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ABSTRACT

This study developed an index of communal school organization and used this measure to focus on specific features of high schools as social organizations. The philosphical and social perspectives of the school as a community are explored, focusing on the school as a social organization consisting of cooperative adults who share a common purpose and where daily life for both adults and students is informed by shared values and a common agenda of activities. The positive relationship between parents and school staff provides important support for school aims. The "High School and Beyond" data base and results from the Administrator and Teacher Survey (ATS), provided the core data for this analysis of the school as a community as reflected by teacher behavior and expectations for student achievement and behavior, and the possible consequences of a communal school organization on students. A discussion of the results is augmented by tables displaying the data used in the study. (JD)

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THE HIGH SCHOOL AS COMMUNITY: CONTEXTUAL INFLUENCES, AND CONSEQUENCES FOR STUDENTS AND TEACHERS

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The University of Chicago

November, 1988

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Although this is only a first study, the statistical evidence amassed so far strongly supports the conclusion that a communal school organization can have far-reaching consequences. In our view, the idea of a communal school organization has considerable practical appeal.

It provides a framework for connecting the social interactions of teachers and students to institutional aims within a context where formal work is accomplished and human meaning is shaped in profound ways. In contrast, other views of school organization -- as garbage cans, as political coalitions competing for power and influence, or as disembodied multi-level decision-making processes -- can offer useful lenses for analyzing aspects of school life, but have uncertain practical utility. In the past at least, they have more often provided explanations for failure rather than projected strong images of a better way.

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I. THE SCHOOL AS COMMUNITY: BACKGROUND

That good schools are places where there is a "sense of community" is a recurrent theme in recent research on effective schools. Rutter, Maughan, Mortimore, & Ouston (1979), for example, describe an ethos which pervades effective schools. This ethos is characterized by a sense of common purpose and a set of shared values among the adults in the institution. More recently, Hallinger and Murphy (1986) include a sense of community as one of 14 elements in their conceptual framework for effective schools.

In ethnographic studies of classrooms and schools, such as Metz (1986) and Peshkin (1986), the school's social organization plays an integral role. The patterns of social relations in the school influence virtually every aspect of the institution. Metz (1986) in particular describes how aspects of teachers' beliefs and values can affect their work in classrooms. She suggests that a cohesive faculty culture can have positive effects on the quality of life in a school for both teachers and students.

Other research on secondary schools, including Lightfoot (1984) and Sizer (1984), report a sense of community in successful high schools. More recently, Grant (1985) has described how a commonly understood set of values and practices that embody those values are characteristics of "schools that imprint." In these schools, both students and teachers share rights and obligations implied by their participation in a common enterprise.

A major theme in this recent school research is that good schools are not defined solely in terms of material resources, programs and facilities. The quality of students' social relations with teachers and teachers' relations with other staff all contribute to an enhanced school environment. When the school feels like a community, it is a better place for those who work and study there. Such environments promote adult commitment to the organization and provide intrinsic rewards for those who participate. Important social and academic benefits accrue to students as well.

The recent accounts of good schools with a "sense of community" stand in sharp contrast to some other pictures of contemporary schools which have also appeared. For example, Powell, Farrar, and Cohen (1985) offer a detailed view of the modern high school, designed to please its consumers, where students' individual choices largely determine their course of study and shape their high school experiences. Such schools segment and render incoherent the academic and social lives of many students. There are negative implications for teachers too. McLaughlin, Pfeifer, Swanson-Owens, & Yee (1986) present a dismal view of contemporary schools as organizations that by design and practice frustrate teachers and impede their achievement of the intrinsic rewards that initially drew them into the profession. Grant (1988) amplifies this theme in noting how an over-reliance on legal and bureaucratic norms in the school organization has diminished teachers' commitment and sense of efficacy.

In sum, schools with a "sense of community" appear as an important organizational alternative to the overly bureaucratic public institutions that are increasingly common in American life (Wise, 1979; Bellah, Tipton, Swidler, & Sullivan, 1985). Yet the idea of a communally organized school remains vague, with few specifically identified elements that

can be generalized across schools. The basic organizational features and how they interact to form a "sense of community" remain to be articulated.

II. STUDY PURPOSE

In this study we develop an index of communal school organization and use this measure to undertake a broad empirical investigation of how structural and compositional features of schools relate to a communal organization and the consequence of this organizational form on students and teachers.

Our efforts begin with a theoretical rationale for an overall definition of the construct and the items that are selected to indicate it. Next, we consider the internal statistical properties of the measure. We are concerned principally about whether the items which form the overall index cohere and whether the summary measure has adequate reliability.

The major foci of the study involve an empirical assessment of the validity of the measure and the substantive importance of the underlying construct. While these two aims are conceptually distinct, from an empirical point of view they are significantly intertwined. If our measure provides valid information about social reality, then theoretically and logically based claims about a communal school organization should be sustained by empirical relations involving the new measure. Later in the paper, we propose an interrelated set of hypotheses involving the communal organization construct. In articulating these relations, we rely heavily on both general sociological theory and recent qualitative accounts of school life. The hypotheses are of three types: contextual factors that should facilitate the formation and sustenance of a communal school organization; other features of schools that are closely related to communal organization but whose effects are analytically distinct from it, and the expected consequences for teachers and students which should be more prevalent in schools with this organizational form. Assessments of both the substantive importance of the underlying construct and the construct validity of the measure are based on the statistical evidence relevant to these hypotheses.

III. COMMUNITY: A DEFINITION ROOTED IN THE LITERATURE

The idea of a school as a community -- as a social organization consisting of cooperative relations among adults who share a common purpose and where daily life for both adults and students is organized in ways which foster commitment among its members -- has strong theoretical roots. Philosophers, sociologists and anthropologists have long studied the ways in which people organize the places where they live and work. There has been little recent effort, however, to examine the implications of these understandings for schools. In a longer paper on which this article is based (Bryk & Driscoll, in press), we review these writings as they bear on the notion of a school as a community. In order to motivate the definition of a communal school organization developed in this research, we highlight below selected points from that review.

III.A. The School as Community: A Philosophical Perspective

Bernstein (1987) provides a broad discussion of the renewed conversations among contemporary philosophers, such as Arendt, Gadamer, Sandel and Rorty, about matters of community. This concern about community is perhaps most evident in MacIntyre (1981). For MacIntyre membership in communities is the means through which we build a narrative or personal history that provides meaning in our lives. Perhaps the most widely read account of this perspective can be found in Habits of the Heart. Bellah et al. (1985) use membership in life-style enclaves and local communities as a framework for probing the tension between individualism and commitment in American life.

In addition to enhancing our understanding of the functions of community, this renewed philosophical interest in community also directs attention to practical concerns about how such communities are formed, nurtured and maintained. In this regard, we are drawn to the work of John Dewey who is particularly germane because of his specific interest in school communities.

Dewey sought to integrate the individual's view of experience with that set of everyday social and intellectual relations by which individuals are formed. He was preoccupied with the relation of the individual to society. Individuals must somehow learn through experience that knowledge necessary for them to be productive members of a democracy (Dewey, 1900). The school, as a primary force in young people's lives, became a critical forum where these developmental tasks should be undertaken. In practical terms, this meant that educators had "to order the small society of the school to present students with opportunities to become effective members of adult society. The objective was to form students' capacity for independent, critical social practice" (Bidwell & Friedkin, 1988, p. 4).

Dewey recognized that the social organization of the school was central to its mission and purpose. His writings focus our attention on concerns such as the content of adult values, how these are closely connected to organizational structure, and how the institution's traditions and social processes shape the round of daily life. These understandings are in sharp contrast to the more typical view of the modern school as a collection of material and human resources to be efficiently distributed.

III.B. The School As Community: A Sociological Perspective

Fundamental studies of communities by sociologists provide another perspective for examining the school as a community. The dichotomy between Gemeinschaft and Gesellschaft, developed by Tonnies and elaborated by Weber (see, for example, Weber, 1947), is found throughout the sociological literature and is helpful in understanding the basic concept of community and the tensions inherent in it. Communal relationships (of the community, or Gemeinschaft) are based on subjective understandings -- sentiments and traditions which bind people together. People engage in communal relationships because of feelings that they belong together. Associative relationships (of society, or Gesellschaft), in contrast, are based on rational assessments of common interests or purposes. People

engage in these relationships because it suits their individual interests and makes rationally-based activity possible.

The concept of school as a community actually involves both elements of the dichotomy. Schools are places characterized by many associative relationships--links formed from the common bond of shared work and the understanding that joining forces is necessary if that work is to be accomplished. The administration schedules teachers' classes, for example. Faculty share and coordinate curricular materials. Students, desiring a particular kind of educational or vocational training, seek out the individuals who are best able to provide them with that preparation and interact with them accordingly -- from taking their classes to asking them for a recommendation.

But a concept of a school as a community also implies that traditions, sentiments and values bind the organization together in a web of personal relationships. The school's society is structured to encourage and accommodate such connections. Individuals are involved with one another not merely because they are engaged in the same task, but because they are socially connected as well. Traditions, such as a graduation ceremony, link a current class of students to those who have proceeded them, and model behavior for those who will follow. Teachers and students attend a pep rally or participate in some school improvement project because they feel part of the school organization and its spirit. Administrators and teachers share understandings of what constitutes appropriate behavior for students as well as common beliefs about what students can achieve and what kind of people the school should help them to become. Faculty form social and extracurricular ties that go beyond program planning. In addition to choosing teachers for specific coursework, students may seek out these adults because they value their friendship and rely on their advice in both academic and personal matters.

When developing a definition of communal school organization, then, we must attend both to personal relations which affectively tie individuals to one another, and to the ways in which work is structured so that a network of associative relationships undergirds the community. Practically speaking, we must consider how cooperative work takes place, especially among the faculty. But we must also remember that shared meanings and understandings are needed to transform rational cooperation into community.

Thus, the distinctions between Gemeinschaft and Gesellschaft are largely bridged in the concept of a school as a community. A communal school organization recognizes and values the important functions of its symbolic and personal dimensions, and combines the latter with carefully structured activities and work relations. Taken together, these features permit the school to be effectively formed and sustained.

Further, the idea of the school as community implies careful consideration of the ways we think about both adults and students as school members. Within the school community, adults are linked to one another by a common mission and by a network of supportive personal relations that strengthen their commitment to the organization. The adults share ownership in a common vision of what the school is about and what kind of people the students should become. Teachers personally engage their students. Through such social interactions the gap between generations and cultures can be bridged, and as

a result students can be drawn into a shared organizational life. Thus, for students as well as adults, the communal school offers strong affective ties. To attend such a school is a source of meaning -- a chance to be a part of something of value.

III.C. The Core Concepts of the School as Community

We argue below that three core components comprise the construct of a communal school organization. In elaborating each, we give special attention to the ways in which these core elements might be indicated in a given school. Specific measures of these three components, using data from High School and Beyond, are described in a later section.

First, schools organized as communities will exhibit a system of values which are shared and commonly understood among the members of the organization. Such common understandings are particularly critical among teachers and the administrative staff, most notably the principal. Key among this set of values are beliefs about the purpose of the institution, about what students should learn, about how teachers and students should behave, and about the kind of people students are and what kind they have the capacity to become. Underpinning these educational beliefs are in turn more fundamental beliefs about the nature of the individual and society. Quite simply, for a school to be a community, its members, and especially its adult members, must share a commitment to community. Public expressions of concern and action toward a common good are necessary to counterbalance the individualistic pursuits present in all schools, but personified in the extreme by the market economy of the "shopping mall high school" (Powell et al. 1985).

Second, communal school organizations are also characterized by a common agenda of activities which marks membership in the organization. These shared activities may range from required academic courses to school-wide events such as assemblies or football games. The common agenda serves both a pragmatic and a symbolic purpose. It fosters relationships among school members by providing opportunities for interaction, and it can also link the students, faculty and administrators to a school's traditions and the meaning available to all who may embrace these traditions.

Third, communal school organizations have a distinctive pattern of social relations that embody what Noddings (1988) has called an "ethic of caring." In part, this ethic is reflected in the esteem which teachers hold for one another -- the personal respect accorded to colleagues who share an important mission. Another central feature of this relational ethic among teachers is a personal interest in students that reaches beyond the narrow confines of classroom performance. At its most basic level, an ethic of caring is an object of instruction -- a habit of the heart -- which schools strive to foster among its students. In pursuing these distinctive social relations, two formal organizational features play a central role: collegial relations among the adults in the institution, and a diffuse or extended teacher role.

In addition, we posit that each of these three core components is essential to the construct of a communal school organization. No one of these components alone nor a subset will adequately characterize a school as a community. Rather, the literature suggests that when these features occur simultaneously their influence reinforces one another and

they combine to create a coherent organizational life that has powerful effects on both teachers and students alike. Numerous shared activities promote frequent face-to-face interactions among students and adults. When an ethic of caring is conveyed through these interactions, the social bonding of teachers and children to one another is nurtured. Active rituals in turn locate the current social group within a larger heritage, a living tradition, which can be a source of profound human meaning. Lastly, the underlying values of the institution, shared by its members, provides the animating force for the entire enterprise.

III.C1. A Shared Value System

Schools organized as communities have a system of shared values among the members of the organization. These shared values include what Bird and Little (1986) term the "norms of schooling": norms for instruction, which affect the way teachers' work is conducted and student learning takes place; and norms for civility, which affect the relations among individuals in the institution.

With respect to norms for instruction, in a communal school organization there is a clear set of goals about the purposes of the institution. Such shared values can arise when the expressed purpose of the school reflects a common destiny for a school's students. When students can anticipate a specific occupational or academic future, for example, they may think of themselves as members of a group which has a "charter" (see Meyer, 1970). On a daily basis, adults transmit appropriate values through their words and actions, and most students come to adopt these values. Dornbusch's (1955) study of the Coast Guard Academy, as well as studies of British public schools (Weinberg, 1967; Wilkinson, 1964) and American elite private schools (Cookson & Persell, 1985) provide examples.

Shared values can also arise out of the social interactions that form a faculty culture. These interactions result in a common language about work (Little, 1982), or what Lortie (1975) has called a "shared technical culture." More recently, Metz (1983, 1986) has focused on the beliefs shared among teachers about students' capabilities, the role of the teacher, and the purpose of the institution as a whole. In her ethnographic study of several desegregated urban junior high schools, she found that positive interracial relations were associated with optimistic teacher views about students and their work. Metz documents (1983, p. 241) "distinctive socially formed behavior" among the teachers that was rarely articulated but rather simply regarded as "a reflection of common sense." Although the cultural and academic background of students clearly plays an important role in shaping school norms, teachers can independently affect the belief system of the entire school. Metz's research suggests that a positive faculty culture can have beneficial effects on the quality of life for everyone.

Norms for instruction in communally organized schools are expressed through behaviors that support the institution's academic and social goals. Such behaviors range from the way discipline problems are handled to teachers' efforts toward "good" teaching. As Grant (1988) remarks, it is not just the existence of standards but rather the fact that they are commonly embraced that marks a communal organization. For example, when teachers share responsibility for maintaining school-wide discipline, students learn to expect similar standards from the entire staff.

In terms of norms for civility, concerns about the feelings and welfare of others are routinely expressed as part of the round of daily life. When this caring ethic is commonplace, a social cohesion among staff and students results that can enhance the schools' academic mission and norms for instruction (see Murphy, Weil, Hallinger, & Mitman, 1985). One reason this occurs is that even when teacher interactions with students are socially motivated, these contacts provide opportunities for academic teaching as well as expressions of concern for students' personal well-being (Griffin, 1985). Thus, informal teacher-student contact can simultaneously promote academic effectiveness (Cszikzentmihalyi & McCormack, 1986) and add to the psychic rewards teachers enjoy (Devaney, 1987; McLaughlin et al. 1986).

III.C2. A Common Agenda of Activities

A communal school organization is also marked by activities that link students and teachers to each other and to the traditions and values of the institution. These shared activities range from students' pursuit of similar academic course work, to informal opportunities for personal interaction among students and teachers, to more formal occasions where faculty and students participate in school activities such as plays, athletic events, or honors ceremonies.

Common activities have a practical consequence. They enable school participants to get to know one another through face-to-face interaction, and they facilitate social ties by providing a common ground. Such experiences encourage participants to form communal relationships. These activities also provide occasions that socialize participants to the institutional norms previously described.

In a "chartered" school where students are focused toward a common destiny, a good deal of shared time is spent in activities aimed at this goal. To be sure, however, not all groups sharing a common preparation for a common destiny develop communal relationships. For example, in a study of medical education, Becker, Geer, & Hughes (1961) found that although students shared many common activities, an institutional emphasis on individual competition discouraged cooperation The clear message from this case study is that if the adult school members do not see personal ties and cooperative behavior as central to organizational life and embrace "the ethic of caring," communal relationships will not occur even if there are many shared activities. The Becker et al. (1961) study provides a concrete example of the connections required among the organizational features which we have identified as central to the foundation of a communal school. The benefits attendant to this organizational form may not occur if some features are absent.

School rituals also provide occasions for shared activity and they can play an important role in sustaining school communities. Through rituals, students and teachers are initiated into the organization and are bound symbolically to the school and its traditions. In this way, rituals contribute to the overall coherence of organizational life. The activities manifest the shared values of the community, bring members of the school together, and are logically connected to expressed institutional norms. As discussed below, these rituals

may center on athletic, religious, or other communal activities, and may even involve the school's academic programs.

The symbolic value of common activity has been underscored by many social theorists, including Emile Durkheim (1956, 1961). More recently, Meyer and Rowan (1977) have remarked that the "ritualistic significance" of activities "maintains appearance and validates an organization." They note that no matter how symbolic the event, the effects are real: "The confidence and good faith generated by ceremonial action is in no way fraudulent. It may even be the most reasonable way to get participants to make their best efforts in situations that are made problematic by institutionalized myths that are at odds with immediate technical demands" (1977, p. 549).

Rituals that unite students and teachers can take many forms. Wilkinson's (1964) work on British public schools, for instance, documents the unifying function of chapel ceremonies in these institutions. Such ceremonies are both communal expressions and symbolic events. Weinberg (1967) also notes that these ceremonies communicate a school's message to students and faculty alike. School athletics can be another unifying force (see for example Coleman, 1961).

While some shared activities physically assemble participants in a single place at a given time, a round of activities in which all students participate at some time can also exercise a unifying effect. Take, for example, the experience shared by different cohorts of students who attend the classes of a particularly memorable teacher. In some cases, the personality of the individual teacher may take on mythic proportions, and participation in special classroom activities organized by such individuals can become a major event in students' academic lives (Jackson, 1986).

In a school where students have little choice in their educational program and where electives are somewhat restricted, the academic life of the institution can become a special kind of ritual. One individual's course of study does not differ substantially from the "average" academic experience. And if this curriculum remains substantially unchanged from year to year, students will share academic experiences with students from previous years. Thus, the communal nature of the academic experience not only enhances academic equity within the school and provides opportunities for students to get to know one another, it also has symbolic value in that it links each new student to the school's "community of memory" (Bellah et al. 1985, p. 153).

In sum, shared academic and extracurricular experiences perform several functions for a school organization. They make possible a range of interactions which enable the members to know one another, and convey to participants a set of common understandings about individual purposes and institutional goals. These shared experiences also build and nurture a "community of memory" within the school, where students' efforts are placed within a larger context. It binds them to the past while at the same time turning them toward the future.

III.C3. Formal Organizational Characteristics

The distinctive social relations within a communal school are most visibly manifest through two specific formal organizational features: collegial relations among the adults in the institution, and a 'diffuse' teacher's role.

Collegial interaction has implications for both the quality of social relations among the adults within a school and the effectiveness of the technical core of academic work. In academic terms, it means that teachers seek out other teachers for help with individual problems. They may plan activities together, and see the school as having a cooperative work ethic. Teachers in such places engage in what Murphy et al. (1985) have called "collaborative organizational processes."

In social terms, collegial interactions mean that teachers have opportunities for relationships of personal value. Teachers may choose to spend time with colleagues in non-academic activities. They are more likely to perceive the schools as having a friendly atmosphere and derive satisfaction from working there. In such a context where personal relations are strong, the technical work of teachers can be enhanced.

Academic purposes are thus intertwined with social aims. Rosenholtz (1985, p. 80) remarks that collegial norms found in the faculties of effective schools "represent a form of group problem solving, social support, and ongoing professional development." Socialization of new teachers blends with the skill acquisition of all teachers in an informal, friendly and work-related atmosphere. Even when formal control structures and hierarchies are present in effective schools, these coexist with more informal social networks that provide assistance and personal support. Little (1982) notes that teachers develop a common language with which to discuss curricular and other work-related problems. Such collegiality can also reduce the teacher's sense of isolation and vulnerability (Rosenholtz, 1985, 1987; Little, 1982) and provide an arena for peer recognition and encouragement (Bird & Little, 1986).

A diffuse teacher's role is another distinctive characteristic of the formal organization of communal schools. This concept, owing to Parsons (1958), identifies teachers as having broad responsibilities which extend beyond specific classroom duties. Such a vision of the teacher's role has also been called "extended" (see Newmann, 1981) in that it includes non-academic as well as academic responsibilities. This adult role recognizes that explicit and implicit objectives of the school are not restricted to the scholastic, but include goals for social and personal development too. The role offers teachers the opportunity to "send a variety of moral communications to their students" (Bidwell, 1973), and, as noted earlier, teachers' personal influence can be far-reaching.

A diffuse role can also facilitate what Schwartz, Merten, & Bursik (1987) have called a "personal style" of teaching. Teachers can use the knowledge they acquire through informal student interactions when they address academic tasks. It can help them link current subject matter to experiences meaningful in students' lives. Further, the personal relationships that teachers establish outside of class can provide the human connections needed to catalyze students' engagement within class.

An extended teacher role is also a common element in recent accounts of schools where a "sense of community" has been observed. In elite boarding schools in the United States (see, for example, Lightfoot, 1984; Jackson, 1981; Cookson & Persell, 1985), teachers are expected as part of their contractual obligations to supervise extra-curricular activities. This extensive involvement by teachers in extracurricular activities was also observed by Bryk et al. (1984) in effective Catholic schools where a strong sense of community was present. The financial advantages of such arrangements for a school are obvious, rendering it a pragmatic school policy. Such arrangements also afford, however, numerous opportunities for informal student and teacher interactions. These teaching moments provide occasions to display human concern and to influence students' lives. These face-to-face personal contacts with students can also benefit teachers in that they are a common source of the intrinsic rewards that teachers cite as so important in their work (Feiman-Nemser & Floden, 1986)

We would expect, then, that in communally organized schools teachers spend time in non-classroom activities that enhance the social life of the school. Teachers come to know many students, including those they have not had in class. Students in turn perceive teachers as having an interest in their lives as well as in their academic achievements.

IV. STRUCTURAL AND COMPOSITIONAL FEATURES HYPOTHESIZED TO PROMOTE A COMMUNAL SCHOOL ORGANIZATION

We hypothesize that certain structural and compositional characteristics of schools facilitate the formation of a communal organization and help to sustain it. These include the school's size, its sector, and the diversity of its student body. The rationale for each of these hypotheses is described below.

IV.A. Small School Size

The social theory of Weber (1947) provides good reason to assume that a sense of community -- however defined -- diminishes as size increases. Weber (1947) was concerned about the consequences of organizational growth. In particular, he forecast the rise of bureaucratic structures resulting from such development. Bureaucracies, however, by definition are predicated on objective relations where there is little place for the personal ties that characterize a community. The bureaucratization process which accompanies organizational size is in many ways the antithesis of the communal organization.

Educational theorists have specifically recognized the negative consequences of large school size and the attendant bureaucratization of school. (See, for example, the critique by Wise, 1979 of the "hyper-rationalization" of schooling and also Newmann, 1981.) In a related way, Cohen (1988) argues that the technical work of teaching and the individual nature of the human interactions that sustain this work require personal judgment and discretion, both of which are ill-suited to a rigid bureaucratic environment. Thus, we hypothesize that a relatively small school size is an important facilitating factor for a communal school organization.

Indeed, the initial arguments for larger and more comprehensive high schools (cf. Conant, 1959) were advanced in terms of academic efficiency and cost considerations, but not in terms of their positive social consequences. Ironically, Goodlad (1984), Sizer (1984) and Powell et al. (1985), among others, suggest that large comprehensive high schools may neither affect academic excellence for all nor meaningful social connections among students and adults.

IV.B. Sector: Public, Catholic or Private

Recent research suggests that a sense of community characterizes effective high schools in the Catholic sector (Bryk, Holland, Lee, & Carriedo, 1984). A higher incidence of communal organization is expected in the Catholic sector for several reasons. First, the avowed religious purpose of these schools shapes adult views about student capabilities, the kind of people they should become, and the ways in which teachers and the school organization should foster these goals. Further, the content of these religious beliefs places considerable value on social responsibility and an ethic of caring (see Lesko, 1988) which we have previously identified as important features of a communal school organization. Second, Bryk et al. (1984) and Lee and Bryk (1988) document that the academic organization of Catholic high schools is more tightly constrained than in the public sector. Required academic courses dominate the curriculum, and electives play a lesser role. As a result, students' academic experiences within a given grade level and from year to year are likely to have a great deal in common. Third, Bryk et al. (1984) also describe an extended teacher role as a strong characteristic of these schools. Thus, Catholic high schools appear to have organizational features which span the three dimensions necessary for a communal school. There are strong institutional commitments to social cooperation and human caring. Academic life is structured in ways that promote many shared experiences, and the formal organization of teachers' work acts in concert with the other features described above to produce strong communal ties.

We also hypothesize that communal school organizations will be more prevalent among other private schools. Many of these institutions are characterized by a set of shared values tied to a common destiny for their students. The latter is particularly true for the elite private schools that are included here (Cookson & Persell, 1985). Also represented within this category are other non-Catholic religious schools where many aspects of communal organization may be present (see for example Peshkin, 1986).

In contrast, existing research on the public sector is less sanguine. Cusick (1983), Powell et al. (1985) and Grant (1988) suggest that public schools typically are not communally organized. These schools tend to be large, public bureaucracies where rules and legal considerations become ends unto themselves, rather than precepts which guide personal understandings among members of the organization.

IV.C. SES and Ethnic Mix

As noted above, a major feature of a communal school organization is shared beliefs and values among the members. Homogeneity in a school's membership may also be an

important facilitating characteristic. It would seem easier to sustain a communal organizational life when the institution attracts like-minded individuals. This observation raises questions about the role of diversity in the student body and the limitations that diversity may place on school life. How much differentiation among students and faculty is possible within a "community" framework? Can a school create a unified organization even though a diverse array of cultures and groups are represented among its students? Some limitations must exist.

This argument leads us to hypothesize that heterogeneity among students with respect to "background characteristics" such as social class and ethnic/racial heritage is inversely related to community. This hypothesis, if true, would imply a troublesome negative cost of community -- a limited tolerance for the unfamiliar or the diverse. Peshkin's (1986) work on fundamentalist school communities certainly points in that direction. These religious institutions are indeed tightly-knit communities, where outsiders are mistrusted and even feared. But there is other evidence (Bryk et al., 1984) that demographically diverse Catholic schools with large numbers of non-Catholic students also seem to exhibit a strong sense of community. This suggests that we may need to attend more carefully to the breadth and specific content of the values which ground the institution. It may be that unity is needed on only a small band of beliefs and that much diversity may be accommodated around the core.

V. OTHER SCHOOL FEATURES CLOSELY RELATED TO COMMUNAL SCHOOL ORGANIZATION

We also consider two other features of schools -- the degree of control by a school over the selection of its students, and the nature of parent-school relations -- that are closely related to the idea of a communal organization. Both of these features shape the social boundaries of a school, and may constitute important conditions for the sustenance of a communal school life. We hypothesize that both features are related to the teacher and student outcomes of interest in this study, but that their effects will be largely indirect through the communal organization measure.

V.A. Student Selectivity

A major theme in the sociological literature on communities is that they have boundaries and mores governing membership. (See Scott, 1970 or Gusfield, 1975 for review). Communities are created and maintained by controlling those admitted for membership and expelling those who do not meet their obligations to the group.

Theorists, focusing on the politics of schools (for example, Chubb & Moe, 1988), have suggested that selective schools operate differently than do non-selective schools. The processes enabled through a school's selection of students and through the choice exercised by parents and students in seeking admission fundamentally alter subsequent organizational life. At a social psychological level, selectivity means that some students have been chosen, set apart from those who were not admitted. By virtue of this fact, those chosen are now special, and this perception of specialness may have its own effects. At a more instrumental

level, having a student body comprised primarily of students who want to be there and whose parents want them there can affect students' commitment to the school and engagement with academic work. Such students are likely to be easier to teach, and as a result, teachers' sense of efficacy and satisfaction should be greater since positive effects are more readily manifested.

V.B. Supportive Parent-School Relations

Coleman and Hoffer (1987) argue that schools where parents and staff have close relationships acquire a form of "social capital." The positive relationship between parents and school staff provides important support for school aims. This social capital expands the human resources of the school by increasing the information and support available to students. This in turn encourages student engagement in school life and higher levels of academic achievement.

Such a position is also logically consistent with work by Cohen (1988) and Lortie (1975). Both observe that teaching is a profession with a weak technological base. Given the uncertain nature of client-centered professions such as teaching, supportive social networks are necessary to sustain practitioners' efforts. When social support is lacking, teachers may feel threatened or challenged in ways that impede their work. Thus, a climate of parental trust and support may also be important in promoting a communal school organization.

VI. THE CONSEQUENCES OF COMMUNALLY ORGANIZED SCHOOLS

The last and most important aspect of our investigation of a communal school organization is the consequence of this organizational form on teachers' work, and students' attitudes, behaviors and academic outcomes. First, we hypothesize that a communal school organization substantially enhances the likelihood that teachers will attain the intrinsic rewards which Lortie (1975) has argued are so essential to the profession. We expect the strongest effects of communal organization to occur in this domain. We view teacher satisfaction, their sense of efficacy, enjoyment of work, and staff morale as direct and immediate consequences of this organizational form.

Second, we posit that the presence of strong teacher engagement is infectious. It can draw faculty together and this in turn can draw students into a mainstream of school life. The actual process by which this occurs is multi-layered. The personal interest of teachers in individual students fosters a social bonding of these students to the school place and to the core activities which manifest the school's goals. Further, when this social activity is widespread, a normative school environment is created where caring, a sense of hope, purpose, and meaning come to characterize the personal experiences of both adults and students.

These arguments suggest that in a communally organized school powerful social consequences for students should also result. Negative student behavior, including class cutting and unexcused absenteeism, should be less prevalent. Further, since students feel

like they belong to something of value, alienation should be reduced and the incidence of dropping out ameliorated.

In general, we see the principal effects of a communal school organization on both teachers and students as located in the personal and social domains. The communal school organizational construct, as we have defined it, is primarily a social structure that conditions the nature of human interactions and the meanings conveyed through those interactions. While it favors certain formal organizational features which are closely linked to the technical core of instruction, such as collegial relations among faculty, it is not principally focused on classroom instruction. Nevertheless, a communal school organization is likely to influence instructional efforts in important ways.

Specifically, we hold that the social engagement of adults with each other and with students is critical to a school's academic mission. Meaningful human engagement in a communal school provides reasons for teachers to work hard in their uncertain profession (Cohen, 1988), and for students to expend effort on the acquisition of knowledge which may have little immediate value (Cszikzentmihalyi & Larson, 1984; McDill, Natriello, & Pallas, 1986; Wehlage & Rutter, 1986). Because of the increased effort on the part of both students and teachers which is promoted by a communal school, we hypothesize that positive academic outcomes for students should also accrue. Figure 1 displays the full set of relations tested in this study. A further rationale for the hypothesized outcomes of communal school organization on teachers and students is offered below.

VI.A. Consequences for Teachers

Previous research suggests that several features of school organization have positive consequences for teachers' work and facilitate their engagement (Rutter, 1987). Little (1982) and Bird and Little (1986) argue that collaborative organizational processes contribute to teachers' satisfaction and efficacy by reducing their sense of isolation, providing social support and curricular resources, and by increasing the likelihood of teachers helping each other with work related problems. In a related vein, Feiman-Nemser and Floden (1986) found that the personal attachment of teachers to their students is another major source of intrinsic rewards. Rosenholtz (1985), Murphy et al. (1985) and McLaughlin et al. (1986) view these aspects of school life as essential to successful schools. In such places, the administration and overall organization of the school encourages teacher effort and invites their commitment to shared school goals.

We infer from this literature on school organization that in a communally organized school teachers should be able to achieve psychic rewards because they are engaged in significant face-to-face interactions with students, because other teachers and administrators share their vision of the enterprise, and because their work is structured to foster cooperative activity with other faculty toward these shared aims. This leads us to hypothesize that staff in a communally organized school will express positive attitudes about their work and exhibit this positive outlook in their work behaviors. Negative behaviors indicative of teacher alienation, such as absenteeism (McLaughlin et al., 1986), should be low.

VI.B. Consequences for Students

Teachers' commitment and enjoyment of their work is central to building students' engagement with schooling and self-confidence in their own abilities (Cszikzentmihalyi & McCormack, 1986). Teachers can transmit to students their belief that academic work is interesting and important. The latter is significant because research indicates that adolescents concentrate and achieve at high levels when they are motivated (cf. Cszikzentmihalyi & Larson, 1984). In addition, students' engagement with school life and attention toward learning can be positively affected when students have strong social ties to teachers, other students, and a school's traditions (Newmann, 1981). Thus, a cohesive student culture involving strong relations with faculty strengthens the school's academic mission (Murphy et al., 1985; Hallinger & Murphy, 1986).

Moreover, important developmental needs may also be addressed by a communal school organization. Adolescents' need for affiliation requires a social organization which encourages a sense of belonging (Newmann, 1981; Lightfoot, 1984). A school characterized by an "ethic of caring" can be both responsive to students' personal needs and through this basic human engagement also foster increased student commitment to academic work.

In contrast, Wehlage and Rutter (1986) focus on how common features of contemporary high schools contribute to students dropping out. In a similar vein, Newmann (1981) offers a compelling critique of how schools promote student alienation. From their perspectives, the alarming high school dropout rates, particularly in large cities, are not surprising given the large bureaucratic structures, the impersonalism and specialization which dominate school life. This critique is extended in Bidwell and Friedkin (1988), who argue that students are unlikely to stay in environments that they do not find rewarding. Further, undemanding activities do not necessarily persuade students that schooling is of value. Rather, as McDill et al. (1986) suggest, it may be that a lack of challenge causes students to feel alienated and to disengage from school.

The findings in this research on student engagement and its complement, student alienation, lead us to hypothesize that in a communal school organization, where participation and engagement is sought from all students, the incidence of student misbehavior including dropping out should be lower. Further, as a result of these enhanced social connections, we also hypothesize positive effects on student interests in school and academic achievement.

VII. METHODOLOGY

VII.A. The Data Base

This investigation uses the High School and Beyond data base. (For a complete description of HS&B, see Peng, Feiters, & Kolstad, 1981; Peng, 1983; Jones, 1983; Jones, Knight, & Ingels, 1985). The core data for our analyses are the teacher and principal questionnaires from the Administrator and Teacher Survey (ATS) collected in 1984 (Moles, 1988). The ATS consists of a sub-sample of 457 schools from the original HS&B sample

of 1015 schools. The ATS questionnaires provide information about the attitudes of the adults in the school, including their expectations for student achievement and behavior, as well as information on specific school policies, teachers' and administrators' views of school goals, and teachers' and principals' working conditions.

We also drew information from the principal questionnaires administered in 1980 and the follow-up in 1982, and used student data from the sophomore longitudinal cohort. Baseline information on these students was collected in 1980, and then follow-up data were gathered in their senior year, 1982. A small number of variables on social interactions among students, teachers and parents were also formed from information reported in the Teacher Comment File in 1980. These include data on how well teachers know students based on contacts inside and outside of class. The latter [illegible] indicators of face-to-face interactions among these groups.

The HS&B data have both the advantages and disadvantages of large, general purpose surveys. On the one hand, we were restricted to creating proxy measures based on existing questions. Some individual features of the communal organization constructs, such as the specific content of adult beliefs about the institution and its students, are not particularly well-measured in these data. Nevertheless, by combining the base year HS&B study, the first follow-up, and the ATS data, we were able to form multiple indicators for each of the three core components of the communal school organization construct.

The HS&B data also have some clear strengths. Both the core data and the new Administrator and Teacher Survey offer a large, nationally representative sample of schools, teachers and students. Whenever possible in forming measures, we exploited multiple sources of information in order to control possible respondent bias associated with organizational role. In addition, the relatively large sample size facilitates an examination of the effects of organizational characteristics that are harder to discern in smaller field studies.

VII.B. Definition of The Analytic Sample

The Administrator and Teacher Survey was designed to supplement the information available in the core High School and Beyond data collection. The survey was collected in 1984 approximately two years after the first follow-up on the sophomore cohort. Any substantial changes in schools during this period would inflate the error variance and might constitute a source of confounding. In order to minimize this potential problem with the ATS data, several analyses were undertaken to identify schools where extensive change seemed likely to have occurred. These schools were subsequently dropped from the sample.

We began with the original ATS sample of 457 schools. A two-step process was undertaken to arrive at the final analytic sample. At step one, we examined the amount of faculty turnover and teacher reports about changes in school climate over the past two year period. Since a high level of faculty turnover could produce substantial school change, we decided to drop from the sample any schools where over 33% of the faculty had been hired within the last three years. We also created a measure based on teacher reports about the amount of change in the educational and disciplinary climate of their school over

the last 2 years. Schools with extreme responses on this change measure were also deleted. The cutoff value for this deletion was a standardized score of +/- 2.57 indicating a probability of occurrence by chance alone of less than .01. As a result of these two criteria, 86 schools were dropped from the study.

At step two, we examined the consistency between school-level responses in 1982 and 1984. We used selected items from the first follow-up in 1982 to predict related responses on the 1984 ATS. Three specific prediction analyses were undertaken. First, principal responses in 1982 about the extent to which class cutting was a problem in the school (FS36B) were used to predict teacher responses in the ATS about the extent to which tardiness and class cutting interfered with teaching (T19P). Second, a school average of a student factor score, based on four questions from the 1982 follow-up about students talking back, refusing to obey teachers, getting into fights, or threatening to attack teachers (FY20C,D,E & F) was used to predict average teacher responses in 1984 on how much the level of student misbehavior (noise, horseplay, or fighting) and the use of drugs and alcohol interfered with teaching (T19G). Finally, principal reports from 1982 about the degree to which teacher absenteeism was a problem (FS36E) were used to predict teachers' self-reports of days absent in 1984 (T16). Schools with standardized residuals of +/- 2.57 or greater were defined as outliers in these prediction analyses, and were deleted from the analytic sample. Finally, while the average number of teacher responses in the ATS per school was about 22, a few schools had very small sample sizes. Since many of the school-level variables were created from these teacher data, schools in which less than 5 teachers responded were also deleted at this point. An additional 14 schools were dropped from the sample as a result of the prediction analyses and the small teacher sample sizes.

These data filters left us with a final sample of 357 schools. All of these schools have teacher data (from the ATS), and school and student information (from the baseline and first follow-up of HS&B). These data comprise the core for our analyses. Some 88% of these schools (315 out of 357) also have data from the principal questionnaire in the ATS; a smaller number have data from the baseline Teacher Comment form (221/357 or 62%).

VII.C. Creation of Indicators of Communal School Organization

In order to operationalize the construct of community, we created several indicators for each of the three core components of the communal school organization construct (cf. section III.B). Figure 2 displays the set of 23 indicators that were constructed from the HS&B data. These components were combined to create an overall index, COMINDEX (detailed below). A twenty-fourth indicator of principal/teacher agreement on school goals did not correlate as expected with the other components of COMINDEX and thus was dropped from further consideration.

Some indicators involve school means or proportions based on response of teachers and/or students in a school. Others are based on variance statistics computed at the school level, and one involves a measure of agreement (Kendall's coefficient of concordance). The choice of the appropriate statistic for each indicator depends both on the specific wording of the individual survey questions and how the information relates to the theoretical

construct as articulated above. Further rationale and details of the measures construction are provided in the Appendix to Bryk and Driscoll (in press).

In order to combine the indicators logically into a single composite measure, a number of statistical manipulations were required. First, each indicator was scaled such that a positive score was theoretically consistent with a communally organized school. In several cases this required reversing the natural metric. For example, all of the similarity measures used in COMINDEX were originally constructed as diversity measures. The latter are sample variances computed separately for each school based on individual responses from within the school. Since we hypothesize that low diversity is characteristic of communal organization, we transformed the final scores into similarity measures by multiplying by (-1). In this transformed metric, a high score reflects communal organization.

Second, because the community indicators involve different kinds of statistics (e.g., school variances, proportions and correlations), these measures were subject to normalizing and standardizing transformations in order to place them on a common metric. For school percentages and proportions, the normalizing transformation is the log odds ratio. Correlation measures were subject to a Fisher Z transformation, and the natural log was taken for school variance measures. Finally, each indicator was then standardized to a mean of zero and a variance of 1 to place the set on a common scale. Extreme standardized values, in excess of +/- 3.0, were trimmed respectively to +/-3.0 in order to assure that an outlier response on one measure did not exert undue influence on the overall index.

The final composite measure, COMINDEX, is the school average across the twenty-three separate indicators of communal organization. If data were missing on an indicator for a particular school, that indicator was ignored in the averaging which produced a COMINDEX score for that school.

VII.D. Sociometric Characteristics of COMINDEX

The theoretical work discussed above argues for combining the 23 indicators together into a single continuous measure of communal school organization. Table 1 provides basic statistical information on the internal coherence of the resultant COMINDEX measure. Each indicator correlates at least .22 with the composite measure, and over half are above .45. The combined index has a reliability of .81. These statistical results provide our first piece of empirical evidence about the validity of the communal organization measure. The hypothesized elements of the construct meet at least a minimum standard of coherence to warrant the joining together of these indicators into an overall organizational measure.

VIII. BREAKDOWN OF COMMUNAL ORGANIZATION BY SCHOOL SIZE, SECTOR, ETHNIC MIX AND SOCIAL DIVERSITY

Table 2 presents a breakdown of COMINDEX by school size, sector, school ethnic mix and SES diversity. The first set of columns provides the mean outcome for the various

categories. Since all variables have been standardized to a mean of 0 and a variance of 1, these means can be interpreted as standard effect sizes. F statistic and P-value for each breakdown are also provided. The last column in the table gives the Eta statistic which measures the proportion of variance in each indicator that is between groups.

For this set of analyses, each school in the sample is categorized in terms of level of school size, ethnic mix and SES diversity variables. A low ethnic mix or social class diversity score indicates an homogeneous student body relative to other schools in the sample. Those schools labeled as medium diversity correspond to the middle fifty percentile of the sample (i.e. the interquartile range). The high diversity schools are the top quartile.

As hypothesized, the incidence of communal organization is higher in Catholic and private schools than in the public sector. Communal school organization (COMINDEX) is also negatively associated with school size. A communal organization is somewhat less common in schools with ethnically diverse student populations. Although this result is statistically significant, the strength of the relationship is not nearly so striking as those observed in the breakdown by sector and size. Diversity in the socioeconomic status of the students is not, however, significantly related to the community index. This suggests that socioeconomic homogeneity is not an important factor in the formation and sustenance of a communal school. Schools with little social diversity are no more likely to have communal organization than schools with a highly stratified student body.

In general, these results support the validity of the community index measure. As hypothesized, both school size and sector are strongly related to the prevalence of a communal organization. The weak effects associated with ethnic and social diversity are unexpected and encouraging results. The latter indicates that it is possible to sustain a communally organized school even when the student population is demographically diverse.

IX. ANALYSES OF OUTCOMES ASSOCIATED WITH COMMUNAL SCHOOLS

As stated earlier, we hypothesize that a communal school organization has positive effects both on teachers' reactions to their work environment and on student attitudes, behaviors and academic outcomes. We expect strong effects on teachers to be manifest in their sense of satisfaction and efficacy, enjoyment of work, and staff morale. We also expect substantial effects on students' social engagement with the school. The latter should be seen in reduced rates of absenteeism, class cutting, classroom disorder, and dropping out. Finally, we anticipate some effects on academic outcomes as a result of the enhanced level of commitment and effort on the part of both teachers and students. The specific teacher and student outcomes considered here are listed in Table 3. (For details about the construction of these variables see Bryk and Driscoll (in press).

Table 4 reports simple correlations between the community index and the 10 outcome variables considered in this section. In addition, correlations for these outcomes with the student selectivity measure and principals' reports about the cooperativeness of parental relations are included. The associations for the community and selectivity measures with teacher and student outcomes follow the expected pattern. Teacher efficacy,

enjoyment of work, and morale are higher, and absenteeism is lower in communal schools and in selective schools. In these same schools, student misbehavior is less prevalent, dropout rates are lower, and interest in academics is higher. Mathematics achievement is also slightly higher. The correlations with parental cooperation follow the same general pattern, although the associations are not as strong. The latter may reflect weaknesses in the parental cooperation measure in that it consists of responses to only a single item on the principal questionnaire.

IX.A. Methodological Considerations and Analytic Approach

Analyses of school effects on teacher and student outcomes have historically posed serious methodological problems (for a review see Burstein, 1980). Such research requires the formulation and testing of hypotheses involving data from more than one organizational level. In the present case, we are concerned about the effects of school organizational characteristics, including size, composition, communal organization, selectivity and the nature of parent-school relations, on the teachers and students within these organizations. Traditional single-level regression analyses can produce seriously flawed inferences in such cases. Raudenbush and Bryk (1986) and Bryk and Raudenbush (1988) have demonstrated, however, that recent developments in the statistical theory and applications of Hierarchical Linear Models (HLM) now provide a satisfactory solution to the problems inherent in the analysis of multi-level data.

In general, ordinary regressions at either the teacher or student level would result in standard errors that are too small because these analyses fail to take into account the dependence among the outcomes for the teachers and students within a particular school. On the other hand, analyses at the school level can misestimate the regression coefficients because they fail to take into account variations within-school sample sizes. Both concerns are resolved through the use of HLM. Basically, the HLM estimation is equivalent to generalized least squares where the weight matrix takes into account both the varying number of observations in different schools and the intra-school correlation problem noted above.

Although the statistical estimation theory for HLM is somewhat complex, the estimated effects can be interpreted as standard regression coefficients. Each coefficient provides a measure of the direct effect of a particular independent variable on the outcome of interest. In order to facilitate a comparison of the relative importance of the school organizational variables for each outcome, all school variables have been standardized to a mean of zero and a variance of one. We also report a t-statistic for each effect in addition to the estimated regression coefficients.

Most of the teacher and student analyses reported below were performed using the HLM computer program, version 2 (Bryk, Raudenbush, Seltzer, and Congdon, 1988). The analyses for teacher enjoyment, staff morale and classroom disorder, however, use only conventional school-level regressions because of the nature of the outcome variables in these three cases. Each of these outcomes consists of reports by individual school members about others in the organization. The teacher enjoyment variable is based on student reports. The staff morale variable includes principals' perceptions, and the incidence of

students' classroom disorder is reported by teachers. In each case, these data were aggregated into school means which form the outcome in a school-level analysis.

We present four separate models for each teacher and student outcome. The first model controls for several aspects of school composition: average student academic background, average student social class, minority concentration (a dummy variable where 1 = > 40% minority), social class and ethnic diversity. The natural log of school size is also included as a predictor. In the second model, we add the communal index. If the latter is a valid measure of an important organizational construct, we would expect the statistical relation of communal organization to the outcomes of interest to persist even after adjusting for any effects of school composition and size. Model three adds student selectivity and parental cooperation to the base model. We expect significant effects for both of these measures on the various teacher and student outcomes. The final model includes the five compositional variables, log of school size, student selectivity, parental cooperation, and the communal organization index. This model provides our final two tests of the validity of the communal organization measure. First, we expect communal organization to have a significant effect on each outcome even after controlling for the other eight variables included in the model. Second, as stated earlier, we hypothesize that a substantial portion of the effects of student selectivity and parental cooperation is indirect through the effects of communal school organization which both of these factors help to promote. Thus, we anticipate that the statistical relations estimated in model three for student selectivity and parental cooperation with the teacher and student outcomes, will be substantially reduced after the community index is entered in the final model.

IX.B. Teacher Outcomes

As noted earlier, if a communal school organization positively influences the conditions of teachers' work, these effects should be manifest in teachers' reports of their sense of efficacy and satisfaction with work. This is the first outcome that we consider. Further, if the organizational effects on teachers are to have pervasive consequences, then they ought to be perceived by others as well. Thus, we also consider in this section students' reports about teachers' enjoyment of their work, and reports about staff morale which include information from school principals. In essence, we are using data from multiple sources (teachers, students, and principals) in order to cross-validate any inferences about the effects of a communal school organization on teachers' work conditions. As a final check, we also consider teacher absenteeism. Although many factors in addition to the organization of the work environment influence absenteeism, we expect that an increased commitment to schoolwork will also appear when teachers report high levels of satisfaction.

1. Teacher efficacy and satisfaction. Table 5 displays the results for this teacher self-reported outcome. In terms of the composition model, we find that teachers' sense of efficacy is substantially greater in high social class schools, and is somewhat lower in large schools. Adding the community index has a powerful effect. The estimated coefficient, .205, is four times larger than any other effect, and the explained school-level variance jumps by 28.6%. The school social class effect remains although it is substantially reduced. The school size relationship to teacher efficacy, however, has changed direction.

This pattern of change in the school size effect after controlling for communal organization appears on several of the outcomes we consider. These results suggest that two different and competing mechanisms are at work here. First, as we have already demonstrated, a smaller school size is more likely to promote a communal school organization. Thus, before the community index is entered into the model, a substantial part of the overall negative relation between school size and teacher efficacy is a hidden effect of communal school organization on this outcome. Second, larger schools often have greater tangible resources and can provide teachers with more opportunities for individual choice in teaching and extra-curricular responsibilities. This is the individualism on the teacher side of the "Shopping Mall" high school (Powell et al., 1985). Thus, once we explicitly model the effect of communal organization, the smaller positive effect of increased size associated with the greater adult freedom in larger schools becomes visible.

In terms of student selectivity and parental cooperation variables, these both behave as hypothesized (model 3 in Table 5). Teacher efficacy is higher in selective schools and where the relationships with parents are cooperative. The results from the final model indicate that these effects are indirect, working mainly through the promotion of a communal school organization. The significant coefficients found in the third model are not sustained after the community variable is reentered into the equation.

In sum, the results for teacher efficacy provide strong evidence about the validity of the community index measure, which in turn provides a substantial confirmation of the importance of the communal organization construct. The estimated effect of community in the final model remains four times larger than any other variable. Even when entered last in the equation, after 8 other school variables, it still provides a unique increment to variance explained of 25.3%. In simple raw empirical terms, such a large effect is quite uncommon in educational research.

2. Teacher enjoyment of work. Next we consider students' perceptions about the teachers in their school. One possible criticism of the analysis of teacher self-reports just considered, is that since the community index also relies heavily on teacher reports, the results may share a response bias. That is, teachers who offer positive reports about their own life may be more likely to report positively on the school as well. This explanation would appear less salient, however, if the reports about teacher satisfaction in communally organized schools were also sustained in students' perceptions.

The results for this outcome variable are displayed in Table 6. Students in affluent schools and in small schools are more likely to report that teachers enjoy their work (see composition model). This parallels the findings in the analysis of teacher self-reports which we just discussed. The effect of the community index when added to the base model is again very large. The estimated coefficient of .563 is five times greater than any other estimate. Student selectivity is strongly related to this measure of teacher outcomes, but the direct effect is again substantially diminished once community index is returned to the model. Even in the final model, the effect of school community remains five times larger than any other school variable. The unique increment to school variance explained when

the community index is added as a last step is 14.7% -- again a very substantial empirical result.

3. Staff Morale. The third measure of teachers' reactions to their work environment consists of combined reports from teachers and their principals about the quality of staff morale within the school. These results are presented in Table 7. We see from the base model that staff morale is higher in more affluent schools, in smaller schools, and in schools with a high minority concentration. When community index is added, it is again the biggest effect in the overall table -- three times larger than for any other school variable. Student selectivity and parental cooperation are both positively related to staff morale. The estimated direct effects for these two variables are substantially reduced when community index is reintroduced into the model. A significant direct effect for parental cooperation, however, does persist.

The increased level of staff morale in high minority concentration schools first noted in model 1 is also sustained in the final model. This result means that the level of staff morale in high minority schools is greater than we would expect given the other characteristics of the students taught and organizational features of these schools. Apparently, an elevated level of esprit de corps is common among teachers in such schools.

In terms of the principal focus of our analysis, we again encounter strong statistical evidence consistent with the hypothesized effects of communal school organization. The estimated coefficient for the community index remains large, and it accounts for an additional 16.4% of school-level variance when entered last in the model.

4. Teacher Absenteeism. The last teacher outcome we consider is absenteeism. Table 8 displays these results. Absenteeism is lower in high social class schools, and higher in large schools and schools that are socially and ethnically diverse. The negative school size effect again disappears, once the community index variable enters the model. This provides further evidence that increasing size acts to diminish a sense of community within schools and the positive consequences attendant to this organizational form.

The community index has a significant effect when added to the model, and this effect persists, although somewhat reduced in magnitude, in the final equation. The effect of student selectivity is more substantial for this outcome than in the previous analyses. The coefficient for the selectivity measure is the largest effect in the final model, slightly greater than for the community index variable. The higher levels of teacher absenteeism in socially and ethnically diverse schools also persists through the final model.

5. Summary Comments on the Analysis of Teacher Outcomes. The results presented above provide empirical confirmation of the substantive importance of the communal organization construct. Substantial psychic rewards appear to accrue to teachers who work in a communal school environment. This conclusion is supported with data from teachers' self-reports and is cross-validated with student perceptions and information from principals as well. The impact of a communal school environment is also manifest in an important teacher behavior -- reduced absenteeism.

On balance, the statistical models examined above include only a modest number of school variables, and more elaborated hypotheses for these teacher outcomes could possibly be formulated. Each of the control variables we have included is justified by a substantial body of prior empirical research and theoretical argument. Although more factors might be included in the models and the estimated direct effects of the community index might as a result be reduced somewhat, it seems doubtful that the effects would be so diminished as to alter our basic conclusion.

Thus, it appears that important benefits accrue to teachers in a communal school organization. From a purely empirical point of view, the increments to school variance explained by the community index are unusually large. The sheer magnitude of these empirical findings provides reason to affirm that the community measure is tapping an important organizational reality.

IX.C. Student Outcomes

We next consider the possible consequences of a communal school organization on students. As we argued above, a communal school can have a substantial impact on those who work there. The resultant heightened sense of efficacy and commitment among staff will in turn affect students' social engagement with the school place and its programs. These effects should be especially manifest in reduced incidence of social misbehavior such as cutting class, absenteeism, classroom disorder, and the likelihood of dropping out. Finally, since the social engagement of both teachers and students with school aims is critical for academic learning, effects on academic outcomes should also be seen. Thus, we consider below students' self-reports about their interest in academics and their gains in mathematics achievement from sophomore to senior year. All outcomes are measured at the student level except for classroom disorder which is based on teacher reports aggregated into a school mean.

The analyses reported in this section include in the base model four student-level controls for individual social class, academic background, race and ethnicity in addition to the school composition variables and log of school size. The statistical adjustment for the student-level variables is accomplished by entering them as fixed effects in the within-school HLM equation for each student outcome. (For more details on this analysis model see Bryk & Raudenbush, 1988.) The coefficient estimates for the student-level controls are analogous to the pooled within-school regression slopes in analysis of covariance. Similarly, the outcomes of interest in the school-level portion of the hierarchical linear model are now adjusted school means. Differences among schools in the social class, academic background, race and ethnicity of the students enrolled have been statistically controlled. This too is like ANCOVA except that the hierarchical linear model allows us to take into account the special structure among the intra-school errors which is usually ignored.

1. Class Cutting. Table 9 presents the results for this first student outcome. In terms of the student-level controls, class cutting is lower for black students and those with strong academic backgrounds. The incidence of cutting class, however, is somewhat higher among Hispanic students. At the school level, we find that adjusted school rates for class cutting are greater in large schools, high social class schools, schools with high

concentrations of minorities and ethnically diverse schools. This pattern of effects for school composition and size persists across all four of the models estimated.

The finding for school social class may appear anomalous at first in that we expect affluent students to be more academically oriented (see for example the results in Table 13). The positive finding in Table 9, however, is for the school-level variable, not the student measure. This compositional effect might be traced to normative differences among peer groups in different schools, or perhaps to certain school policies that are more prevalent, in this case, in high social class schools. The latter explanation is consistent with field reports that students in affluent schools are given considerable discretion over how they spend their time, including whether or not they attend class (see for example, Powell et al., 1985).

As hypothesized, the community index is negatively related to class cutting, and this effect persists in the final model. The final estimated coefficient of -.065 is the second largest among the school variables. Even when entered last in the model, the community index accounts for an additional 8.2% explained variance among the adjusted means.

Class cutting is somewhat lower in selective schools and in schools where the relationship with parents is cooperative. Neither effect, however, is statistically significant, and the size of both estimates are substantially reduced in the final model. This evidence suggests, that to the extent that the latter two factors influence class cutting, the effects are indirect through their relationship to communal school organization.

2. Student Absenteeism. Absenteeism is lower among black students, among more affluent students, and students with strong academic backgrounds (see Table 10). In terms of the effects of school composition on student absenteeism, the adjusted school rates are higher in large schools and ethnically diverse schools. Absenteeism is substantially lower in schools that are communally organized, and the coefficient of -.070 is the largest estimated school effect in the final model. The community index accounts for an additional 4.6% of the school-level variance when entered last.

Whereas the parental cooperation variable is not related to student truancy, school absenteeism rates are lower in schools with a selective student body. This effect persists in the final model, although somewhat reduced in size. The latter is again what we would expect given the hypothesis that student selectivity works to promote a communal school organization.

3. Classroom Disorder. The analyses presented in Table 11 are ordinary school-level regressions where the outcome variable is based on teacher reports that have been aggregated into a school mean. No student-level controls are used in this analysis since the ATS teacher responses cannot be linked to specific students. Nevertheless, this is still an important analysis because it provides a cross-validation of student behavior with reports from teachers rather than students themselves.

In general, the results for the classroom disorder measure are quite similar to those already described for class cutting and student absenteeism. Classroom disorder is more

prevalent in large schools, in ethnically diverse schools, and in schools where the average level of students' academic background is weak.

The pattern of effects for school size across the four models reported in Table 11 merits mention. The estimates here mirror results also present in Tables 9 and 10. The negative effects on student behavior associated with large schools are reduced considerably once the community index is added to the model. These results provide further evidence that size is a significant structural feature of schools. In general, larger schools are less likely to have a strong sense of community, and display the positive teacher and student outcomes associated with this organizational form.

Classroom disorder is much less problematic in communally organized schools. The estimated effect for the community index is again the largest in the overall table, and the measure accounts for an additional 11.3 percent of school-level variance when entered last in the final model. Classroom disorder is also less prevalent in schools where parental relations are cooperative. The estimated effect of student selectivity in the final model is the only truly anomalous result encountered so far. The positive coefficient means that teachers in selective schools are reporting higher levels of classroom disorder than we would expect given the otherwise favorable compositional and organizational characteristics of these schools.

4. Dropping Out. The results for this most important student engagement variable are reported in Table 12. In terms of the student-level relations, the likelihood of dropping out is lower among blacks, students from affluent families and those with strong academic backgrounds. The dropout rates for Hispanic students are somewhat higher than expected given their other personal characteristics.

In terms of the school-level relations, adjusted school dropout rates are lower in high social class schools, and higher in large schools and schools with a substantial minority concentration. The school size effect again diminished substantially once community index is included in the model.

Adjusted school dropout rates are also higher in schools where the average student academic background is high. This composition effect runs counter to the student-level effect just described above. This means that dropout rates are higher than we would expect in schools where students enter well prepared. One possible explanation for this result is that the level of academic competition is elevated in such contexts causing some students to drop out who might otherwise have completed their studies.

As hypothesized, dropout rates are substantially lower in schools with a communal organization. The effect for community index is again the largest in the final model, and the increment to variance explained at the last step is 9.8 percent. Neither student selectivity nor cooperative parental relations demonstrate any significant relations with school dropout rates.

5. Students' Interest in Academics. As we discussed in section VI, enhanced personal engagement of both teachers and students with school life are the principal effects

of a communal organization. The evidence reported above overwhelmingly supports this proposition. But we also claim that the social benefits of a communal organization has academic consequences for students. These result from the increased levels of commitment shared by faculty and students to core school aims. We consider these links in examining the next two student outcomes.

The results for students' interest in academics are displayed in Table 13. Black students, high social class students, and especially students with strong academic backgrounds are more likely to express a strong interest in academic work. At the school level, more positive reports about students' interest in academics is encountered in high social class schools and high minority concentration schools. High levels of interest are also characteristic of communally organized schools, and in schools with a selective student body and where parent-school relations are cooperative. The community index is still among the largest estimated coefficients in the final model, accounting for an additional 3.9% of explained school-level variance. Even here, the direct effects of student selectivity and cooperative parental relations are diminished somewhat after community index enters the model. This provides additional evidence that the effects of a communal school organization are distinct from these other organizational characteristics.

6. Gains in Mathematics Achievement. We focus attention on mathematics achievement because the HS&B test in this area is widely regarded as the best instrument in the battery with the largest number of items and highest reliability (Heyns & Hilton, 1982), and because mathematics learning is most influenced by schooling and least affected by home factors (Murnane, 1975). The analyses, presented in Table 14, follow the same general form as the other student-level outcomes except that sophomore mathematics achievement is included as an additional student-level control. As a result, the outcome in the school-level portion of the HLM is mean mathematics achievement adjusted for sophomore status as well as student social and academic background differences.

As expected, sophomore and senior achievement are strongly related. Even after controlling for sophomore mathematics scores, we find that senior achievement is lower for blacks and Hispanics and higher for students with a strong academic background and high social class. In terms of the school variables in the base model, adjusted mean achievement is higher in affluent schools and in high minority concentration schools. It is lower in large schools and ethnically diverse schools. A negative effect for average school academic background also appears in this analysis. It seems unlikely that the latter has any substantive significance given the much larger estimated coefficients for school social class, as well as the strong student-level effects for academic background and sophomore achievement.

In terms of our key concern, schools with a communal organization have a substantially higher level of mathematics achievement at senior year. This difference is observed even after adjusting for students' academic and social background, sophomore mathematics achievement, and a variety of school variables including measures of composition, student selectivity, and parental cooperation. Mathematics achievement is also higher in selective schools. The estimated direct effect of student selectivity is again somewhat reduced when the community index variable is included in the model. There is

no evidence in these data of a significant relation between parental cooperation and senior achievement.

7. Summary Comments on Analysis of Student Outcomes. The results for the student outcomes discussed above provide strong evidence about the validity of the community index measure, and consequently also provide an empirical confirmation of the substantive importance of the communal organization construct. In general, the level of student social engagement and academic outcomes are substantially higher in a communally organized school. As predicted, the largest effect associated with the community index variable occurs on the various measures of student social engagement with schooling (class cutting, absenteeism, classroom disorder, and dropping out). Smaller but still substantial effects occur for students' interest in academics and gains in mathematics achievement from sophomore to senior year.

The estimated effects of various aspects of composition and school size tend to diminish after the community index variable enters the model. This suggests that part of the effect of these variables is indirect through communal organization. These empirical results are consistent with the proposition that aspects of school composition and size can act to facilitate (or impede) the formation and sustenance of a communal organization.

Finally, the estimated effects of a communal school organization on student outcomes are clearly distinct from those of student selectivity and cooperative parent-school relations. Here too we see a pattern of estimated effects which diminish in size after the community index is added to the model. These results are consistent with the hypothesis that student selectivity and cooperative parent-school relations act to shape the social boundary of a school. These boundaries can in turn promote a communal school organization although this consequence is not necessary.

X. DISCUSSION

We began this project intrigued by accumulating evidence from field research that links "a sense of community" with positive staff attitudes, teacher behaviors conducive to good schools, and a high level of student engagement. We have attempted here to elucidate the organizational features that catalyze such a "sense of community," develop a measure of school communal characteristics based on this definition, and investigate some of the causes and consequences of this organizational form.

We have approached the task in the spirit suggested by Cronbach, that "to validate is to investigate" (cited in Cherryholmes, 1988, p. 443). By its very nature, measurement construction and validation is an open process wherein each investigation can raise new questions. The instrument itself and the interpretation of results are always open to revision. Although the results assembled here are substantial, this is only a first study.

As we noted in the introduction, research of this type requires an interplay of both discursive and empirical elements. With this in mind, we have assembled a dense array of statistical evidence to reflect against conceptual arguments drawn from both social theory

and recent field studies of schooling. The validity of the community index measure and the importance of the underlying organizational construct is neither assured nor negated by any single piece of evidence. Rather, summary judgment requires an examination of the entire mass of empirical evidence and its relationship to the latent nomological web.

We acknowledge that the models investigated here involve a relatively modest number of school variables, and that the introduction of additional controls might diminish somewhat the size of the estimated communal organizational effects. On balance, however, the magnitude of the estimated statistical relations for the community index are quite large and uncommon in past school effects research. Even if somewhat diminished in size, they would still represent important educational consequences.

To appreciate fully the magnitude of these estimated effects, we use the results previously reported in Tables 5 through 14 to simulate the consequences of a school change toward a stronger communal environment. Specifically, we consider the case of a school which is at the 50th percentile for each of the teacher and student outcomes considered in this study. We also assume that this school is initially very low on COMINDEX (-1 s.d = 17th percentile), but shifts over time to become a strong communal organization (+1 s.d. = 83rd percentile on COMINDEX). What do our estimated models predict about the consequences of such a change? These results are presented in Table 15.

The average teachers' sense of efficacy would rise substantially to the 92nd percentile. In terms of teacher enjoyment of work and staff morale, the school would now be located at the 76th and 79th percentiles respectively. The school rate of teacher absenteeism would drop from the 50th percentile to the 35th. Similar large changes are predicted for student misbehavior. The incidence of class cutting and classroom disorder would decline to the 18th and 15th percentile respectively. The rate of absenteeism would locate the school around the 27th percentile, and dropping out would be substantially reduced (predicted at the 30th percentile). There would also be a significant enhancement in students' interest in academics (the school would rise to the 73rd percentile) and a gain in mathematics achievement to the 71st percentile. Although we caution against over-generalizing from these predictions since any comparison of this sort is somewhat artificial, the results do indicate that the communal index is tapping important organizational processes.

X.A. Weaknesses in the Community Index

We were limited in the formation of the community index by the items available in HS&B. Although HS&B is an extensive data base, it does not provide good information about the more phenomenological elements of the communal organization construct. There is little information, for example, about the actual content of adult beliefs, and few attitudinal or behavioral items which indicate an ethic of caring, and what more generally might be called the moral life of the schools (Bryk, 1988). The presence of traditions and rituals and their salience in the daily round of school life are also virtually unexamined in HS&B. Clearly, the construct of a communal organization is not fully realized in the existing measure.

Nevertheless, the components of the community index developed in this study do meet minimal standards for combining them into a composite measure, and as we hypothesized, the measure does display an impressive array of statistical relations. Further, statistical analyses of the index could be undertaken. We have not examined whether the three dimensions of communal school organization (shared values, a common agenda, and formal organizational characteristics) are equally important to the construct. Rather, for purposes of the present study, we have presumed the validity of the proposition that it is when these school features occur simultaneously that their influence reinforces one another and thereby creates a distinctive organizational life.

X.B. Other Possible Considerations

1. Effects of External Factors. Our analyses point toward the potentially important effects of external governance factors in shaping the social boundaries of schools. We have identified a number of significant statistical relations for student selectivity and parental-school relations with a wide array of teacher and student outcomes. Further, as noted earlier, the cooperative parental relations variable is based on only a single item from the principal questionnaire. It seems likely that even stronger effects would be displayed if better measures were constructed.

Even so, our results contribute another piece to a growing number of theoretical arguments (such as Coleman & Hoffer, 1987; Cohen, 1988), and empirical studies (such as Chubb and Moe, 1988) which affirm the social character of schools and demonstrate that aspects of schools' external environments can substantially affect both the form and feeling of the social interactions occurring within these contexts. Other externalities, not explicitly modeled in our research, also merit further scrutiny. These include how faculty membership is controlled through procedures for selecting and terminating teachers, and the influence of external regulation by federal, state and local governments, and the judiciary.

2. The Role of School Leadership. School leadership is an important dimension in effective schools research that we have not explicitly included in the definition of the communal organization construct. Obviously, the actions of a school principal, more than any other single individual, can shape the academic and social environment of a school, and as a result play a major role in the development and sustenance of a communal organization.

It is not clear, however, that only a single administrative style is consistent with the idea of community. In some instances, a school may need a strong, dominating, charismatic leader. In other contexts, a consensus builder may be required, and in still others the dimension of leadership to be emphasized is a nurturant force promoting an ethic of caring. In a practical sense, good school leadership seems inseparable from the specificities of context -- the nature of current school problems and organizational strengths, and the history and traditions on which these in turn rest. This perspective suggests that there may not be a single definition of good communal school leadership. Rather, future research may need to focus on how features of context make specific demands on communal school leadership and subsequently offer their own definition of goodness. (See Lightfoot, 1984 and Cuban, 1988 for a further elaboration of these ideas.)

3. Sector Differences. The mean differences across sectors in the incidence of communal school organization reported in Table 3 suggest that the prevalence of this organizational form varies greatly between public and non-public schools. While we have introduced extensive controls for the social composition, school size, student selectivity and parental-school relations in our outcome analyses, we have yet to explore whether the relationships observed between the community index and teacher and student outcomes are the same in each sector. Since over 85% of the schools in the analytic sample are from the public sector, however, it seems highly unlikely that the attendant effects of a communal school organization found in these data are peculiar to non-public schools.

4. Worries about Potential Negative Consequences of a Communal School Organization. Our analyses also provide a first look at some concerns which have been articulated about communal school organization. In particular, we worried that the benefits of community may be extracted at the price of limited tolerance for the unfamiliar and the diverse. The latter is described, for example, in Peshkin's poignant account of fundamentalist academies (1986).

While this is a concern that merits more extended consideration, the results assembled so far indicate that extreme social closure is not a necessary condition for a communal school organization. Diversity among students in race, ethnicity and social class are only weakly related to an absence of communal school organization. Indeed, our results indicate that a fair amount of diversity may be compatible with this organizational form.

Similarly, our analyses suggest that while control over the selection of students may in fact promote a communal school organization, the variable does not have strong independent effects on most of the outcomes we considered. This supports the contention that selectivity is not a major constitutive element of a communal school organization.

Thus, we are left pretty much where we began with regard to these concerns. From a theoretical point of view, some degree of control over school membership seems central to sustaining a community. But the amount required, and the specific elements on which unity must be assured, remain largely undefined. We are encouraged by the results so far which indicate that the benefits of a communal school organization may be attainable without jeopardizing social commitments to equity, tolerance, and diversity.

5. Disentangling Reciprocal Causation and Selection Artifacts. A legitimate methodological critique of our research is that school communities may be affected by the kinds of conditions that we claim school communities cause. For example, we have interpreted the statistical evidence of a lower incidence of classroom disorder in communal schools as a result of this organizational form. In principle, the reverse interpretation is also possible. That is, orderly students can have positive organizational consequences.

Questions of reciprocal causation are endemic to non-experimental social research. Although complex statistical techniques have been formulated in an attempt to disentangle such phenomena, estimation of such models can be highly sensitive to specification (Rogosa,

1980), and the latter is often determined more by analytic restrictions than by strong theoretical arguments. There are no empirical solutions to this problem because the data we typically analyze have neither sufficient density nor experimental design to separate such causation. In interpreting statistical evidence in such situations, we inevitably fall back on the larger empirical and theoretical foundations on which the investigation rests.

The conceptualization of the present research has been substantially influenced by what might be broadly termed the effective schools movement. Beginning with Rutter et al. (1979), a spate of field studies and school ethnographies have argued that schools serving very similar kinds of students and families can have substantially different organizational environments with far-reaching consequences for both adults and students. This research directs attention toward the power of collective adult action in improving schools. It is a simple message -- adults make a difference in schools. The outcomes of schooling are not strictly determined by the composition of the students enrolled. This perspective does not deny the fact that student cultures have powerful effects on school life. But they are not monolithic either. They can be shaped by adult influence.

In this study, we have used large-scale survey research methodology to focus on specific features of schools as social organizations. We have found strong statistical evidence relating the social nature of schools to a wide array of outcomes. These effects exist for both students and teachers and they are cross-validated in each other's reports. We have introduced a number of school (and where appropriate student) control variables in the analyses, and yet the estimated effects remain quite large. In broad strokes, our results mirror findings from the more intensive, but less extensive, field investigations. While causal interpretation of any single statistical finding is fraught with a high degree of uncertainty, in our view the overall pattern of evidence from this study supports a school effects explanation.

In general, the problems associated with drawing such inferences are well established. In the face of such difficulties, the conventional wisdom in school effects research has been to adopt a stance of disbelief. That is, the analyst seeks to exhaust all possible explanations of observed effects as being caused by the characteristics of students who attend a school before giving any credence to a school explanation. As new statistical techniques have emerged, however, it has become increasingly clear that traditional statistical methods used in such inquiries have been biased against the discovery of organizational influences (Bryk & Raudenbush, 1988; Raudenbush & Bryk, in press). These methods have typically attributed undue importance to causes located within individuals. These methodological biases have led to systematic underestimation of school effects, and have tended to support claims that individual student background and school social composition are the only major influences on student learning. While there is no guarantee that we have achieved the proper balance in this particular study, our interpretation of results has been influenced both by the renewed appreciation of the social dimensions of schools accentuated in effective schools research and the inherent limitations of the methods employed in studying such phenomena.

X.C. Concluding Comment

To take an idea such as "school as community," elaborate a definition, and then give that definition some empirical specificity is a way to organize thinking. This process directs attention toward certain aspects of school life while other organizational features are deemed less salient, and by implication, moved to the background. In a real sense, any definition of a social construct is based to some degree on a definition of social reality. Nonetheless, the choice among constructs is far from arbitrary, and each alternative can be subject to a rigorous assessment of its utility.

From a scientific point of view, such assessments rely on statistical tests about the strengths of relations among a set of measures, and more fundamentally on the theoretical importance of the underlying constructs to which these measures are connected. Although this is a first study, we have amassed a substantial body of empirical evidence supporting a positive conclusion about the scientific merits of a communal organization construct.

From a practical point of view, the utility of a construct must be judged in terms of its potential for advancing understanding as a basis for action. In our view, the idea of a communal school organization passes this test as well. It provides a framework for connecting the social interactions of teachers and students to institutional aims within a context where formal work is accomplished and human meaning is shaped in profound ways. In contrast, other views of school organization -- as garbage cans, as political coalitions competing for power and influence, or as disembodied, multi-level, decision-making processes -- can offer useful lenses for analyzing aspects of school life, but have uncertain practical utility. In the past at least, they have more often provided explanations for failure than projected strong images of a better way.

TECHNICAL NOTES

1. The ATS design weights in our sample ranged in value from 1 to 157.40. Although the average weight was 17.89, 8 schools out of the 357 had weights in excess of 100. Simply, to use the reported weights in linear model analyses raises serious problems about the robustness of estimated effects. A single school with a large weight could exert substantial influence on the final results.

Thus, two conflicting principles come into play in a decision about the use of school-level design weights in HS&B. Population validity concerns dictate use of the design weights in order to properly infer results to a national population. When producing simple statistics such as head counts, proportions and means, this logic seems compelling.

For complex relational analyses, however, concerns about influential observations must also be addressed. These concerns may be especially important in organizational research using HS&B because it is small public schools which have the very large design weights. This is a result of the basic HS&B sampling plan where schools were selected with probability proportional to size. The potential leveraging effects of these schools in any school effects analysis can be extreme as many organizational variables of interest are also related to school size.

In the spirit of robust data analysis, we proceeded as follows. A natural log transformation of the weights shrunk the range from (1.0, 157.40) to (0.0, 5.40). We then set the minimum design weight at .50. In this way, the data from each school made at least some contribution to the estimated coefficients. Nevertheless, the schools with the largest weights still contributed ten times as much as those with the minimum weights. This admittedly empirical solution was chosen as a compromise between population validity concerns and statistical robustness.

From the perspective of our primary research concern -- investigating the effects of communal school organization -- this weighting approach is likely to be conservative relative to full design weighting. Since communal organization is strongly related to small school size, full design weighting would substantially increase the likelihood of declaring an organizational effect which is not broadly represented throughout the data but rather limited to just one or a few schools.

The mean design weight for our analytic sample was 2.38. All of the t-statistics reported as part of the HLM analyses are based on this. Dividing the reported t-statistics by 1.54 approximates the results that would have been obtained had the mean weight been normalized to 1.0 (i.e., maintaining the effective sample size as 357). The t-statistics reported for the school-level analyses (i.e., the classroom disorder, teacher enjoyment and staff morale outcomes) are exact as stated since the SAS weighting routine preserves the appropriate degrees of freedom count in calculating standard errors and t-statistics.

2. The estimation formulas for the two-level HLM are based on the assumption of normally distributed errors. With a dichotomous outcome such as dropping out, these assumptions are not strictly tenable. Our limited work to date, however, suggests that violation of this assumption may not be problematic in the current application (Thum, 1987). In essence, we are using the estimates from a linear probability model as outcomes in a generalized least squares analysis. The weight matrix for the latter will have an appropriate form, combining sampling variances and parameter variances, although the sampling variances are likely to be misestimated. In general, HLM Gamma coefficient estimates are not very sensitive to variations in the weight matrix. Thus, given the larger investigative purposes of this study, further concern here does not seem warranted.

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Table 1.

Part/Whole Correlations of Separate Indicators with the Composite Community Index (COMINDEX)

Components of Community Index	Correlation with COMINDEX
Teacher Agreement on School Goals	0.33
Reported Teacher Consensus on Beliefs and Values	0.52
Teacher Consensus That Students Can Learn	0.62
Teacher/Administrative Agreement That Students Can Learn	0.26
Teacher/Administrative Agreement on School Discipline	0.35
Student Beliefs About the Teaching Role	0.39
Track Similarity	0.63
Coursetaking Similarity	0.52
Similarity of Math/Science Coursetaking	0.51
Teacher Knowledge of Students (Class-Based)	0.32
Percent of Students Involved in Extracurricular Activities	0.61
Percent of Students in Leadership Roles	0.43
Percent of Teachers Who Use Teacher Help	0.39
Teacher Cooperation with Colleagues	0.5[illegible]
Teacher Time Planning With Other Teachers	0.45
Staff Commitment to Evaluation	0.22
Participation in Faculty Socials	0.52
Perception of Staff Support	0.48
Teacher Time in Extended Roles	0.36
Percentage of Teachers Involved in Extracurriculars	0.42
Teacher Knowledge of Students (Beyond Class)	0.48
Teacher Contact of Students Outside Class	0.48
Student Perception of Teacher Interest	0.63

COEFFICIENT OF GENERALIZABILITY FOR COMINDEX* = 0.812

*Note:
The generalizability coefficient is based on the random effects model, $y_{ij}=\mu_j+e_{ij}$, where yij is the value on subindex i in school j, μ_j is the true communal index value in school j, and e_{ij} is measurement error.
The coefficient is defined as the ratio of [var μ_j] to [var μ_j + var e_{ij}/n] where n is the number of indices (n=23).

Table 2.

Breakdown of Community Index by Sector, Size, Ethnic Diversity, and School Social Class

Sector	Public	Catholic	Private		F	p-value	ETA
	-0.25	1.11	2.09		123.13	.000	.406
School Size	**0-300**	**300-1200**	**1200-1800**	**1800+**	**F**	**p-value**	**ETA**
	1.05	0.22	-0.21	-0.41	19.44	.000	.145
Ethnic Diversity	**Low**	**Medium**	**High**		**F**	**p-value**	**ETA**
	0.24	-0.01	-0.23		5.12	.006	.022
Social Class Diversity	**Low**	**Medium**	**High**		**F**	**p-value**	**ETA**
	0.00	-0.01	0.00		.07	.927	.000

Table 3.

Outcomes Associated with Communal School Organization

Teacher Outcomes	Type and Source of Measurement
Teacher Efficacy and Satisfaction	individual teacher reports
Teachers Enjoy Work	school means of student reports
Staff Morale	school mean of principal and teacher reports
Teacher Absenteeism	individual teacher reports
Student Outcomes	
Cutting Class	individual student reports
Student Absenteeism	individual student reports
Incidence of Classroom Disorder	school mean of teacher reports
Dropping Out	individual student designation from HS & B
Interest in Academics	individual student reports
Mathematics Achievement	senior year test scores on individual students

Table 4.

Correlations of Teacher and Student Outcomes with Community Index, Selectivity and Parental Cooperation

OUTCOME	Community Index	Selectivity	Parental Cooperation
Teacher Outcomes			
Teacher Efficacy and Satisfaction	0.63	0.31	0.08
Teacher Enjoys Work	0.62	0.39	0.03
Staff Morale	0.54	0.30	0.18
Teacher Absenteeism	-0.33	-0.31	-0.08
Student Outcomes			
Cutting Class	-0.36	-0.21	-0.04
Student Absenteeism	-0.41	-0.32	-0.01
Incidence of Classroom Disorder	-0.46	-0.17	0.06
School Dropping Out Rate	-0.41	-0.22	-0.02
Interest in Academics	0.28	0.33	0.10
Senior Mathematics Achievement	0.09	0.02	-0.08

Table 5.

Comparison of Alternative Models for Teacher Efficacy

School-level Variables	Composition Model		Adding Community Index		Adding Selectivity & Parental Cooperation		Final Model	
	Effect	t-ratio	Effect	t-ratio	Effect	t-ratio	Effect	t-ratio
Average Academic Background	.019	1.277	.025	1.933	.014	1.002	.024	1.886
School Social Class	.161	9.773	.042	2.637	.1[illegible]	8.257	.044	2.762
Minority Concentration	.008	.600	-.021	-1.662	-.007	-.483	-.020	-1.535
School Size	-.022	-1.901	.048	4.344	-.014	-1.229	.046	4.085
Ethnic Diversity	.000	.017	-.007	-.643	-.001	-.045	-.006	-.603
Social Class Diversity	-.006	-.509	.002	.236	.000	.071	.002	.260
Community Index			.205	16.013			.207	14.904
Student Selectivity					.048	4.063	-.008	-.808
Parental Cooperation					.031	2.973	.007	.803
% School-level Variance Explained	34.4		63.0		37.5		62.8	

Notes:

The percentage of variance statistics reported in the table are the proportion parameter variability in school means explained by each model.

Table 6.

Comparison of Alternative Models for Teacher Enjoyment

School-level Variables	Composition Model		Adding Community Index		Adding Selectivity & Parental Cooperation		Final Model	
	Effect	t-ratio	Effect	t-ratio	Effect	t-ratio	Effect	t-ratio
Average Academic Background	.028	.44	.034	.61	.016	.26	-.033	-.59
School Social Class	.429	6.14	.101	1.47	.328	4.60	.119	1.69
Minority Concentration	.046	.73	-.034	-.62	-.022	-.36	-.025	-.49
School Size	-.113	-2.40	.087	1.92	-.071	-1.51	.074	1.50
Ethnic Diversity	-.074	-1.36	-.097	-2.01	-.077	-1.45	-.009	-2.06
Social Class Diversity	-.056	-1.11	-.037	-.83	-.036	-.73	-.068	-1.53
Community Index			.563	10.25			.521	8.74
Student Selectivity					.230	4.61	.085	1.75
Parental Cooperation					.031	.69	-.034	-.82
% School-level Variance Explained	23.1		40.9		27.7		42.4	

Notes:

The outcome variable in this analysis is based on student reports and was aggregated to the school-level. The percentage of variance explained statistics refer to observed school means.

Table 7.

Comparison of Alternative Models for Staff Morale

School-level Variables	Composition Model		Adding Community Index		Adding Selectivity & Parental Cooperation		Final Model	
	Effect	t-ratio	Effect	t-ratio	Effect	t-ratio	Effect	t-ratio
Average Academic Background	.096	1.39	.102	1.72	.072	1.08	.091	1.54
School Social Class	.342	4.57	-.024	.34	.273	3.58	-.008	-.12
Minority Concentration	.289	4.28	.198	3.36	.223	3.31	.190	3.19
School Size	-.098	-1.94	.166	2.63	-.089	-1.78	.102	2.11
Ethnic Diversity	.085	1.44	.059	1.17	.093	1.63	.067	1.34
Social Class Diversity	-.022	-.41	-.001	-.02	.009	.18	.010	.22
Community Index			.631	10.87			.608	9.82
Student Selectivity					.150	2.83	-.011	-.23
Parental Cooperation					.191	3.96	.120	2.79
% School-level Variance Explained	14.2		35.9		19.9		37.5	

Notes:

The outcome variable in the analysis is based on principal reports. The percentage of variance explained statistic refer to the observed variability in those reports.

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Table 8.

Comparison of Alternative Models for Teacher Absenteeism

School-level Variables	Composition Model		Adding Community Index		Adding Selectivity & Parental Cooperation		Final Model	
	Effect	t-ratio	Effect	t-ratio	Effect	t-ratio	Effect	t-ratio
Average Academic Background	.034	1.623	.032	1.527	.040	1.925	.037	1.793
School Social Class	-.103	-4.430	-.041	-1.581	-.063	-2.633	-.031	-1.200
Minority Concentration	.008	.409	.024	1.179	.037	1.783	.041	1.991
School Size	.052	3.183	.015	.874	.035	2.095	.014	.819
Ethnic Diversity	.055	3.061	.059	3.27	.057	3.221	.059	3.326
Social Class Diversity	.045	2.686	.041	2.472	.035	2.079	.034	2.063
Community Index			-.108	-5.231			-.069	-3.135
Student Selectivity					-.094	-5.661	-.075	-4.274
Parental Cooperation					-.035	-2.365	-.027	-1.790
% School-level Variance Explained	17.5		20.4		21.8		22.5	

Notes:

The percentage of variance statistics reported in the table are the proportion parameter variability in school means explained by each model.

Table 9.

Comparison of Alternative Models for Cutting Class

School-level Variables	Composition Model		Adding Community Index		Adding Selectivity & Parental Cooperation		Final Model	
	Effect	t-ratio	Effect	t-ratio	Effect	t-ratio	Effect	t-ratio
Average Academic Background	-.011	-1.417	-.011	-1.560	-.009	-1.240	-.012	-1.576
School Social Class	.043	4.903	.080	8.426	.048	5.193	.079	8.143
Minority Concentration	.017	2.235	.026	3.466	.021	2.670	.025	3.215
School Size	.046	7.970	.024	4.040	.045	7.560	.025	4.073
Ethnic Diversity	.022	3.332	.025	3.874	.022	3.268	.025	3.847
Social Class Diversity	.010	1.721	.009	1.511	.009	1.446	.009	1.547
Community Index			-.063	-8.553			-.065	-8.251
Student Selectivity					-.010	-1.668	.007	1.093
Parental Cooperation					-.008	-1.552	-.001	-.241
Student-level Controls								
Black	-.049	-4.327	-.047	-4.173	-.049	-4.272	.048	-4.206
Hispanic	.020	2.229	.021	2.350	.020	2.262	.021	2.344
Academic	-.091	-13.208	-.091	-13.197	-.091	-13.206	-.091	-13.199
Social Class	.004	1.221	.004	1.236	.004	1.228	.004	1.232
% School-level Variance Explained		19.4		28.3		19.8		28.0

Notes:

The percentage of variance statistics reported in the table are the proportion parameter variability in school means explained by each model after first adjusting for differences among schools in student characteristics.

Table 10.

Comparison of Alternative Models for Student Absenteeism

School-level Variables	Composition Model		Adding Community Index		Adding Selectivity & Parental Cooperation		Final Model	
	Effect	t-ratio	Effect	t-ratio	Effect	t-ratio	Effect	t-ratio
Average Academic Background	.009	.691	.009	.651	.014	1.004	.011	.839
School Social Class	-.017	-1.093	.034	1.571	.010	.607	.042	2.440
Minority Concentration	.009	.629	.021	1.553	.027	1.895	.031	2.203
School Size	.056	5.443	.026	2.436	.045	4.318	.024	2.213
Ethnic Diversity	.029	2.452	.032	2.820	.029	2.484	.032	2.787
Social Class Diversity	.015	1.415	.013	1.240	.010	.966	.010	1.003
Community Index			-.088	-6.670			-.070	-4.951
Student Selectivity					-.061	-5.616	-.042	-3.733
Parental Cooperation					-.010	-1.077	-.002	-.270
Student-level Controls								
Black	-.109	-4.246	-.107	4.167	-.104	-4.052	-.104	-4.039
Hispanic	.078	3.755	.079	3.848	.080	3.851	.080	3.896
Academic	-.227	-14.303	-.227	-14.295	-.227	-14.294	-.227	-14.296
Social Class	-.066	-8.241	-.066	-8.240	-.066	-8.223	-.066	-8.227
% School-level Variance Explained		11.4		20.2		17.8		22.4

Notes:

The percentage of variance statistics reported in the table are the proportion parameter variability in school means explained by each model after first adjusting for differences among schools in student characteristics.

Table 11.

Comparison of Alternative Models for Classroom Disorder

School-level Variables	Composition Model		Adding Community Index		Adding Selectivity & Parental Cooperation		Final Model	
	Effect	t-ratio	Effect	t-ratio	Effect	t-ratio	Effect	t-ratio
Average Academic Background	-.067	-2.382	-.073	-2.730	-.059	-2.091	-.070	-2.615
School Social Class	-.136	-4.369	.013	.408	-.128	-3.956	-.002	-.063
Minority Concentration	.010	.385	.049	1.861	.023	.833	.041	1.530
School Size	.127	5.787	.037	1.642	.131	5.810	.050	2.176
Ethnic Diversity	.106	4.372	.114	4.948	.104	4.306	.111	4.819
Social Class Diversity	.012	.542	.002	.122	.002	.111	.001	.055
Community Index			-.261	-9.853			-.274	-9.555
Student Selectivity					-.017	-.756	.056	2.483
Parental Cooperation					-.079	-3.878	-.046	-2.334
% School-level Variance Explained	26.9		38.9		27.5		38.8	

Notes:

1. This variable is based on teacher reports (see Appendix A), and as a result no student-level controls appears in the analysis.
2. The percentage of variance statistics reported in the table are the proportion parameter variability in school means explained by each model.

Table 12.

Comparison of Alternative Models for Dropping Out

School-level Variables	Composition Model		Adding Community Index		Adding Selectivity & Parental Cooperation		Final Model	
	Effect	t-ratio	Effect	t-ratio	Effect	t-ratio	Effect	t-ratio
Average Academic Background	.008	2.836	.008	2.821	.008	2.879	.008	2.707
School Social Class	-.011	-3.307	-.003	-.963	-.010	-2.786	-.003	-.923
Minority Concentration	.008	2.605	.009	3.262	.008	2.809	.009	3.106
School Size	.008	4.091	.004	2.029	.008	3.692	.004	1.865
Ethnic Diversity	.003	1.483	.004	1.697	.003	1.484	.004	1.752
Social Class Diversity	.003	1.594	.003	1.465	.003	1.513	.003	1.547
Community Index			-.013	-4.740			-.013	-4.620
Student Selectivity					-.003	-1.320	.001	.303
Parental Cooperation					.001	.069	.001	.833
Student-level Controls								
Black	-.014	-1.932	-.013	-1.833	-.013	-1.858	-.013	-1.834
Hispanic	.012	1.974	.012	2.099	.012	2.011	.012	2.086
Academic	-.045	-9.344	-.045	-9.333	-.045	9.341	-.045	-9.333
Social Class	-.033	-13.805	-.033	-13.799	-.033	-13.796	-.033	-13.800
% School-level Variance Explained		26.0		39.1		27.2		37.0

Notes:

The percentage of variance statistics reported in this table are the proportion parameter variability in school means explained by each model after first adjusting for differences among schools in student characteristics.

Table 13.

Comparison of Alternative Models for Interest in Academics

School-level Variables	Composition Model		Adding Community Index		Adding Selectivity & Parental Cooperation		Final Model	
	Effect	t-ratio	Effect	t-ratio	Effect	t-ratio	Effect	t-ratio
Average Academic Background	-.010	-.740	.008	-.670	-.015	-1.167	-.013	-1.009
School Social Class	.047	3.147	-.001	-.065	.015	1.016	-.010	-.649
Minority Concentration	.082	6.108	.070	5.284	.060	4.469	.057	4.263
School Size	-.011	-1.141	.016	1.581	.001	.094	.017	1.667
Ethnic Diversity	.012	1.096	.009	.847	.013	1.208	.010	.998
Social Class Diversity	-.009	-.913	-.007	-.702	-.002	-.261	-.002	-.274
Community Index			.082	6.607			.056	4.246
Student Selectivity					.071	6.915	.055	5.165
Parental Cooperation					.019	2.095	.013	1.400
Student-level Controls								
Black	.137	5.455	.136	5.431	.132	5.270	.132	5.280
Hispanic	-.024	-1.205	-.026	-1.296	-.026	-1.329	-.027	-1.368
Academic	.362	23.331	.362	23.328	.362	23.325	.362	23.325
Social Class	.031	4.002	.031	4.001	.031	3.979	.031	3.983
% School-level Variance Explained		4.1		13.8		13.5		17.4

Notes:

The percentage of variance statistics reported in this table are the proportion parameter variability in school means explained by each model after first adjusting for differences among schools in student characteristics.

Table 14.

Comparison of Alternative Models for Mathematics Achievement

School-Level Variables	Composition Model		Adding Community Index		Adding Selectivity & Parental Cooperation		Final Model	
	Effect	t-ratio	Effect	t-ratio	Effect	t-ratio	Effect	t-ratio
Average Academic Background	-.230	-2.351	-.228	-2.379	-.266	-2.751	-.251	-2.621
School Social Class	.906	8.037	.603	4.922	.753	6.519	.562	4.562
Minority Concentration	.429	4.328	.355	3.623	.324	3.256	.300	3.019
School Size	-.176	-2.470	.000	.000	-.113	-1.569	.007	.100
Ethnic Diversity	-.275	-3.364	-.298	-3.710	-.217	-3.374	-.291	-3.648
Social Class Diversity	.075	.996	.085	1.150	.106	1.413	.102	1.378
Community Index			.530	5.789			.416	4.252
Student Selectivity					.359	4.764	.249	3.151
Parental Cooperation					.103	1.523	.053	.780
Student-Level Controls								
Black	-1.889	-9.187	-1.914	-9.327	-1.931	-9.400	-1.940	-9.449
Hispanic	-1.876	-11.375	-1.901	-11.532	-1.898	-11.510	-1.911	-11.593
Academic	2.22[illegible]	17.306	2.231	17.339	2.229	17.324	2.232	17.344
Social Class	.663	10.183	.665	10.213	.663	10.174	.665	10.201
Sophomore Achievement	.740	128.028	.738	127.799	.739	127.934	.738	127.791
% School-level Variance Explained		14.7		22.0		23.0		24.1

Notes:

The percentage of variance statistics reported in this table are the proportion parameter variability in school means explained by each model after first adjusting for differences among schools in student characteristics.

Table 15.

Predicted Effects of a Strong Communal Organization on an Average School (Base level = 50 percentile)*

Measure	Predicted Effect (percentile school rank)
Teacher Outcomes:	
Teacher efficacy	92
Teachers enjoy work	76
Staff morale	79
Teacher absenteeism	35
Student Outcomes:	
Cutting class	18
Student absenteeism	27
Classroom disorder	15
Dropping out	30
Interest in academics	73
Mathematics achievement	71

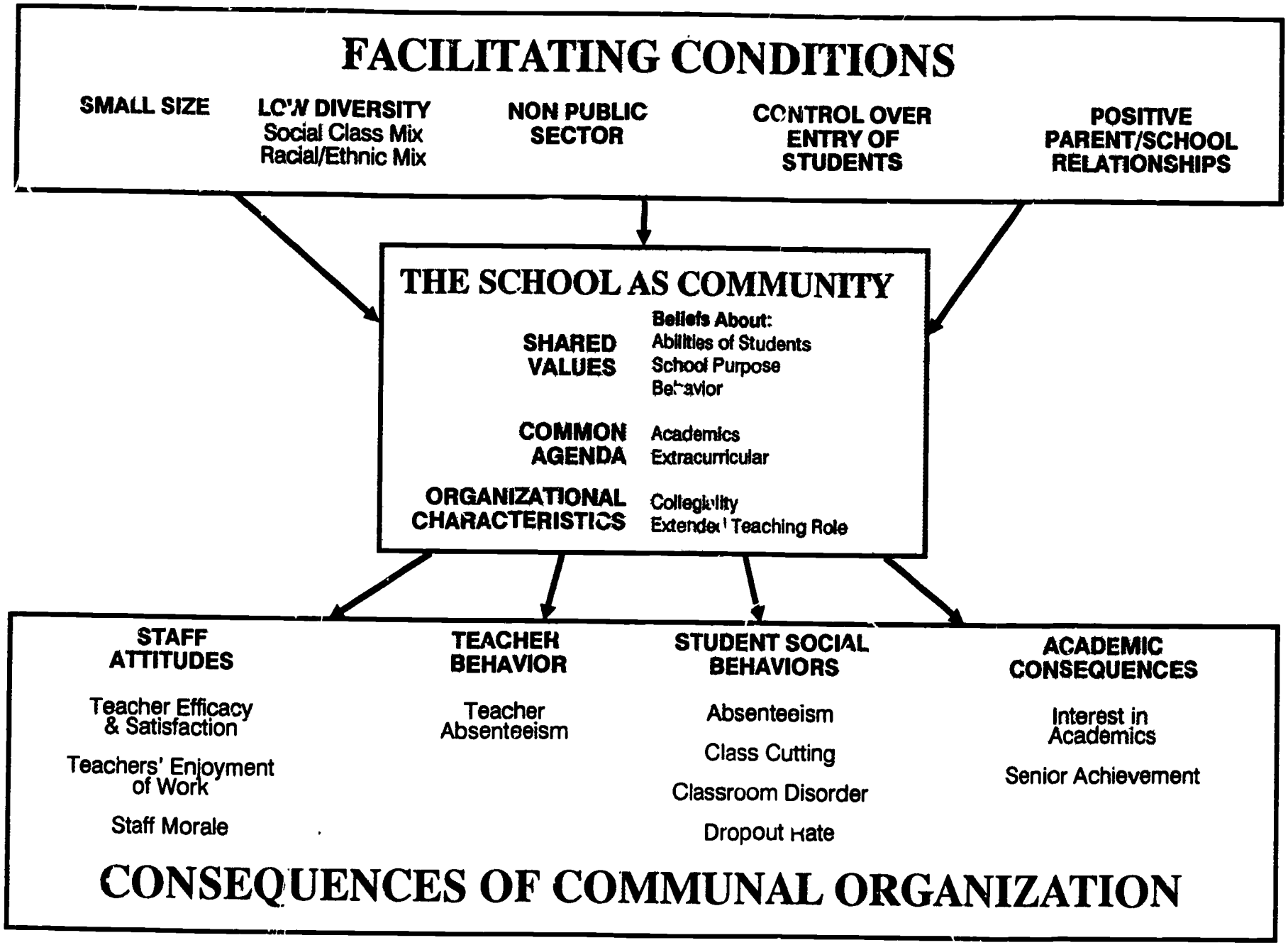

Figure 1. A Communal School Organization

Figure 2.

Indicators of Communal School Organization

Community Index	Kind of Measure
I. SHARED VALUES	
A. Beliefs About School Purpose	
1. Teacher Agreement on School Goals	Kendall's Coefficient of concordance for teacher goal rankings
2. Reported Teacher Consensus on Beliefs and Values	school mean of teacher reports on faculty consensus
B. Adult Beliefs About Student Capabilities	
1. Teacher Consensus That Students Can Learn	school mean of teacher reports on student abilities
2. Teacher/Administrative Agreement That Students Can Learn	*similarity measure of principal/teacher reports on abilities
C. Beliefs About Behavior of Students and Teachers	
1. Teacher/Administrative Agreement on School Discipline	school mean based on factor score of teacher reports on existing school standards
2. Student Beliefs About the Teaching Role	*similarity measure of student responses about characteristics of good teachers
II. COMMON AGENDA	
A. Academic Agenda	
1. Track Similarity	*similarity measure using student reports of their track
2. Coursetaking Similarity	*similarity measure using student reports of courses taken
3. Similarity of Math/Science Coursetaking	*similarity measure of specific math and science courses
4. Teacher Knowledge of Students (Class-Based)	log of odds ratio on teacher responses from teacher comment file
B. Extracurricular Agenda	
1. Percent of Students Involved in Extracurricular Activities	log of odds ratio based on student reports of participation
2. Percent of Students in Leadership Roles	log of odds ratio based on student reports of leadership roles
III. ORGANIZATIONAL CHARACTERISTICS	
A. Academic Collegiality	
1. Percent of Teachers Who Use Teacher Help	log of odds ratio based on teachers' report on whether they use other teachers for help in solving classroom problems
2. Teacher Cooperation With Colleagues	school mean based on factor score of teacher responses on 4 questions about cooperation
3. Teacher Time Planning With Other Teachers	school mean of teacher reports on amount of time spent collaborating with other teachers
4. Staff Commitment to Evaluation	principal report on staff's engagement in evaluation
B. Social Collegiality	
1. Participation in Faculty Socials	school mean of teacher reports on amount of time spent socializing with other teachers
2. Perception of Staff Support	school mean of teacher and principal reports on staff support
C. Extended Teaching Roles	
1. Teacher Time in Extended Roles	school mean of teacher reports on amount of time spent in extended roles
2. Percentage of Teachers Involved in Extracurriculars	log of odds ratio based on teacher reports of participation
3. Teacher Knowledge of Students (Beyond Class)	log of odds ratio based on reports from teacher comment file of all students known minus those known from class
4. Teacher Contact of Students Outside Class	log of odds ratio on teacher responses from teacher comment file
5. Student Perception of Teacher Interest	school mean based on factor score of student reports about teacher interest and influence

*Note: This is a squared difference measure transformed andrescaled as a similarity measure