to type and level of school, secondary schools were less likely to report time expended on such activities than middle or elementary schools; and private schools were less likely than Catholic and public schools to report large amounts of time devoted to the administration of public programs. Unexpectedly, in some but not all analyses, schools reporting higher levels of integration among federal or federal and state programs reported larger amounts of time devoted to program administration.

Overall, however, our results on increasing demands by the external environment on the time of school administrators are consistent with a number of recent studies based on detailed observations of the principal's work profile. Thus, based on his in-depth study of the work activities of a single elementary school principal, Wolcott (1973) noted that in his "representational role" the principal performed an important interface function, mediating between the demands of the school system bureaucracy and the regulatory environment on the one hand and the school's client community on the other. And in their detailed study of the work schedules of 16 school principals in the Chicago area, Morris and his colleagues (1981) reported that both elementary and secondary principals spent over 10 percent of their time interacting with the district superintendent or his office staff. In addition the seven elementary school principals

> devoted about 12 percent of their time to written communications at their desk. Half to three-quarters of this time was consumed in processing documents for headquarters personnel. The general perception of the principals was that the load of this type of paperwork was indeed on the increase. One principal reported that it was necessary to take work home virtually every night to stay on top of the task. Many principals stayed at their desks after school or reported early in the morning in order to stay ahead of the mail.

Others diverted time from other activities during the day to handle data-gathering for each child (Morris et al., 1981: 47-48).

To summarize the school level findings, we found substantial differences in size of the administrative component by type and level of school, with private and then Catholic having larger ratios of administrators to students than public schools and secondary and middle schools having slightly larger ratios of administrators than elementary schools. The differences associated with type appear to reflect both the smaller average size of the Catholic and private systems and the absence of any substantial intermediate buffering structure such as the district office represents for the public system. Participation in public programs was observed to be associated with more elaborate administrative components for Catholic elementary and for public middle and secondary schools. And the perception that state and federal program requirements were well integrated was associated with reduced administrative components in both Catholic elementary and public secondary schools. Finally, for all schools, the larger the number of public programs in which a school was involved, the greater the amount of time administrators reported devoting to them. Increased time commitments were reported to be greater for elementary than secondary schools and for Catholic and public than for private schools. Thus, it appears that schools respond to more complex and fragmented environments either by increasing administrative ratios or by redirecting the time and attention of existing administrators to meet this demand.

Complexity and Organizational Level. It appears that we have an empirical answer to the question posed earlier in this paper; namely, where, at what level, does organizational structure become more elaborate and complex to deal with environmental pressures? For the case of the public school system, we found that administrative complexity is generated at both the district and school level (not to mention the state level where, as noted, educational agencies have expanded enormously in recent years). While school district offices do expand and function to manage and, partially, to mediate between individual schools--including Catholic and private schools--and state and federal program requirements, they do not completely absorb these demands. That individual school administrators

both expand in number and/or devote increasing amounts of time to managing such external demands is not surprising when one reviews the extensive descriptive literature detailing the processes by which specific federal or state programs are implemented at local levels within individual schools. (See, for example, Weatherley, 1979; Hargrove et al., 1981.) More often than not, district officers see their role as providing technical assistance and, perhaps, training, with the actual interpretations and decisions regarding implementation delegated to school level personnel.

The view of individual schools directly confronting and responding to a fragmented regulatory and funding environment in addition to responding to these pressures more indirectly as mediated by superordinate structures reinforces an image of educational organizations as loosely-coupled systems. (See Weick, 1976; Davis et al., 1977.) Indeed, a good indicator of how tightly coupled an administrative system is would be the extent to which upper levels are able to manage uncertainty and complexity for lower levels, either absorbing or transforming these pressures so that subordinate units would not be required to confront them directly.

Curricular and Goal Coherence

We turn now to the second general empirical issue posed in this report. It is argued above that public schools are likely to have less organizational coherence than are private schools. This idea is not related to a conception that private schools are somehow more successful than public ones--indeed, any reasonable reflection would suggest that in purely organizational terms, private schools have statistically lower chances of stability and survival than do public ones. Private schooling systems face continuing and crucial problems of funding and market survival on a scale far beyond that of public schooling. But in a sense it is just that difference in their environments that leads to our main hypothesis. Public schooling is provided by its environment with something close to a monopoly situation in the community, and is highly protected by a network of superordinate organizations and rules. It obtains this monopoly, however, at a considerable cost in internal organizational consistency. Public schooling is under great legal, organizational, and political pressure to meet the full range of "needs of the community" as these are

defined by disparate groups internal to the local community, by state organizations and their penumbra of legitimated interest groups, and now by organized interests and programs at the national level. Public schooling maintains its organizational strength by giving up autonomous authority to the widest variety of disparate environmental groups.

Private schools do not have these benefits, nor the associated resources. They have to try to find in their environments some niche to occupy that will make possible success--some more specialized set of environmental groups that will see in them special virtues sufficient to overide their extra costs. Attempting to play to the full range of environmental supports is in this case almost always a mistake: it is more important to organize around a distinctive and unified set of goals which will make a special appeal to a limited constituency.

We examine our general argument empirically in three distinct ways: there is no very definite way to establish the coherence of an organization's goals, and much inconsistency and disagreement in the literature on the subject. First, we consider the direct reports of the school administrators to questions about the importance of various goals to their programs. One may question the meaning of such verbal accounts, but in some ways modern thinking on the subject treats the concept of organizational goals as referring more directly to official organizational rhetoric than to more hidden and supposedly "real" goals inferred by researchers from participants' behavior. Using the verbal reports, we directly compare public and private schools.

Second, using the same data, we look at the factors affecting schools, goal depictions. We know that public schools face more plural environments than do private ones: does this account for some of the differences among the goals they define?

Third, we shift to data describing patterns of influence over school decisions, rather than goals themselves. Do private schools have more internal control over their own policy decisions than public ones? It seems reasonable to infer from data on this question to the issue of goal coherence in general.

Administrator Verbal Reports. Our school survey contained a series of questions about school program goals. We asked:

> Indicate the area(s) that receive particular emphasis at your school: College preparation___; Basic skills orientation___; Critical and original thinking stimulated___; Respect for authority instilled___; Vocational preparation___; Social development (cultural pluralism, etc.)___; self-esteem development___; Religious, ethical values___; Other (specify)___.

The intention behind this general question was to see whether public school administrators tended to report a wider range of clearly distinct programmatic purposes.

Table 6 reports the distribution of school responses on the goals questions. Schools are classified by level, since elementary school purposes tend naturally to differ from the issues mentioned at the secondary school level. For each type of school, the proportions subscribing to each of the goals in the list is given.

The relevant comparisons are those between public, Catholic and other private schools within school level categories. Turning first to the elementary school level, we find some differences among types of schools, but little that is relevant for our analysis. Schools generally espouse broad educational goals--linked to quite general standards of citizenship and competence. Some private schools emphasize college preparation, but this is not really sharply distinct from the broad general standard. Very few schools of any sort mention vocational preparation, which might be more distinctive. We had hoped that a stress on basic skills might denote a distinct emphasis on more remedial work, but by the time of our survey this too had become a stock phrase embraced by every type of school. Private schools emphasize more goals having to do with broad socialization, and Catholic ones especially mention respect for authority and religious values. But although types of schools at the elementary level vary a little in the package of qualities they want to build into their products, none of their survey responses reflect the differences in coherence we were attempting to measure.

The data at the secondary level reflect similar variations. But here we find additional more interesting results. Almost all the schools report

an emphasis on college preparation. But the public schools combine this with a very different emphasis--on vocational preparation. They are also more likely to report a program emphasis on basic skills than are Catholic and other private secondary schools.

The general findings here clearly illustrates our hypothesis. Catholic and other private secondary schools focus their programs on building the college-bound middle class person. Public schools tend to add to this goal a very different emphasis on serving students who will probably end up in working class positions in society. The finding reflects a truism about American public education--for the most part, public schools can do little to choose their constituencies or the purposes appropriate to them.

Effect of Public Programs. As a second analysis we can carry the finding noted above one step further. The distinct goal emphasis public secondary schools add to those of private schools is the direct acknowledgement of the goal of vocational preparation. Does this simply reflect the fact that public schools have much more diverse student constituencies than private ones? Or is it more that public schools are immersed in an organizational environment which makes necessary the organizational adaptation to vocational training as an explicit purpose?

Table 7, restricted to our secondary school sample, reports the relevant data. It reports a multiple regression analysis predicting which secondary schools describe vocational education as one of their special programmatic emphases. We include, as independent variables, the following factors: the proportion of the school's students who are from ethnic minority groups; the number of special state or federal programs funding the school; and dummy variables indicating whether the school is Catholic or other private. Enrollment size is also included as a control variable.

We already know that Catholic and other private schools tend not to espouse the goal of vocational education. The question here is whether this effect can be accounted for by the distinctive population served by public schools or by their involvement in public programs requiring programmatic conformity. The further question answered by the table is

whether vocational education is more affected by the actual presence of low status minority students, or whether it is the school's involvement in informal public programs that is the crucial factor.

The data answer both questions convincingly. When the other factors are held constant, Catholic and other private schools no longer differ significantly from public ones. And second, the school's formal subscription to a programmatic emphasis on vocational preparation is affected significantly by involvement in public programs: the actual presence of more minority students has an insignificant effect. The data thus suggest that the formal acknowledgement of educational goal quite distinct from the standard image of desirable secondary education is indeed affected by the organizational environment, and that this accounts for the difference between public and private schools.

The Direct Influence of Environmental Groups on School Policy.

We now consider a more indirect way of discussing the programmatic goal coherence of public and private schools. Our instruments contained a number of items asking about influence within the school's decisionmaking process of both internal and external groups. We can compare public and private schools on this dimension.

One set of questions asked administrators simply to report the number of external organizations that made on-site inspections of their school. Almost all of these were inspections in connection with various specially-funded public programs. Naturally, the public schools were more likely to receive such inspecting visits--78.4% of the public schools received one or more onsite inspections compared with only 56.9% of the private and Catholic schools. In itself, this finding suggests the openness of the public schools and their programs to external control and to the expectation of such control.

We also asked a series of questions about which groups influenced school decisionmaking. The questions took the following form:

For the following decisions, indicate how much influence each of the designated positins or groups is likely to have. Record a number from the Influence Scale for each position and decision (the Influence Scale was defined in the following manner: 0 = None; 1 = Little; 2 = Moderate; 3 = Fairly High; 4 = High).

Decisions	State Dept. of Education* Administrative System Office**	School District/ Board* Local Governing	School Advisory Council(s)* or Pastor/Rabbi**	Principal/ Head	Faculty	PTA* Parent Group**
a. adopting a major change in curriculum						
b. hiring a new teacher						
c. dismissing a teacher						
d. determining student admission policies						
e. defining school budget						

*public school questionnaire

**private and Catholic school questionnaire

In Table 8, we simply report the mean percentage of decisionmaking influence exercised by external agents. For public schools, external agents are defined as the state department of education, the school district or school board, school advisory council(s) and committee(s), and the P.T.A. For Catholic and private schools, the external agents are the administrative system office, the local governing board, the pastor or rabbi, and the parent group. The percent of influence exercised by external agents is calculated as the sum of the influence scores for these groups over the five decision domains divided by the sum of the influence scores for all groups.

The data show that public schools report more influence in the hands of external groups than do Catholic or other private schools, in which most decisionmaking influence is in the hands of groups in the organizational structure itself. The findings for Catholic schools may come as some surprise to readers unfamiliar with this system, but are borne out by our more qualitative observations. In the Catholic system, neither diocesan or parish leaders routinely intervene in the operation of the local schools, and very few other groups are in any position to do so.

Summary. We find some evidence that public schools, at the secondary level, report less goal coherence than private ones. In addition to the standard educational goals related to broad definitions of education, they often also report emphasizing vocational education. This emphasis is a response to their involvement in public funding programs, which obviously carry this emphasis.

We also find that in reporting influence over school decisionmaking, public schools report much more involvement of external groups--a process that sustains the high level of support public schools receive in this country, but that also lowers their ability to maintain a coherent internal structure. As we have noted in other contexts (e.g. Meyer and Scott 1983), the internally decoupled character of public schooling is intimately related to its close linkages with a complex organizational environment.

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TABLE 1

Sample Size and Return for Schools and Districts

Type	Sample Size	Number Returned	Percent Returned
Public Schools			
High School	153	49	32
Junior High/Middle	82	20	24
Elementary	299	61	20
Public School Districts			
District Offices	110	49	45
Private Schools			
Secondary			
Catholic Parochial	16	6	38
Catholic Independent	20	4	20
Other Religious	8	2	25
Nonreligious	17	9	53
Elementary			
Catholic Parochial	151	69	48
Catholic Independent	5	1	20
Other Religious	62	15	24
Nonreligious	56	15	28

Source: Gilliland and Radle, 1984, Tables 8 and 9.

TABLE 2

Number of Schools and Grades by School Categories

Categories	Number of Schools	Mean Number Grades
Elementary		
Public	61	6.5
Catholic	69	8.4
Private	31	8.2
Middle		
Public	20	2.7
Catholic	1	2.0
Private	1	2.0
Secondary		
Public	49	4.0
Senior High	(48)	(3.9)
Combined Senior and Middle	(1)	(6.0)
Catholic	7	4.3
Senior High	(6)	(4.0)
Combined Senior and Middle	(1)	(6.0)
Private	16	4.7
Senior High	(11)	(4.0)
Combined Senior and Middle	(5)	(6.2)
Comprehensive		
Private	9	12.8

Source: Gilliland and Radle (1984), Table 14.

TABLE 3

Factors Affecting Size of Public District Administration

	1	2	3
Constant	-5.614	-5.672	-5.801
Size			
Enrollment	.875** .0011 (.000071)		
Number of schools		.886** .658 (.042)	.907** .674 (.039)
Internal Complexity			
Unified district	-.019 -.606 (1.759)	-.059 -1.868 (1.762)	
Highschool district			.129** 5.584 (1.859)
External Complexity			
Fragmentation (number of public programs)	.146* .631 (.263)	.161** .698 (.259)	.124* .536 (.220)
R^2 =	.91	.92	.93

Note: First listing in table for each variable is standardized regression coefficient (beta). Second listing is unstandardized coefficient. Third listing, in parentheses, is standard error of the estimate.

*p = < .05
**p - < .001

TABLE 4

Average Number of Students and Number of Students per Administrative and Professional Staff, by School Type and Level

Level and Type	N	Average Enrollment	Students/ Administrator	Students/ Professional
Elementary				
Public	60	386	358	23
Catholic	66	296	204	31
Private	27	185	129	16
Middle				
Public	19	784	320	19
Secondary				
Public	46	1446	326	24
Catholic	7	715	194	21
Private	16	325	92	12

Source: Based on Gilliland and Radle, 1984, Table 21.

TABLE 5

Factors Affecting Size of School Administration

	Elementary Schools			Public Middle Schools	Secondary Schools	
	Public	Catholic	Private		Public	Private
onstant	.014	.869	-.169	3.751	1.856	1.347
ize						
Enrollment	.644*** .003 (.0005)	.260 .003 (.0016)	.919*** .013 (.0015)	-.239 -.002 (.0022)	.464** .002 (.0005)	.369 .001 (.002)
cternal mplexity						
F mentation (number of public programs)	.100 .027 (.035)	.290* .272 (.149)	.029 .039 (.168)	.676* .516 (.284)	.278* .221 (.111)	.572 .887 (.769)
Perceived Integration	-.009 -.003 (.035)	-.287* -.105 (.055)	-.149 -.103 (.086)	-.492 -.484 (.360)	-.382** -.533 (.196)	.310 .252 (.423)
R^2 =	.47	.24	.90	.27	.43	.53

Note: First listing in table for each variable is standardized regression coefficient (beta). Second listing is understandardized coefficient. Third listing, in parentheses, is standard error of the estimate.

*p = < .1
**p = < .05
***p = < .001

Table 6

Reported School Programmatic Emphasis of Public, Catholic and Private Elementary and Secondary Schools

(table entries are percents reporting emphasis on each goal)

	Elementary Schools			Secondary Schools		
	Public	Catholic	Private	Public	Catholic	Private
% report program emphasis on...						
Vocational Preparation	2	12	6	53	29	19
College Preparation	10	19	35	86	86	100
Basic Skills	98	97	90	90	71	62
Critical Thinking	62	76	90	39	86	81
Respect for Authority	67	93	65	39	86	50
Social Development	55	72	74	41	71	38
Self-Esteem Development	88	93	97	57	86	50
Religious Values	5	97	48	2	100	50
N (= 100%)	60	67	31	49	7	16

Table 7

Multiple Regression Analysis of Factors Affecting a School Emphasis on Vocational Prepareation : Secondary Schools Only

Independent Variables	Slopes	Standard Errors	T
Enrollment	-.0001	.0001	-1.4
Catholic	-.14	.25	-.6
Other Private	-.15	.23	-.6
Percent Minority Students	.005	.003	1.6
Number of Funded Public Programs	.06	.025	2.2*
Constant	.27	.24	
R^2	.26		
N	64		

*p<.05

Table 8

Mean % of Decisionmaking Influence Accounted for by External Agents,[a] by Educational Sphere and Grade Level[b]

	Educational Sphere and Grade Level						
	Public Elementary	Catholic Elementary	Private Elementary	Public Middle	Public Secondary	Catholic Secondary	Private Secondary
Mean % of Decisionmaking Influence Exercised by External Agents	52.5	46.5	37.8	45.6	48.5	41.7	29.3
(N)	(60)	(66)	(31)	(18)	(49)	(6)	(16)

[a]Excluding Catholic and private middle schools (n=2) and private comprehensive schools (n=9). See Gilliland and Radle (1983:28-31) for a discussion of the manner in which educational sphere and grade level categories were assigned.

[b]Respondents were asked to asess the degree of influence (on a 5-point scale) exercised by each of six positions or groups over five decisionmaking domains (see text for description of positions and domains). For public schools, external agents are defined as the state department of education, the school district or school board, the school advisory council(s) or committee (s), and the P.T.A.; for Catholic and private schools, external agents include the administrative system office, the local governance board, the pastor or rabbi, and the parent group. The mean % of influence exercised by external agents was calculated by dividing the sum of the invluence scors of these positions over the five domains by the sum of the influence scores for all groups over the five domains.

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