DOCUMENT RESUME

ED 412 637 EA 028 713

AUTHOR	Braatz, Jay; Putnam, Robert D.
TITLE	Families, Communities, and Education in America: Exploring the Evidence.
INSTITUTION	Center on Organization and Restructuring of Schools, Madison, WI.; Wisconsin Center for Education Research, Madison.
SPONS AGENCY	Office of Educational Research and Improvement (ED), Washington, DC.
PUB DATE	1996-07-08
NOTE	37p.
CONTRACT	R117Q0005-95
PUB TYPE	Information Analyses (070) -- Reports - Evaluative (142)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	*Community Involvement; *Educational Improvement; Elementary Secondary Education; *Family Involvement; Outcomes of Education; *Parent Participation; *Research Methodology
IDENTIFIERS	*Social Capital

ABSTRACT

What the empirical evidence suggests about the relationship between parental involvement in noninstructional educational activities or wider networks of community engagement on the one hand and effective schools and student learning on the other is explored. Parent participation is discussed as direct involvement in school governance or as indirect participation in school-community collaborative efforts. It is generally agreed that schools need parental and community involvement to succeed. The concept of social capital refers to features of social organization that improve the productiveness of individuals and groups. As a concept, it originated in claims about the effects of social networks and norms in education in America. The empirical basis of those claims remains controversial, largely because of methodological difficulties, but there is good reason to suspect that many forms of social capital influence education powerfully, including the family, community engagement, and parent-school engagement. Preliminary exploration of three independent measures of educational outcomes (National Assessment of Educational Progress scores, Scholastic Assessment Test scores, and statewide dropout rates) strongly suggests that greater attention should be paid to the possible educational consequences of differing levels of social capital at both family and community levels. These findings raise questions about the methodology, causes, and mechanisms involved in social capital influences on education. Much effort will be needed to test theories linking social capital and educational outcomes and to develop effective social capital intensive strategies for improving education in America. Dilemmas associated with these efforts include equity-efficiency tradeoffs, the link between government and social capital, inclusive versus exclusive social capital, and disparities in class, status, and power. For all its promise, strengthening social capital is not an antiseptic, risk-free strategy for improving education. (SLD)

FAMILIES, COMMUNITIES, AND EDUCATION IN AMERICA: EXPLORING THE EVIDENCE

Jay Braatz
Harvard Graduate School of Education

and

Robert D. Putnam
Kennedy School of Government

FINAL DELIVERABLE TO OERI

Prepublication Draft. Chapter to be included in Wehlage, G. G., & White, J. A. (Eds.). (in progress). *Rebuliding the Village: Social Capital and Education in America*. London: Falmer Press. Not for quotation or reproduction without permission.

This paper was prepared at the Center on Organization and Restructuring of Schools, supported by the U.S. Department of Education, Office of Educational Research and Improvement (Grant No. R117Q0005-95) and by the Wisconsin Center for Education Research, School of Education, University of Wisconsin-Madison. The opinions expressed in this publication are those of the author and do not necessarily reflect the views of the supporting agencies.

FAMILIES, COMMUNITIES, AND EDUCATION IN AMERICA: EXPLORING THE EVIDENCE

JAY BRAATZ

HARVARD GRADUATE SCHOOL OF EDUCATION

ROBERT D. PUTNAM

KENNEDY SCHOOL OF GOVERNMENT

JULY 8, 1996

Many Americans are concerned with what appears to be a gradual deterioration in the quality of our children's education over the last several decades. The focus of this chapter is the educational consequences both of parents' non-instructional involvement and of wider community networks of civic engagement. Parental participation is here limited primarily to direct involvement in school governance or indirect participation in school-community collaborative efforts. What does the empirical evidence suggest about the relationship between parental involvement in non-instructional educational activities or wider networks of community engagement, on the one hand, and effective schools and student learning, on the other? Is there evidence to suggest that family- and community-based social capital holds promise for school improvement?

Gallop poll surveys highlight the US public's declining confidence in education. In 1940, eighty-five percent of Gallop respondents felt that their children were provided a better education than their parents were. In 1978, only thirty-five percent of those polled thought schools were better than they had been in the past, and three years later, in 1981, schools were given a grade of C-, on average.[1] Confidence in schools continues to plummet today as the public is bombarded with media reports of rising dropout rates, declining test scores, deteriorating educational facilities and an increasing gap in American students' achievement as compared to students in other countries.

In 1983, the watershed publication of the National Commission on Excellence in Education, *A Nation at Risk* , perhaps best summed up America's sense of the impending crisis in public education. The commission's much repeated assessment: "The educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a Nation and a people," spawned a wave of reform efforts, yet many would argue that the gloomy statistics cited in the document are little changed today, almost a decade and a half later.

Claims that student performance has, over the last three decades, stagnated, or even fallen, are widely cited in both academic and more popular accounts. Educational economist Eric Hanushek notes, "Comparisons of US and Japanese students in the early 1980's showed...that only five percent of American students surpassed the average Japanese student in mathematics proficiency," and goes on to claim that the academic advantage

Americans students once enjoyed over their European and Asian counterparts has eroded in recent years. Hanushek asserts that achievement on science exams for all racial groups fell between 1970 and 1982, and, although scores rose during the late eighties and into the nineties, by 1992, achievement scores had not reached their 1970 levels.[2] Others concur. Chester Finn, is his recent volume, *Education in the '90s* claims that although the publication of *A Nation at Risk* prompted sincere efforts to improve schools, the reforms had "scant impact" [p. vii]. Finn (pg. Xi) sums up the evidence: "Test scores remain flat or declining. International comparisons continue to show us at the back of the pack. Remedial education is the fastest-growing activity on many college campuses. Employers say they still cannot find competent workers. The quality of our civic and political life erodes."

Of course, empirical evidence for the deterioration of our nation's public schools is hotly debated. There is significant support for the stance that academic achievement has not regressed -- for example, scores on the National Assessment of Educational Progress (NAEP) have remained fairly constant over the last two decades.[3] The particular problems associated with using the most commonly cited index -- College Board tests -- as a measure of achievement, or even more problematic, changes in achievement over time, are well documented. It has been suggested that the decline in these scores is simply a reflection of the changing composition of test takers in recent years, especially the increase among groups that have not scored well on standardized tests in the past. (Howe, 1985; Cuban and Tyack, 1995).

So while there is no simple answer to whether schooling has worsened over the last several decades, there *is* broad public acknowledgment that there is much room for improvement. Regardless of whether one believes the schools have never been worse, or, conversely, that the schools have never been better, it is clear that the public schools need to do a better job of preparing students to think in critical and complex ways in order to compete in a global economy and take on the civic responsibilities required of citizens in a democratic society. More importantly, it is generally agreed that the schools cannot take on this work alone, and that to succeed parents and communities need to be involved.

1. Definitions and Dimensions of Social Capital

The concept of social capital, especially as introduced into educational sociology by James Coleman, refers to features of social organization, such as trust, networks and norms, that improve the productiveness of individuals and groups. The specific mechanisms that underlie the effects of social capital are varied, but one central theme is that voluntary cooperation is easier in a community characterized by high levels of civic engagement, reciprocity, and trust.

Coleman, in a study of the differences in student achievement in public and private schools, differentiated social capital from financial, human or cultural capital, to refer to "a variety of different entities, with two elements in common: they all consist of some aspect

of social structure, and they facilitate actions of actors -- whether persons or corporate actors -- within the structure" (1988). In the educational context, Coleman defines social capital as "the norms, the social networks, and the relationships between adults and children that are of value for the child's growing up" (1990). The hypothesis is that social capital, the connections between individuals established as a result of membership and participation in social networks, facilitates the development of obligation and trust that supports institutional structures such as schools (Coleman, 1990, 1994; Coleman and Hoffer, 1987; Schneider and Coleman, 1993).

Like its physical counterpart, social capital is not a single "thing" of which one can have more or less; it is not, in other words, a unidimensional concept. Important dimensions along which forms of social capital vary include the following:

Density, multiplexity, and closure. These dimensions are central to Coleman's work in educational sociology and social theory.[4] Networks that link a larger proportion of community residents in multiple ways, he argued, likely to be more effective in sustaining shared norms. Social networks are said, for example, to be denser, more multiplex, and more closed in Israel than in the United States.

Organizational structure: vertical vs. horizontal. It is a plausible hypothesis that egalitarian, horizontally-structured organizations constitute more productive forms of social capital, at least in a democratic setting, than vertical linkages that may embody subtle or not so subtle relations of exploitation and dependence. This distinction was central, for example, to Putnam's work on Italian regional politics.[5] Social networks are said to be more vertical in the backward Mezzogiorno, more horizontal in the productive center-north.

Social distribution: inclusive vs. exclusive. Some forms of social capital bridge underlying social cleavages, while other parallel and reinforce those cleavages. This distinction has been implicitly at the core of debates about, for example, busing in American education, and it deserves much more explicit attention in research on social capital and education. Other things equal, socially inclusive networks seem more likely to promote tolerance and healthy learning, although (as we note at the end of this essay) the implication of this hypothesis for educational reformers is far from straight-forward.

Social location: Place-based vs. function-based. Neighborhood ties represent one end of this spectrum, internet affinity groups the other. One general hypothesis is that place-based social capital is being replaced in contemporary America by function-based forms; in higher education, for example, campus-based social networks are declining, while discipline-based networks are expanding. A second and more disturbing hypothesis is that many social functions have traditionally been facilitated by place-based social capital, for which function-based social capital is an inadequate substitute.

Intimacy: Classically, sociologists distinguish between *primary* groups (such as the family) and *secondary* groups (such as a church or a bowling league). However, many or-

ganizations prominent in contemporary life (such as the American Automobile Association or the American Association of Retired Persons) embody virtually no connections whatsoever *among* their members, but only between *individual* members and a distant central office; these might be termed *tertiary* groups. Although often quite powerful politically, membership in tertiary groups in general has few immediate benefits for the effectiveness of community institutions.

Purpose: self-regarding vs. civic-regarding. No social group belongs exclusively on one side or the other of this distinction, but broadly speaking, the *mafia* and the Red Cross lie toward opposite ends of this continuum, with New Age self-help groups somewhere in the middle. In our view, the interpersonal networks at the core of the Michigan militia, for example, *do* foster trust and cooperation *among* the group's members, and in that sense they constitute a form of social capital, but the effects of these networks for the rest of the society are far from positive. In terms of Coleman's "functional" definition of social capital, it should be pointed out, social capital had, by definition, only positive consequences. We prefer a broader conception of social capital that makes evaluation of the broader consequences of social networks and norms an empirical, not definitional issue.

These distinctions (and perhaps others) need to be brought into discussions of the incidence, causes, and consequences of various forms of social capital.

2. Trends in Social Capital in America[6]

Historically, America has been blessed by unusually high levels of social capital. This fact, first emphasized by Tocqueville, is confirmed by contemporary social scientific evidence.[7] Recent research suggests, however, that over the last generation many familiar forms of civic engagement and social connectedness have declined.

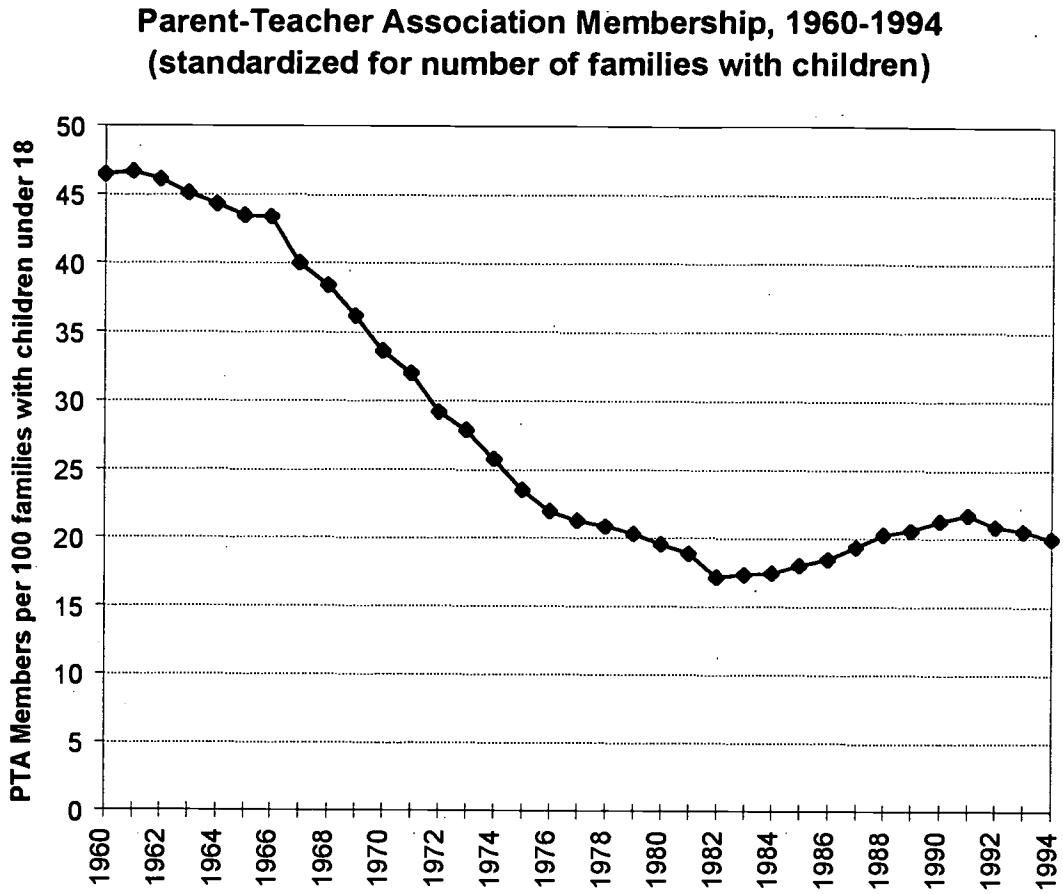
First, although efforts to influence government itself have not diminished, many types of communally-oriented political participation have declined – not just voting, but even such activities as "attend[ing] a public meeting on town or school affairs," the incidence of which has declined by 39 percent in the last two decades. Engagement in many civic organizations has sharply fallen since the early 1960s, including church attendance (off by roughly 20-25 percent), union membership (off by roughly 50 percent), and involvement in many civic and fraternal organizations (from the League of Women Voters to the Masons, off by 25-50 percent). Some organizations have enjoyed growing membership, of course, and the extent of this form of civic disengagement remains controversial. Rising educational levels have boosted more Americans into professions and social strata that have traditionally evinced high levels of civic participation, but that effect has been offset by a generational decline (particularly among so-called "boomers" and "X-ers") in the propensity to invest in enduring community ties.

Nor is this change in American life limited to formal organizational settings. A massive and widely discussed loosening of bonds within the family is reflected in higher divorce rates,

more single-parent families, and a sharp increase in one-person households. (Rioux and Berla report [p. 363] that "only 7 percent of today's school-age children come from families that were typical in 1965 – two-parent, single-wage earner families.") A decline in informal social connectedness within residential neighborhoods is also suggested by the fact (as recorded in the General Social Survey) that between 1974 and 1996 the frequency of "spend[ing] a social evening" with a neighbor has declined, even as the frequency of spending a social evening with "friends who live outside the neighborhood" has increased. Last but not least, social trust—not just trust in leaders and political institutions, but trust in "the generalized other"—has declined: the proportion of Americans saying that "most people can be trusted" (as opposed to "you can't be too careful") fell by two-fifths between 1960 (when 58 percent chose that alternative) and 1994 (when only 35 percent did). From the point of view of civic life, this erosion in social trust may be even more significant than any decline in organizational involvement. A world in which we are distrust one another is a world in which social collaboration seems a bad gamble, a world in which democracy itself is less safe.

More immediately relevant to issues of education, the parent-teacher association (PTA) has been an especially important form of civic engagement in twentieth-century America. We want to emphasize that PTA membership is not necessarily the most educationally significant form of parental engagement. However, membership in this organization does provide a conveniently and reliably measured index of long-term trends in one form of parental engagement with schools. It is, therefore, dismaying to discover that participation in parent-teacher organizations has dropped drastically over the last generation. As Figure 1 shows, adjusted for the number of families with schoolchildren, the proportion of American parents engaged in this way with their children's schools dropped by more than 60 percent between 1960 and 1982 and has hardly recovered since then.[8] What factors might underlie this decline remains unclear, but it is worth emphasizing that this trend appears to be part of a wider generational transformation of American civic life.

Figure 1



Although our investigation of these changes in American society is incomplete, it is worth noting that we do *not* interpret these trends as merely the latest installment of an ineluctable, secular degradation of social relations in modern society. Rather, we conjecture that the course of American history has witnessed both ebbs and flows in the creation of social capital. In fact, we see certain parallels between trends in contemporary America and earlier periods of social distress that served as a prelude for subsequent epochs of intense social capital formation. Be that as it may, the more recent changes form a backdrop for our exploration here of how patterns of civic engagement and parental involvement in schools might affect educational outcomes.

3. Social Capital and the Educational Process

The concept of social capital, though now being applied to a very wide range of phenomena, from economic development in India to crime rates in Sweden, originated in claims about the effects of social networks and norms in education on America. The empirical

bases of those claims remain controversial, largely because of important methodological difficulties, including

- the difficulty of distinguishing between structural and compositional effects (Is it, for example, the networks of middle-class neighborhoods that really matter or merely the material resources of middle-class individuals?)

- the difficulty of distinguishing between selection and socialization effects (Is it who sends their kids to private schools or the community in which those schools are embedded, for example, that really matters?)

- the difficulty of documenting precise causal mechanisms (As yet, few studies have been designed to test alternative hypotheses about how social capital might influence educational processes.)

Nevertheless, there is good reason to suspect (though much need to confirm) that many forms of social capital powerfully influence the educational process. These forms include the following:

The *family*, both nuclear and extended. The literature documenting the effects of the family on the educational success of children is, of course, massive. There seems little doubt that different family forms embody different quantities and qualities of social capital, and that they have different consequences for children's socialization. While much here remains controversial, there is some evidence that the traditional nuclear family is a more successful agency of socialization than the less conventional forms of single-parent or blended families that have become more common throughout the West over the last generation. This theme is treated at length in many other studies, and it is not central to our chapter. Toward the end of our chapter, however, we report ancillary evidence that underscores the importance of family structure for educational outcomes.

Community engagement. Other forms of social capital have also been linked to improved educational outcomes. These include youth organizations (see, for example, Heath and McLaughlin [1993], as well as Wynn's work contained in this volume), religious organizations, and other forms of civic engagement. We have found less empirically-based discussion of possible effects of broader community connectedness on educational outcomes, but we address this issue with some preliminary evidence toward the end of this chapter.

Parent-school engagement. A substantial body of literature has accumulated in recent years that suggests that educational outcomes are improved when families are directly engaged with schools. Anne Henderson, for example, has summarized a large number of studies tending to show that when parents are involved with their children's education, children do better in school and the schools they attend are better. Henderson and Berla (1994), in their review of the research, assert that "[t]he evidence is now beyond dispute. When schools work together with families to support learning, children tend to succeed not just in school, but throughout life...When parents are involved in their children's edu-

cation at home, their children do better in school. When parents are involved at school, their children go further in school, and the schools they go to are better" [p. 1].

Social capital within schools. Attention has also been given to the possibility that schools themselves vary in terms of social capital in ways relevant to educational outcomes. For example, this is one way of interpreting the observation by Lee and Smith (1994) than schools organized in a "communal" way are more effective than "bureaucratic" schools. Much of the research on "effective schools," "school-based management," and "school size effects" might also be reinterpreted in this way. This topic is treated in more detail in the contributions of Bryk and Schneider and Croninger and Lee to this volume.

Clearly more research is needed to begin to understand the full implication of the educational benefits of social capital in its many forms. Much of what is outlined above is beyond the scope of this chapter, as our primary focus is on parents' non-instructional involvement in schools and local participation in the education of children. However, at least in the area of parent-school engagement, our review of the literature indicates that when families directly engage in instructional activities the benefits for student achievement are clear, significant, and reasonably uncontroverted. Whether there are similarly strong benefits from non-instructional parental involvement – through PTA participation, for example, or in local school councils – is less clear from the existing literature, though some evidence suggests that this sort of involvement, too, improves school effectiveness.

In order to understand more fully the impact of parental participation on school effectiveness and student learning, some studies have distinguished parent involvement at school and parent involvement at home, while other studies have employed a typology that distinguishes between parent involvement with instructional activities and parent involvement with non-instructional activities. Drawing on Joyce Epstein's decade of research on parent involvement, Michael Fullan claims that parental participation in education can be defined to include four types of involvement: in-school volunteer work, often as classroom assistants or teacher aides; assistance to children at home, for instance, monitoring and tutoring related to homework; school-home communications that are the result of broad-based efforts by schools to establish relationships with their communities; and participation in school governance and advocacy. Fullan (1991) notes, "the first two forms of involvement have a more direct impact on instruction than do the other forms, and as such have a much greater impact on student learning" [p. 228-9].

Intuitively, the fact that parental involvement in instruction (either tutoring or acting as teacher aides in the classroom, or monitoring and helping with homework at home) is linked to increased student learning is not surprising, and research supports this conclusion. There is little question that parents have a strong positive impact on their children's success in school when they help in the classroom or at the kitchen table. A significant body of research has demonstrated a positive relationship between instructionally related parental involvement and student achievement (Clark, Lotto and McCarthy, 1980 and Fatini, 1980, Barth, 1979 and Epstein 1988). Epstein (1988) argues "[t]here is consistent evidence that parents' encouragement, activities, interest at home and their participation at

school affect their children's achievement, even after the students' ability and family socio-economic status is taken into account."[9]

Links between schools and parents (and schools and communities) are complex, and many factors influence the type, and level of parent involvement. Studies that fall within Fullan's typology of non-instructional parental involvement (school-home communications and participation in school governance and advocacy) typically consider a range of parental involvement activities (membership in the PTA, attendance at parent-teacher conferences, volunteer activities and involvement in school site management councils and subcommittees), clouding understanding of causal links between involvement and student outcomes. For example, while there is evidence that teachers' expectations of students rises when teachers collaborate with parents (Epstein, 1988; Lareau, 1989; Stevenson and Baker, 1987), it is less clear exactly what the causal path is between parents' engagement in schools and improvement in student achievement. Swap (1993) hypothesizes that a "partnership" model, in which parents are involved in all aspects of school life, is essential to significant gains in student achievement. By defining four types of parent-school relationships, Swap's work raises the issue of intensity of parental involvement, and proposes that the fact of parental involvement may not be a significant predictor of school improvement, but rather that it is the depth and quality of participation that matters. Swap's work suggests that is the development of trust, or social capital, between and among educators and parents, that allows for full collaborative relationships, or partnerships that hold promise for educational improvement.

4. PARENTAL INVOLVEMENT -- THE HISTORIC CONTEXT

A long research tradition links family background, typically defined by socio-economic status variables including parent's level of education, occupation and income, with student achievement and educational attainment. The most influential work in this tradition is the 1966 Coleman Report, which concluded that the home environment was the most important factor in explaining variation in student test scores, followed in importance by student body characteristics, teacher characteristics and finally school characteristics and curricula. (Coleman, 1966). The report was immediately critiqued on methodological grounds by a host of education production function studies, including reanalyzes of Coleman's original data. The major criticism was directed at Coleman's inattention to high correlations between groups of predictors, and his resulting underestimation of the effect of school variables. Although the debate about the Coleman findings continues, reanalysis of the data generally support Coleman's conclusions (Mosteller and Moynihan, 1972); there is little question that family background and home environment have a significant impact on student success. The importance of Coleman's work to the current debate is the establishment of the family as an important predictor in understanding student achievement. However, Coleman's worked centered around the question of whether the school *or* the family was more important as a predictor of student achievement. The question today might be framed a bit differently, can schools and families *working in concert* create an environment that facilitates school improvement and increases the probability of student success?

More recent research on parental effects on student achievement (see Bempechat, 1992, Henderson and Berla, 1994 and Sattes, 1985 for reviews) have explored a range of variables associated with student learning among different racial and ethnic groups to understand why parents respond to teachers' requests for interaction and involvement with schools differentially, and, ultimately, what the impact may be on student learning. Although parents from different income levels share similar values regarding their children's schooling (Coleman and Schneider, 1993), parents differ in their capacity to implement effective strategies to interact with schools. The resources parents draw on to respond to school requests for participation are largely determined by social class (Lareau, 1989). This research suggests that any examination of parental participation must consider race, ethnicity, level of parents' education and social class, as well as the degree to which parents feel empowered by the process a school chooses to use to engage parents, as significant factors in the manner and degree to which parents involve themselves in their children's' schooling. Yet it is important to note that traditional measures of socio-economic status do little to define levels of social capital in communities. Recent research that has begun to explore the strength and complexity of parent and community networks in racial minority or strong ethnic communities (Delago, 1992; Hildalgo, 1992; Swap, 1994) suggests that traditional values, cultural norms, and community networks play a role in involving parents in their children's schools. Social clubs, the church and extended families in Puerto Rican communities have been identified as strong "natural support systems" and potential resources for school involvement (Delago, 1992).

Although it is difficult to discern whether research has driven practice, or changes in practice have sparked research efforts, evolving interests in the research community concerning parent and community participation in schools have mirrored shifts in parental involvement practices in education over the last 50 years. Parental activity during the early post World War II decades consisted primarily of school support through parent conferences and PTA fund-raising activities, as well as homework monitoring, report card review and occasional assistance with projects such as term papers (Fruchter, et al, 1992). Although home-school relationships were of importance, the implicit model during those decades assumed two distinct and separate realms of influence on the child. School matters were attended to by the professional educators, and home affairs came under the purview of the parent. The rise of the civil rights and community organizing movements of the sixties prompted thinking about new models for community involvement in public agencies, including schools, at the same time they drew attention to the low achievement of low-income, minority students. Parental participation in education was seen not only as a means to involve parents more directly in their children's education, and thus boost student achievement, but also as a means to make schools more accountable to the communities they served (Davies, 1981). Responding to research that indicated parental involvement in schools was one way in which to improve educational outcomes for low-income students, in the mid-1960's and 1970's policy-makers enacted federal legislation (Title 1 and Head Start) that included provisions mandating low-income parental participation in school councils and program advisory boards (McLaughlin and Shields, 1987). Although participation following the legislative mandates of the 1970's was more broadly

based than it had been in the past, for low-income parents involvement was largely ritualistic, and for middle-class parents, involvement remained predominantly through traditional avenues, such as the PTA or other volunteer activities. In spite of federal support, the mode of parental participation was little changed in the decades of the 1960's and 1970's from that of the 40's and 50's (Fruchter, 1992).

Today, in the nineties, attention has shifted again. A number of states have enacted legislation calling for systemic reform of whole educational systems, and Clinton's Goals 2000: Educate America Act, calling for comprehensive approaches to educational reform, encourages and promotes family involvement in school improvement efforts. Schools are seen as part of a network of social service agencies that, acting in concert with one another, can begin to address the needs of the whole child. Increasingly, parents are seen as essential partners as schools seek new ways to forge school-community linkages.

5. PARENT INVOLVEMENT -- NETWORKS IN SUPPORT OF EDUCATION

The body of literature focused on the educational impact of parent involvement is rooted in research conducted by James Coleman, Thomas Hoffer and Sally Kilgore in the 1980s. Using longitudinal data, Coleman, Hoffer and Kilgore (1982) found that students in both private and Catholic high schools achieve superior results academically to their counterparts in public school. Specifically, the authors found that private and Catholic high school students score, on average, one grade level higher on standardized tests, and are more likely to graduate, and go on to college completion, as compared with public school students. Coleman, Hoffer and Kilgore suggest that the difference in student achievement is due to the difference in parental involvement in schools, measuring parental involvement by the proportion of parents that attend parent-teacher conferences, PTA meetings, visit classes, contact educators about student problems, or do volunteer work in schools. The authors note lower proportions of public school parents, as compared to private, involved in each of these activities, with the exception of parent-teacher contact. More specifically, Coleman, Hoffer and Kilgore find that almost twice as many parents volunteer in private schools as compared to volunteer involvement by public school parents. (The differential is less pronounced on other measures.)

Several things are important to note about Coleman, Hoffer and Kilgore's research. Although the sample was stratified to allow over-sampling of private schools, most analysts have concluded that the data is insufficient to make conclusions about student performance in non-Catholic public schools, and some have questioned whether results were substantial enough to support the conclusion that private schools are superior to public schools (Jencks, 1985). But the sharpest methodological criticism concerns the issue of selection bias (Alexander and Pallas, 1983; Cain and Goldberger, 1983). Murnane, acknowledging the selection bias issue, reanalyzed the data (1986) to ask the question, "[w]hat would the achievement of the average public school student be if he or she attended a Catholic school or other private school *and took along his or her public school students?*" In other words, is it the composition of the student body (influenced in the

Catholic schools by students' decision, or selection, to attend a parochial school) that affects student achievement? The research results are illuminating. First, in reanalyzing the data to examine student achievement as measured on a standardized test of vocabulary and reading skills, the size of the effect between public and private schools, before controlling for student body characteristics, is quite small. Reporting the results of his second analysis, controlling for student composition, Murnane notes, "[t]he Catholic school -- public school gap shrinks by 60%. The gap that remains is statistically significant at the 0.05 level, but this gap is very much smaller. The scores that public school students would achieve in other private schools if placed their with their public school classmates are actually lower than the public school scores, although the difference is not statistically significant" [p. 146].

Murnane reaches two related conclusions that are relevant to this review. The first is seemly obvious, it matters what school a student attends. Murnane asks the reader to "recall the press reports following the publication of *Equality of Educational Opportunity* in 1966, which might be summarized as, schools don't matter, families do. The evidence from the HSB data [High School and Beyond data used in the Coleman, Hoffer and Kilgore research] indicates differences among schools do matter" [p. 161] Secondly, there is considerable variation among schools of similar type, and therefore, "in predicting the quality of a student's education, it is less important to know whether the student attended a public school or a private school than it is to know which school within a particular sector the student attended" (1986, p.162). Neither conclusion discounts the hypothesis that parental involvement positively impacts student achievement, but neither conclusion confirms it. It may be that schools with high levels of parent engagement support high levels of student academic success, but subjected to detailed scrutiny Coleman's findings are inconclusive in this regard.

More convincing support for Coleman's findings comes from the more recent work by Bryk, Lee and Holland on Catholic schools, although this work does raise questions about the importance of non-instructional parental involvement (1993). Recapitulating Coleman and Hoffer's findings, Bryk, Lee and Holland report that, first, a student is more likely to achieve at higher academic levels in a Catholic school as compared to a public school, secondly, that there is a lower dropout rate from Catholic schools compared to the public schools, and, finally, that achievement is spread much more equitably across race and socioeconomic status in the Catholic schools.

Bryk, Lee and Holland differentiate between "parent involvement", defined by "measures of attendance at PTA meetings and parent-teacher conferences, visiting classes and volunteering at the school" and "parent engagement in children's learning" as measured by "parents' supervision of students' schoolwork and knowledge of students' personal activities", and note parent involvement and engagement have different effects on students' academic outcomes. The authors find engagement impacts students' learning, and note a positive relationship between parental engagement and "a student's interest in academics and good grades, doing more homework, being ready for instruction, and taking more math courses and fewer vocational courses" as well as "less unexplained absenteeism and

fewer discipline problems." But the authors do not find a relationship between parental involvement in the organization of the school and student learning, or academic success.

The authors note that parental involvement in Catholic schools, while very important, is generally involvement in school activities ("fund raising to attending student events") rather than governance. This conclusion has relevance to the school reform literature that calls for parental participation in school decision making, or at least is relevant to the assumption that changes in parental roles in school governance have the potential to affect student learning. Bryk, Lee and Holland find the parent-Catholic school relationship unique, "mirroring neither the democratic localism envisioned in some versions of urban school reform nor the contract-for-services image offered by others" [p. 307]. Bryk, Lee and Holland propose that Catholic schools, as "communal organizations", utilize as a resource the shared beliefs about school life as well as social interactions beyond the school. The authors conclude their discussion of parents noting "the participants' accounts suggest to us that trust relationships may be more essential to schooling than has generally been acknowledged, particularly in the context of efforts to provide greater educational opportunities for disadvantaged youth. If correct, this observation poses a major challenge for urban education. The large public schools and bureaucratic structures found in most cities constitute major impediments to forming and maintaining the relationships of trust observed in the Catholic schools" [p. 308].

The issue of trust, or social capital, that appears to be absolutely critical in Catholic schools, is also posited as a crucial variable in the more recent school choice literature. Perhaps one of the most frequently cited examples of successful school choice is New York City's District 4 and Central Park East, located in East Harlem. Founded in 1964, Central Park East was conceptualized as a "democratic community" for both students and adults (Meier, 1987). Parents were integral to the school; indeed their participation was believed to be essential. The success of Central Park East, after thirty-plus years, is well documented and undisputed. While it would be erroneous to state that successful outcomes for students are solely due to parent and community involvement, as the founder Deborah Meier notes, "no school can complete its educational task without the support and trust of a student's family" (Meier, 1995, p. 372). Meier proposes that choice offered a way for parents and teachers to interact collaboratively in District 4, and that the frequent formal and informal interactions between Central Park East and families allowed for the development of mutual respect and trust. Peter Cookson (1994), in his recent review of the school choice controversy, argues for the "reinvention" of American education through the mechanism of school choice. Although we do not intend to enter the debate about choice here, we tend to concur with the general thrust of Peter Cookson's conclusions about parent involvement and the importance of social trust:

> Almost all research indicates that parent involvement in schooling is beneficial to students' cognitive and affective growth....Schools are social organizations, and if they can influence families and communities to be more participatory, it makes sense to think of choice as a way of creating community. John E. Coons (1992) has written that school choice is based on social trust. If choice does indeed create

more social trust, then it is an experiment worth pursuing, within the context of improving and transforming public education (p. 98). The message to be extracted here is that parent involvement matters to student learning, but even more importantly, community networks of trust are vital to the creation of effective public schools.

Other research confirms the importance of social capital to education. Smith, Beaulieu and Israel (1992) using longitudinal data to explore the impacts of human capital and social capital on the probability of a student dropping out of high school, argue that community social capital, estimated in measures of family mobility, and student involvement in church, is related to school dropout rates. These researchers find that, on average, students who moved frequently after fifth grade were almost twelve percent more likely to drop out of school as compared to students who never move, and students who were actively involved in church were three percent more likely to stay in school, compared to students who did not participate in church activities. Noting the need to disentangle the impact of resources available to a parent, Muller and Kerbow find that a sense of community among parents, students and educators improves students' success in school (1993). Focusing on family structure, Lee finds although students in traditional two-parent families are better behaved and score higher, on average, on standardized achievement tests, as compared to students in single-parent, melded or other relative or guardian family structures, the negative effects of non-traditional families can be mediated, to some degree, by parent involvement (1993). The links between schools and families are still not fully understood, but one study (Lee, 1994) indicates that the long-term involvement of parents (over three critical years for the student -- Grade 8 through 10) improves student attitudes, behaviors, grades and school attendance. Muller, in a study of parent involvement in the home, school and community, finds parent-school ties, and participation in parent-teacher organizations is positively related to student grades. Muller also finds, that parent friendship networks, or the community networks established among parents, are positively associated with both student test scores and grades (1993). It is important to note that in all these studies the impact of parent involvement is small, however they do suggest the importance of social capital as a variable in successful student outcomes.

6. Social Capital and Educational Reform

In the 1970's, the effective schools movement emerged as part of the first wave of recent school reform efforts, and the effective schools research (see Purkey and Smith, 1983 and Rosenholtz, 1985 for reviews) began, in part, in response to Coleman's 1966 argument that schools do not make a difference. (Henderson and Berla, in their review of the research on parental involvement (1994), note, "[d]irectly or indirectly, all the studies address the extent to which family socio-economic status determines the quality of student performance." In many respects, Coleman's findings in 1966 continue to provide a framework for research that explores the relationships between families, schools and student achievement.) It is well recognized that socio-economic status (SES) is a strong predictor of student achievement (Baker and Stevenson, 1986; Eagle, 1989 ; Sattes,

1985), yet it is also known that some schools serving low SES students report consistently higher standardized achievement scores than would be expected given students' family background characteristics.

The effective schools research set out to examine organizational characteristics of exemplary schools in low income communities, or inner-city schools that produce superior achievement test results for low-SES students (as compared to national norms for similar student populations), to answer the question, what school characteristics can be linked to improved student achievement? Six "effective school" factors correlated with student achievement and were identified as crucial to school effectiveness, yet parental involvement as one of these predictors was conspicuously lacking in this early research.

Because parent practices were viewed by the first effective schools researchers as outside of schools' spheres of influence, parental involvement was not originally considered as a potential factor in school improvement. Yet as effective school designs, based on the early research, were implemented more widely, parents were recruited for school-based teams to ensure their support for the movement. Although these efforts spawned debate about the relative importance of parental involvement, the research evidence was anything but conclusive. In their review of the research, Purkey and Smith note that some studies find a positive correlation between parental support and student achievement, and conclude "parental involvement is not sufficient, but that obtaining parental support is likely to influence student achievement positively." (Purkey and Smith, 1983)

In the 1980's and 1990's, in contrast to the 1970's, calls for school change did and do include provisions for parent involvement. Recent concern about the links between social capital and the educational process has produced a number of important experimental efforts designed to increase parental and community involvement with schools. These include (among others) James Comer's "School Development Program," Henry Levin's "Accelerated Schools Program," the Chicago experiment in school decentralization, and the Texas "Alliance Schools" program, as well as the work of Joyce Epstein and of Bronfenbrenner and Cochran. These innovative initiatives have generally received favorable assessments, although rigorous evaluations are plagued by the methodological difficulties mentioned earlier. Moreover, since each of these initiatives is multifaceted, it is hard to be sure just which factors are most critical.

James Comer's long-term program to transform two of New Haven's inner city schools, as well as his work in several schools in Michigan and Maryland, is guided by a set of guiding principles, shared among teachers, administrators, parents and students. Two of these principles address comprehensive parent involvement: "[c]oordination and cooperation among all adults concerned with the child's best educational interests" and "active involvement of parents every step of the way" (Comer, 1992). Research from Maryland indicates that students in Comer's School Development Program (SDP) schools, as compared to control groups, show gains in reading and math scores, as well as gains on behavioral measures (Comer, 1988). In New Haven, the two Comer schools, that initially ranked near the bottom in achievement and attendance among the city's thirty-three

schools, have shown impressive student progress over the project's fifteen year history. After five years, students in both schools had the best attendance records in the city, and their achievement test scores had risen to near-grade level. After fifteen years, academic performance in both schools was at grade level (Comer, 1992). Although the results are encouraging, it is important to acknowledge that the existing research does not single out the possible effects of parental participation as distinct from of other elements of the Comer "package" of reforms. In other words, it is still unclear whether some SDP components have greater effects on student achievement than do others.

Harry Levin's Accelerated Schools program, like Comer's work, is characterized by, as Swap notes (1993) a "partnership" model of parent involvement. Levin's California Accelerated Schools are designed to "accelerate" the learning of disadvantaged students and bring their work up to grade level prior to graduation from sixth grade. The program goal is to prevent future dropouts by designing an intervention in the elementary school years. The schools involve parents deeply; a contract outlining obligations is signed at the beginning of the program (Levin, 1987). After four years, accelerated school students' achievement scores were shown to be significantly improved, as compared to students in other district schools (Swap, 1993). However, it is important to note that the research on Accelerated schools suffers in the same way as the SDP research. Without disaggregating program elements, it is unclear to what extent parent involvement directly impacts student achievement.

One of the most recent areas of inquiry on non-instructional parental involvement is the body of research on school restructuring. It is important to note that school restructuring can take a variety of forms, although one might summarize the changes in school governance into two major efforts: site-based management (SBM) and shared decision-making (SDM). Site-based management is essentially an attempt to move decision-making authority away from a central state, district or local entity to the individual school site. Shared decision making is an effort to expand the numbers of individuals involved in the decision making process. More specifically, shared decision making is an attempt to move from more autocratic school governance structures to more democratic, participatory decision making processes involving teachers and parents. The use of either SBM or SDM does not necessarily imply the use of the other, and the level of participation by different constituencies (parents, teachers, school administrators, and the community) varies across different school restructuring plans. In research on SBM and SDM, policies regarding the influence of parents differs markedly across different regions of the country, and actual participation levels differ from school site to school site.

Most research concerning parental involvement in governance has tended to demonstrate little positive effect on student learning, although some would argue the research is inconclusive. In one review of the literature, evidence neither rejected nor confirmed hypotheses about impacts on students. (Fantini, 1980) In five case studies in very different settings, University of Wisconsin-Madison found no correlation between the level of parental participation in school governance and student achievement (Bowles, 1980). Yet other

research has demonstrated that parent groups can be very effective in improving schools (Joyce, 1978 and Moore, Weitzman, Steinberg and Manar, 1981).

The argument has been made that the major impact of school-based management has been on adults, with little impact on student outcomes (David, 1990). Yet it may be that parents, because of lack of knowledge about school business or norms of conduct within councils, have been participants in school governance in name only. Examination of site based councils has revealed that the balance of power and authority often remains unchanged with the establishment of new governance structures, as principals continue to exercise primary power over school decision-making.

In System Development Corporation (SDC) research on parental participation in federally funded educational programs, in only in a very small proportion of parent advisory committees could parents be characterized as actively involved in school governance (Fullan, 1991). Two key points emerge from this and other research. First, beyond token roles, there is relatively little active parent involvement in school governance, even when mandated. Second, if models for serious parent involvement were well implemented, the question remains, would parental participation affect school performance? Here, there are indications of more encouraging news. Data from California and Chicago, as well as the SDC research, suggest parent advisory committees and councils that are active, have clearly delineated tasks, have the capacity to gather necessary information, and function effectively as a group themselves have the capacity to press for needed reforms, impact school improvement and influence the delivery of instruction (Joyce, 1978; Davis, 1981).

A particularly important, and potentially revealing, case study of the impact of parental participation exists in the recent restructuring of governance in Chicago. It is important to note that Chicago's councils are unique. In most school districts, educators hold the majority of votes on school-site councils (the bulk of the research literature on school-based management focuses on teachers and principals for this reason). In Chicago, local-school councils (LSC) are comprised primarily of parents, and have broad decision-making authority, including the authority to hire and fire principals.

Although we do not intend to review the Chicago school reform effort in depth here, early data from Chicago does suggest that "high social resource" schools, schools where the local school council is active and schools in which the whole school community is engaged in the debate about school quality, seem to be most effective in moving reforms forward. Schools governed by "strong democracies" are more likely to indicate systemic improvement efforts (Bryk, 1993). As the researchers themselves propose, "school change necessitates the development of trusting personal relationships among parents, teachers and principal, and requires that these relationships be sustained if school staff are to take risks, work together, and stay committed for the long haul. That is, this systemic change process demands a strong democratic practice" (Bryk and Rollow, 1992, p. 6).

Parent involvement as it is conceptualized in Chicago extends beyond the local school councils and draws on the resources of the community. The most important of these re-

sources, at least in Chicago, seem to be existing social networks. A comparison (Bryk and Rollow, 1993) of two elementary schools draws preliminary attention to parent participation levels, mediated by community networks, as a predictor of school success. Although both schools studied are located in economically disadvantaged neighborhoods serving exclusively low-income students, the schools differ markedly on measures of parent involvement. The communities also differ dramatically, in terms of social resources. The church, as well as extended families, provide many avenues for social interactions in only one of the communities. The research suggests that social networks that facilitate parental engagement in schools are vital to the progress of reform efforts. Although the changes in school governance in Chicago created opportunities for effective local participation, three factors were found to influence the degree to which the Chicago School Reform was implemented: school leadership, outside expertise and whether or not the community had social resources the local school council could tap.

Other research has confirmed that comprehensive parent-community-school collaborations are an important component of school improvement. Wilson and Corcoran's analysis (1988) of 571 secondary schools cite community involvement as one of six elements that characterized effective schools. The benefits derived from community collaboration included the availability of outside expertise, political support, and the development of a school-community culture that values education. In Tennessee, parent involvement in the elementary schools was found to be related to improvement in student's skills, attitudes and behavior (Lueder, 1989). But wholesale organization of a community in support of educational change is perhaps best exemplified in the work of the Texas Industrial Areas Foundation.

Although the Texas Industrial Areas Foundation's work with the Alliance Schools is described more fully elsewhere in this volume, it is important to give it brief mention here. The success of the Alliance Schools seems well documented (Shirley, 1995). Test scores have risen, student attendance has improved, and teacher retention rates are up. One of the chief components of the IAF strategy is collaboration between educators and parents; neighborhoods and congregations; community-based organizations, churches and schools. The IAF model requires the engagement of parents and citizens in the revitalization of their community schools. In short, the role of social capital is a necessary ingredient to school improvement. As Shirley concludes:

> Assume that James Coleman's hypothesis is correct, and that one reason for the poor academic performance of American public school students is the low social capital of inner city neighborhoods.... The Texas IAF has sought specifically to "reweave the fabric" or build social capital in inner city neighborhoods to promote environments conducive to stability and success of working class youth.... Those parents who are active in the Alliance Schools now have the opportunity to make sure their own children receive better education and become politically involved.... The Texas IAF's work should provoke a radical reconceptualization of the problems confronting contemporary public education. The reconceptualizations are not based on tinkering here and there to make the given system work better, but on a revitalization of what it means to be a public person and what it means to live in a

democratic society.... The concept of citizenship in Texas IAF organizing is based on nonmarket values of trust, reciprocity and community (pp. 149-50, 160, 172).

7. Community-based Social Capital and Educational Outcomes

The African proverb, "It takes an entire village to raise a child" has had some resonance in current discussions about education in the US. Recently, a US Department of Education publication on family-school partnerships (1994) asserted that "the complexity of raising and educating children today *requires* support from all parts of the community" [p. 44] (Emphasis added). One interesting research question that arises from this mandate for partnerships is whether some kinds of "villages" (that is, communities with more social capital) can do a better job of raising and educating children than others.

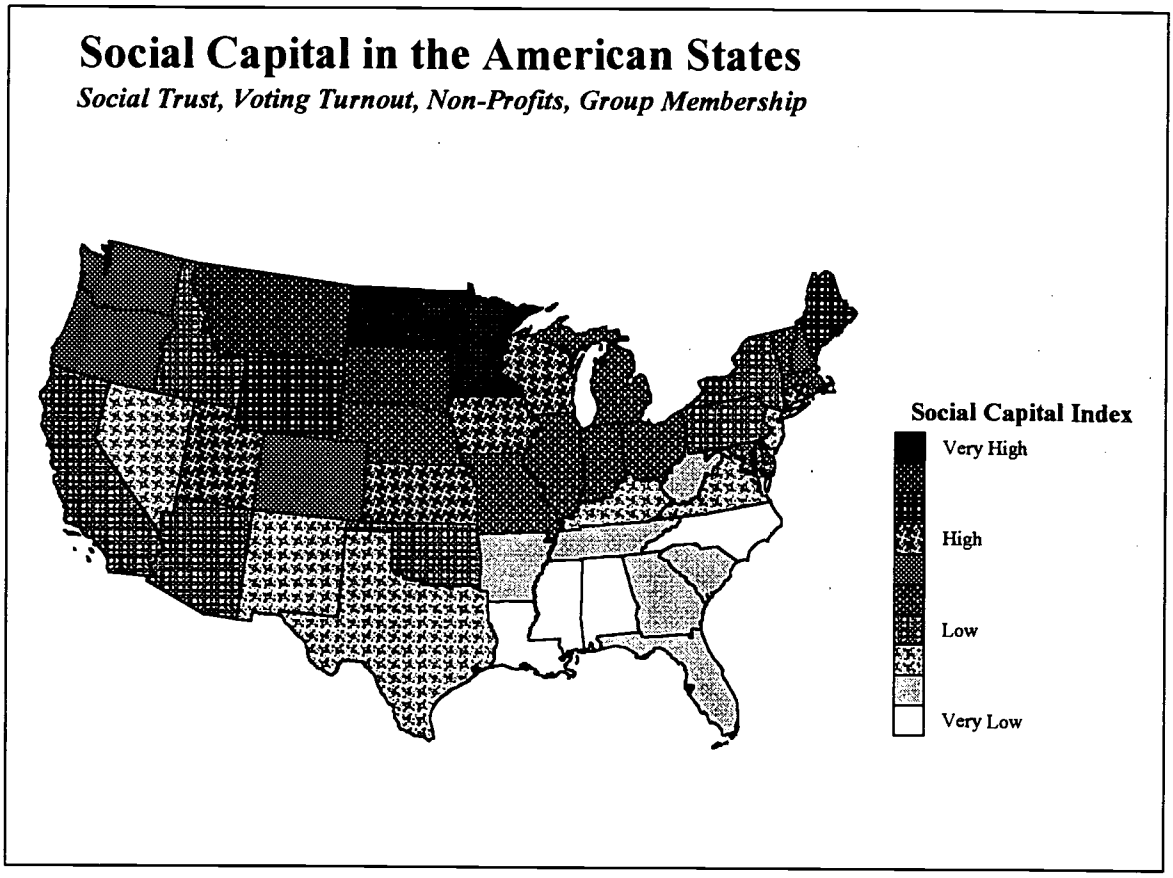
As we have noted several times in this chapter, some research on social capital and educational outcomes (Delago 1992; Heath and McLaughlin 1993; Cookson 1994; Bryk and Rollow 1993) suggests that learning may be influenced not only by what happens in school and at home, but also by social networks, norms, and trust in the wider community.[10] One plausibility probe of this hypothesis is to examine correlations between educational outcomes and social capital at the aggregate level.

As is well known, educational outcomes differ markedly across the American states, as evidenced by test scores from the National Assessment of Educational Progress (NAEP)[11], by Scholastic Aptitude Test (SAT) scores[12] and by dropout rates[13]. In 1992 nationwide math tests, for example, 87 percent of public school 8th graders in North Dakota and 86 percent of Iowans scored above 250 (the nominal midpoint), as compared to 45 percent of Mississippians and 32 percent of students in the District of Columbia. High school dropout rates in 1990 ranged from 4 percent in North Dakota and 6 percent in Minnesota to 15 percent in Nevada and 19 percent in the District of Columbia.[14] Could such contrasts be related, at least in part, to differences in community-based social capital?

States—and therefore the communities that comprise them—differ significantly in their levels of community-based social capital and civic engagement, as suggested by such simple indicators as social trust, associational membership, voting turnout, and the incidence of non-profit organizations. The variance among the states on such measures is quite substantial, with ratios of as much as 3:1 between high- and low-ranking states. Average levels of social trust as expressed on surveys, for example, range from 22 percent in Mississippi to 66 percent in Minnesota.[15] The average number of associational memberships per capita varies from 1.2 in Louisiana to 3.1 in North Dakota.[16] Voting in recent presidential elections has varied between 42 percent in South Carolina and 69 percent in Minnesota.[17] The number of non-profit (501[c]3) organizations per capita ranges from 1.2 in Mississippi to 3.6 in Vermont.[18] These four indicators measured related but distinct facets of community connectedness, and we have combined them into a single Social Capital Index.[19]

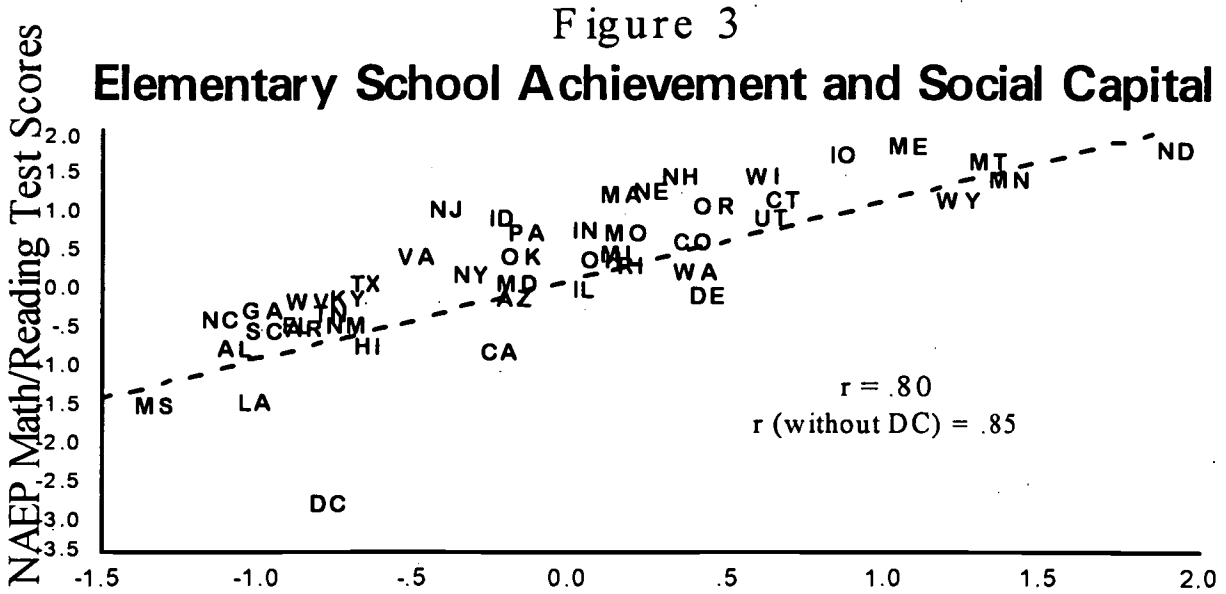
Figure 2, which maps this summary statewide measure of social capital, shows that, geographically speaking, the national social capital "barometric map" is fairly straightforward. The primary "high pressure" zone is centered over the headwaters of the Mississippi and Missouri Rivers and extends east and west along the Canadian border. The primary "low pressure" area is centered over the Mississippi delta and extends outward in rising concentric circles through the former Confederacy. California and the mid-Atlantic states lie near the national average.

FIGURE 2



Figures 3-5 reveal that this Social Capital Index is strongly correlated with each of our three broad measures of educational outcomes. States where citizens vote, join, support non-profits, and trust one another in unusual measure boast consistently higher educational performance than states where citizens are, on average, less engaged with civic and community life. Somehow the former, as contrasted with the latter, seems to encourage relatively high achievement in both primary and secondary school. Figures 3-5 demonstrate a surprisingly consistent correlation between social capital and educational outcomes. Roughly half of all inter-state variation in these three measures of educational outcomes appears linked to levels of social capital.[20]

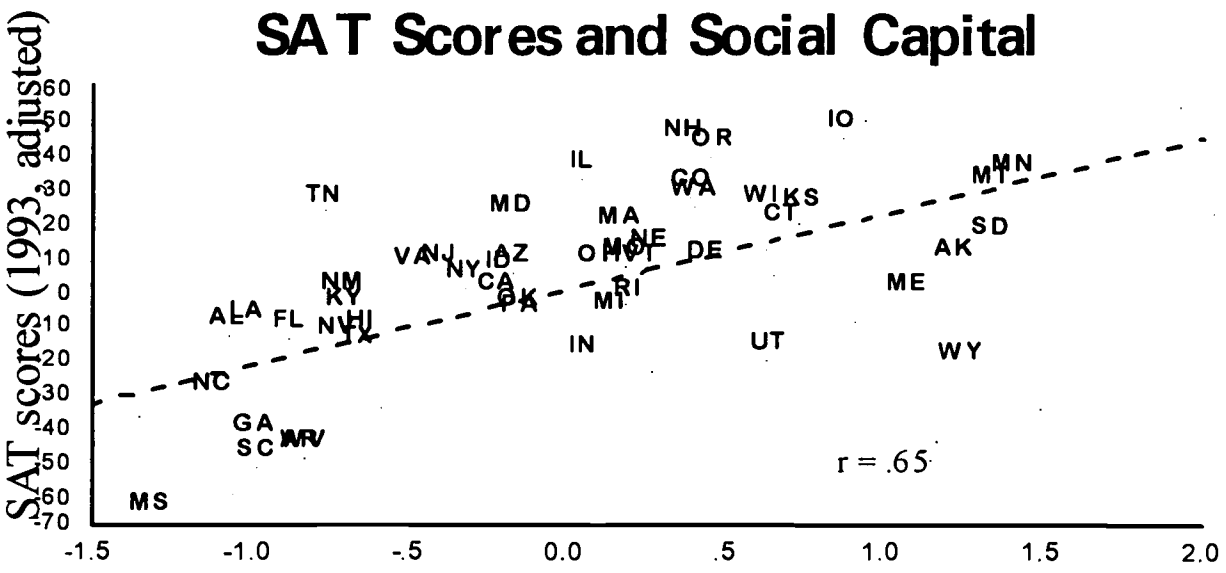
Figure 3



Soc Cap Index includes trust, turnout, group members, and non-profits.

NAEP scores are mean Z-scores for reading (1994) and math (1990 & 1992).

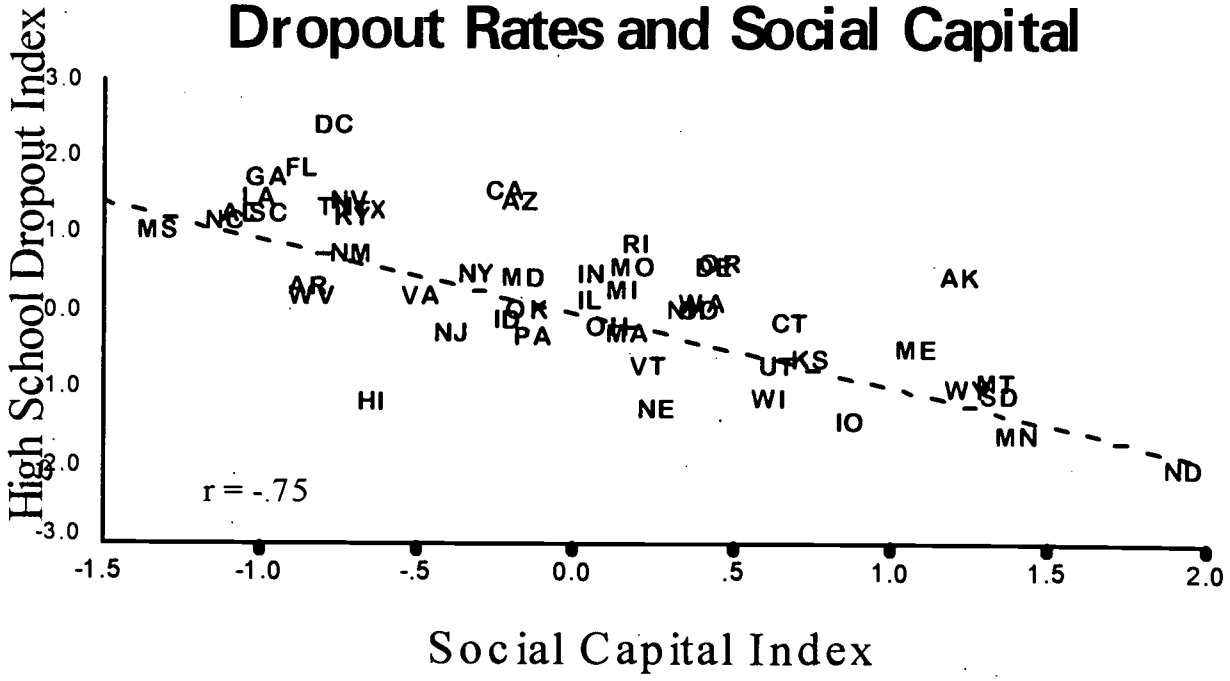
Figure 4



Soc Cap Index includes trust, turnout, group members, and non-profits.

SAT scores adjusted for participation rates (Powell/Steelman, 1996).

Figure 5



Social Capital Index

Soc Cap Index includes trust, turnout, group members, and non-profits.
Dropout Index is a composite of three independent measures, 1989-90.

To be sure, states also differ along many other dimensions that might in principle confound this simple bivariate relationship – affluence[21], adult educational levels[22], racial composition[23], poverty rates[24], educational spending, teachers' salaries[25], average class size[26], family structure[27], religious affiliation,[28] the size of the private school sector (which might "cream" better students from public schools), and so on. In an effort to test the robustness of the presumed "social capital effect," we have conducted a reasonably comprehensive set of multiple regression analyses, including each of the factors just listed. Not surprisingly, several of these other factors have an independent effect on educational outcomes, but in all cases social capital (as measured above) remains a statistically significant influence on educational outcomes, controlling for these other variables. The best fitting model in each case is presented in Tables 1-3, along with an indication of what variables we have been able to exclude as having no statistically significant effect.

In the case of the NAEP composite test scores (Table 1), the most powerful correlate of educational outcomes is family structure (itself another form of social capital), followed by social capital at the community level.[29] Statewide test scores are systematically higher, *ceteris paribus*, where students come from two-parent homes and where citizens are actively engaged in community affairs. Somewhat less powerful, though still direct, influences on this measure of educational achievement are class size, poverty rates, and (less robustly) state racial composition.[30] Educational spending has no direct effect, although additional analysis (not shown here) suggests that it has a modest indirect effect via its impact on class size.[31] Similarly, race, poverty, and the educational composition of the state's adult population have little or no direct effect on statewide educational achievement, but significant *indirect* effects through their impact on family structure and/or community engagement. The bottom line is that the two most powerful and direct correlates of statewide NAEP test scores (controlling for other relevant variables) are both forms of social capital, one centered in the family and the second in the community.

Table 2 shows that social capital (in the form of community ties, not family structure) and state income levels are reasonably strong predictors of SAT scores, adjusted for participation rates (Powell and Steelman 1996). Once these variables are controlled, none of the other variables in the analysis has any direct effect on SAT scores.[32] As in the case of the NAEP test scores, SAT scores are indirectly associated with the racial composition of the state, the average educational levels among adults, and the incidence of poverty. However, all those factors become statistically insignificant when we control for social capital, implying that race, poverty, and education affect dropout rates only indirectly, via their impact on social capital. In short, with or without controls for all other variables we tested, by far the best predictor of adjusted statewide SAT scores is the character of community connectedness in these states.

Finally, as Table 3 reveals, statewide dropout rates are best predicted by social capital at both the family and community levels. In addition, with all other variables controlled, states with high pupil-teacher ratios and high [sic] percentages of whites in the population also have relatively high dropout rates. We are not sure what to make of the link to race, since the simple bivariate relationship between statewide dropout rates and the percentage of whites in the population is $r = -.44$. The positive relationship shown in Table 3 only emerges once we control for two-parent families, a variable that is correlated $r = +.79$ with the percentage of whites in the population. Because of the possibility of multicollinearity here, we also present in Table 3 a model that eliminates the perplexing racial variable. In any case, the basic importance of both forms of social capital to inhibiting high school drop-outs is a robust finding.

TABLE 1:

PREDICTING STATEWIDE NAEP 4TH AND 8TH GRADE MATH AND READING SCORES, 1990-1994

Full model:

Multiple R	.964	DF	Regression	10		
R^2	.930		Residual	33		
Adjusted R^2	.909					
Standard Error	.297	F= 43.87	Sig F=	.0000		
Variable			*B*	*SE B*	*Beta*	*T*	*Sig T*
Two-parent families, 1990-92			.0857	.0210	.532	4.08	.0003
Community social capital, 1972-1994			.2514	.1154	.197	2.18	.0365
Pupil-teacher ratio, 1988-1990			-.0753	.0371	-.173	-2.03	.0508
Poverty rate, 1987-1990			-.0451	.0223	-.201	-2.02	.0513
Population aged ≥ 25 with ≥ 4 yrs high school, 1990			.0225	.0163	.131	1.38	.1784
Elem/secondary pupils in public schools (%), 1990			.0162	.0174	.064	.93	.3588
Educational spending per pupil, 1989-92*			.00012	.00001	.080	.80	.4299
Personal income per capita, 1990			-.00002	.00004	-.045	-.42	.6808
Teachers' salaries, 1989*			-.00001	.00002	-.029	-.40	.6924
Whites (percentage of state population), 1990			.0031	.0103	.039	.30	.7648
(Constant)			-8.071	2.672		-3.02	.0048

*Educational spending and teachers' salaries are adjusted for interstate differences in cost of living.

Reduced model:

Multiple R	.960	DF	Regression	5		
R^2	.922		Residual	39		
Adjusted R^2	.913					
Standard Error	.291	F= 92.84	Sig F=	.0000		
Variable			*B*	*SE B*	*Beta*	*T*	*Sig T*
Two-parent families, 1990-92			.0759	.0132	.465	5.76	.0000
Community social capital, 1972-1994			.3693	.0839	.287	4.40	.0001
Pupil-teacher ratio, 1988-1990			-.0755	.0212	-.173	-3.56	.0010
Poverty rate, 1987-1990			-.0416	.0126	-.183	-3.30	.0021
Whites (percentage of state population), 1990			.0126	.0052	.184	2.41	.0207
(Constant)			-5.045	.7770		-6.49	.0000

TABLE 2:

PREDICTING STATEWIDE SAT SCORES (ADJUSTED FOR PARTICIPATION RATES), 1993

Full model:

Multiple R	.788		DF	Regression	10		
R^2	.621			Residual	32		
Adjusted R^2	.503						
Standard Error	19.600	F= 5.248		Sig F=	.0002		
Variable				*B*	*SE B*	*Beta*	*T*	*Sig T*
Community social capital, 1972-1994				28.2200	9.4062	.782	3.00	.0052
Personal income per capita, 1990				.0060	.0027	.546	2.26	.0310
Whites (percentage of state population), 1990				1.2489	.6842	.414	1.82	.0773
Elem/secondary pupils in public schools (%), 1990				-2.0283	1.1808	-.278	-1.72	.0955
Poverty rate, 1987-1990				1.8175	1.4752	.287	1.23	.2269
Educational spending per pupil, 1989-92*				-.0093	.0103	-.220	-.90	.3743
Two-parent families, 1990-92				-1.4977	2.0816	-.205	-.72	.4771
Pupil-teacher ratio, 1988-1990				1.7727	2.5836	.142	.69	.4976
Teachers' salaries, 1989*				-.00098	.0018	-.108	-.54	.5941
Population aged ≥ 25 with ≥ 4 yrs high school, 1990				-.3433	1.0838	-.070	-.32	.7535
(Constant)				136.23	200.32		.68	.5014

*Educational spending and teachers' salaries are adjusted for interstate differences in cost of living.

Reduced model:

Multiple R	.715		DF	Regression	2		
R^2	.512			Residual	47		
Adjusted R^2	.491						
Standard Error	18.87	F= 24.607		Sig F=	.0000		
Variable				*B*	*SE B*	*Beta*	*T*	*Sig T*
Community social capital, 1972-1994				20.9582	3.4984	.620	5.99	.0000
Personal income per capita, 1990				.0029	.0011	.267	2.58	.0132
(Constant)				-44.69	17.44		-2.56	.0136

TABLE 3:

PREDICTING STATEWIDE HIGH SCHOOL DROPOUT INDEX, 1989-90

Full model:

Multiple R	.921	DF	Regression	10		
R^2	.848		Residual	32		
Adjusted R^2	.802					
Standard Error	.446	F= 18.416	Sig F=	.0000		
Variable			*B*	*SE B*	*Beta*	*T*	*Sig T*
Two-parent families, 1990-92			-.1414	.0315	-.863	-4.48	.0001
Community social capital, 1972-1994			-.6614	.1729	-.508	-3.82	.0006
Whites (percentage of state population), 1990			.0394	.0155	.489	2.55	.0157
Pupil-teacher ratio, 1988-1990			.0755	.0557	.170	1.36	.1843
Teachers' salaries, 1989*			.000040	.000035	.122	1.14	.2628
Elem/secondary pupils in public schools (%), 1990			.0240	.0260	.094	.92	.3623
Population aged ≥ 25 with ≥ 4 yrs high school, 1990			-.0215	.0245	-.123	-.88	.3869
Personal income per capita, 1990			.00005	.00006	.126	.78	.4400
Educational spending per pupil, 1989-92*			-.000135	.000217	-.092	-.63	.5358
Poverty rate, 1987-1990			-.0068	.0334	-.030	-.20	.8404
(Constant)			4.5241	4.0059		1.13	.2669

*Educational spending and teachers' salaries are adjusted for interstate differences in cost of living.

Reduced model I:

Multiple R	.915	DF	Regression	4		
R^2	.837		Residual	40		
Adjusted R^2	.821					
Standard Error	.429	F= 51.516	Sig F=	.0000		
Variable			*B*	*SE B*	*Beta*	*T*	*Sig T*
Two-parent families, 1990-92			-.1530	.0191	-.912	-7.99	.0000
Community social capital, 1972-1994			-.6931	.1116	-.524	-6.21	.0000
Whites (percentage of state population), 1990			.0423	.0076	.603	5.55	.0000
Pupil-teacher ratio, 1988-1990			.0956	.0308	.213	3.11	.0035
(Constant)			6.631	1.095		6.06	.0000

Reduced model II:

Multiple R	.844	DF	Regression	3		
R^2	.712		Residual	41		
Adjusted R^2	.691					
Standard Error	.563	F= 33.814	Sig F=	.0000		
Variable			*B*	*SE B*	*Beta*	*T*	*Sig T*
Two-parent families, 1990-92			-.5964	.1448	-.451	-4.12	.0002
Community social capital, 1972-1994			-.0789	.0180	-.471	-4.38	.0001
Pupil-teacher ratio, 1988-1990			.0684	.0399	.152	1.71	.0941
(Constant)			4.937	1.382		3.57	.0009

In short, our preliminary exploration of three independent measures of educational outcomes strongly suggests that greater attention should be paid to the possible educational consequences of differing levels of social capital at both the family and community levels. These findings in turn raise three important questions:

1. Methodology: Are these results robust and reliable?

2. Causes: What are the origins of inter-state differences in levels of social capital?

3. Mechanisms: *How*, precisely, does community-level social capital influence educational outcomes?

METHODOLOGY

With the framework here outlined, the empirical results seem reasonably robust across different model specifications. However, a number of important qualifications must be added.

- *Level of analysis*. The real effects of community-based social capital presumably operate at the local level, of which statewide measures are at best an imperfect reflection. Our analysis has focused on inter-state differences, primarily we have uncovered as yet no measures of social capital that are systematically available at the level of the locality. For example, our analysis shows that states with more two-parent homes have better educational outcomes, but we have not shown specifically that students from two-parent homes do better than students from other family backgrounds, for any such claim would entail the "ecological fallacy." (This fallacy refers to the risk of false inference about individual-level relationships from aggregate-level data.) With respect to community-wide social capital (social trust, group membership, turnout, and nonprofits), it would clearly be desirable to conduct the analysis at the community level. On the other hand, the very sharp inter-state differences on these measures make clear that the average student (or the average school) in Mississippi operates within a very different civic context from the average student or school in Minnesota, and our multiple regression analyses show that these different civic contexts are closely associated with contrasting educational outcomes.
- *Omitted variables*. We have made every effort to include within our analysis measures of all those contextual variables that are commonly cited as relevant to statewide educational outcomes. On the other hand, we cannot exclude the possibility that some unmeasured variable is distorting the results of our analysis. In this context, we are most concerned about the omission of measures of social and economic equality, for we suspect that social capital itself is closely and reciprocally tied to social equality.
- *Endogeneity, reciprocal causation, and collinearity*. It is certainly possible—indeed, it seems quite likely—that a number of our independent variables (for example, poverty, race, income, and education) are themselves causally intercorrelated. The data and the methodological framework deployed here is not well-adapted for the exploration of such linkages. On the other hand, our analyses suggest that the connection between social capital and educational outcomes is probably not spurious in any simple

sense. Moreover, the way in which state-wide adult educational levels enters these equations suggests that at least a substantial fraction of the causation flows from social capital to educational outcomes and not the reverse.

- *Frail and missing data*. For a number of states data are not available for certain components of both independent and dependent variables in this analysis. For example, data on the full complement of NAEP test scores are available for only 30 states, and we have extended our analysis by including states for which one or two of those measures are missing. Moreover, our measures of trust and group membership for small states are of uncertain reliability.[33] In order to minimize the impact of missing cases and random error in particular variables, we have used indices based on a number of separate variables. In principle, error variance should tend to attenuate coefficients, not exaggerate them, but error of any sort introduces uncertainty.

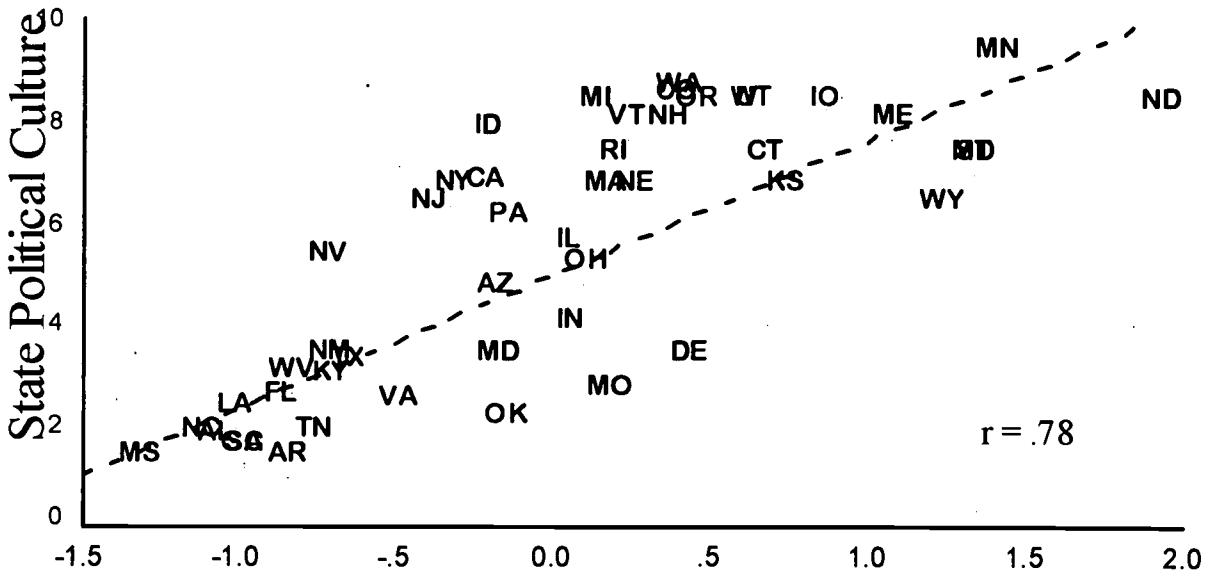
CAUSES

If social capital is so important, from where do inter-state differences in average levels of social capital come from? This is clearly an important question that is beyond the scope of this chapter. Within our statistical framework, social capital is modestly correlated with race, poverty, and educational levels, though which is cause and which consequence in those linkages remains uncertain. In particular, given our principal results, it would be natural to conclude that statewide adult educational attainments are in part a consequence, not a cause, of differences in social capital. Even so, all three variables together (race, poverty, and statewide educational levels) account for less than two-thirds of the interstate variance in social capital as measured here. Although social capital is clearly correlated with other forms of capital, it is not merely froth on the tide of socioeconomic forces.

We have also uncovered some hints that interstate differences in social capital have relatively deep historical roots. On the basis of descriptive accounts of state politics in the 1950s, Elazar (1966) categorized the political cultures of the American states in terms of the degree to which they evinced more or less civic norms, and Sharkansky (1969) converted Elazar's measure into quantitative form. As we show in Figure 6, there is a striking correlation between the Elazar-based measure of state political culture in the 1950s[34] and our measure of community social capital, based largely on data from the 1980s and 1990s. Moreover, in a multiple regression context, including contemporary measures of poverty, race, educational levels, and income, the Elazar measure is by far the dominant predictor of contemporary levels of social capital. On the basis of historical analysis, Elazar attributed these differences to 19th century immigration patterns, and indeed we find a very strong correlation (not shown here) between high statewide levels of social capital and the fraction of the population from Scandinavian backgrounds. Conversely, we doubt that it is mere happenstance that the lowest levels of community-based social capital are found in states whose social structures were historically slave-based. Such patterns lead us to suspect that these inter-state differences in patterns of civic engagement and social trust may be traced back at least into the 1950s and perhaps even into the 19th century, although quantitative evidence for those deeper roots is, as yet, lacking.

Figure 6

Political Culture (1950s) and Social Capital



Social Capital Index

Soc Cap Index includes trust, turnout, group members, and non-profits.

Elazar (1966) Index quantifies descriptions of state politics in 1950s.

MECHANISMS

James Coleman's introduction of the term "social capital" into the lexicon of educational research focused especially on what we have called "family-based" social capital, and he laid out a series of mechanisms by which closely-linked families might foster educational performance. In general, community-based social capital represents a public good that can also serve as a resource for child development and learning, but it is less clear just how community-based social capital might have educational effects. One possibly relevant hint is that of the four components of our community-based social capital index, social trust (however imperfectly measured here) seems to be a prime source of the educational outcomes. Read in conjunction with the chapter in this volume by Bryk and Schneider, this finding hints that social trust in the wider community may positively influence the schooling process itself.

Another hint in our data about possible mechanisms draws on an NAEP-based measure of children's TV-watching.[35] Statewide levels of social capital (both family- and community-based) are very strongly correlated with levels of TV-watching.[36] Children in states where

two-parent families are less common and where social trust and civic engagement are lower are much more likely to be heavy viewers of television, and in turn those are the same states with poorer average educational outcomes. Further down the putative causal chain, roughly half of the total effects of both family- and community-based social capital on educational outcomes is statistically attributable to children's television usage. Of course, much stronger evidence than this would be necessary to pull apart the multiple strands of influence among this nexus of variables, but these patterns suggest the possibility that both family and community structure influence educational outcomes in part through their impact on the use of leisure time.[37]

It is, of course, quite possible that there are other as-yet-undiscovered mechanisms that link community-based social capital and educational outcomes, through effects on school operations or on student aspirations and work habits, for example. Although this empirical analysis is preliminary, we believe that it warrants more focused attention on the ways in which the community context affects the educational fate of children throughout the country.

8. Cautionary Conclusions

Much effort will be needed both to test theories linking social capital and educational outcomes and to develop more effective "social capital intensive" strategies for improving education in America. Even as we prepare for this intellectual and programmatic task, however, it is well to consider some risks associated with this approach. The design and implementation of reforms aimed at increasing the effectiveness of social capital in education will be complicated by a number of fundamental dilemmas of social capital formation. These dilemmas include the following:

- *Equity-efficiency tradeoffs*: Discussion of reforms in this area needs to distinguish between efforts that create new social capital (that is, the creation of new networks, norms, and trust) and efforts that exploit existing social capital (that is, the channeling of existing networks, norms, and trust to support educational activities). Although most reformers think of themselves as engaged in the former task, much of their success may in fact derive from the latter. For example, the preliminary assessments of the important Chicago reform (Rollow and Bryk [1993] and Gittell [1994]) imply that successful sites are located in communities with higher prior levels of social capital. The Alinsky-style work of the Texas Industrial Areas Foundation's "Alliance Schools" initiative relies heavily on the pre-existing stocks of social capital embodied in religious congregations. Our preliminary work on inter-state differences in social capital hints that educational outcomes may be influenced by community differences that have deep historical roots.

  Creating new social capital is undoubtedly more difficult than redirecting existing social capital. The latter strategy is thus probably more practicable, but it also tends to reinforce existing social inequities. In terms of social capital, like financial capital, the

rich usually get richer. This was the assessment, for example, of the effects of the generally successful regional reform that Putnam studied in Italy – all regions benefited from the decentralization, but areas in the North that were rich in social capital at the outset benefited more than their poorer counterparts in the South, so that the North-South gap actually increased.[38] The same pattern might be expected of strategies for educational reform that rely heavily on pre-existing stocks of social capital.

- The controversial *link between government and social capital*: A lively debate has begun about the linkage between government policy and social capital formation. Conservatives argue, in effect, that the decline in social capital in America is attributable primarily to the rise of the welfare state, which has had a "crowding out" effect on private connectedness.[39] Government, it is said, has a kind of "reverse Midas touch," turning whatever social capital it touches to dross. Liberals, on the other hand, even those who are skeptical about centralized bureaucracy, believe that government can serve as partner and facilitator in the creation of social capital. One instructive example is the role of the Department of Agriculture's county agent system in fostering social connectedness in rural areas where physical circumstance impeded the formation of social capital. This broad ideological debate cries out for more careful empirical research.

- *Inclusive versus exclusive social capital*. If we possessed a golden magic wand that could create more "bridging" social capital that crossed racial and other social cleavages, we would certainly use it. However, we are more likely to discover – although even this will not be simple – an aluminum magic wand that can create more social capital, but only of a "non-bridging" sort. The tough question that we shall then face is this: Should we use the aluminum wand, if that is all we can find? Policies that aim at creating inclusive social capital (like cross-district busing) may end up destroying exclusive social capital (like neighborhood schools) without any compensating increase in the inclusive variety. This observation is emphatically not meant to deflect the search for the golden magic wand, but only to point to a fundamental dilemma that may be ameliorated, but may not be avoided, at least in the short run. In other words, advocates of a social capital approach will need to beware of the risk of inadvertently fostering social and racial segregation.

- *Class, status, power, and social capital*. Social and political participation depends on resources, as well as opportunities and motivations. Thus, participation-based initiatives may magnify existing social disparities.[40] Moreover, organization always involves power. Changes in social capital are very likely to entail changes in the distribution of power. This prospect will surely complicate efforts to invest in social capital and will make them politically highly controversial. One hypothesis worth examining is the disconcerting idea that policies designed to foster new social capital may often encourage vertical, not horizontal structures. For example, massive efforts by the central Italian government over the last half century to speed development in the Mezzogiorno (for example, through massive fiscal transfers) had the effect of strengthening long-standing vertical patterns of patron-client exploitation and dependence, and some

retrospective reviews of the War on Poverty might seem to substantiate an analogous concern.

In short, for all its promise, strengthening social capital is not an antiseptic, risk-free strategy for improving education.

NOTES

[1] Tyack and Cuban, 1995: 30.
[2] 1993 US Department of Education statistics cited in Hanushek, 1994:xviii-xix.
[3] Kaestle, 1987, 1992 cited in Tyack and Cuban, 1995: 34.
[4] Coleman, 1990b.
[5] Putnam, 1993.
[6] This section of the essay draws on Putnam, 1995a, 1995b, and 1997; see those sources for a fuller presentation of the relevant statistical evidence.
[7] In the 1990-91 World Values survey, for example, Americans expressed more social trust and claimed membership in more voluntary associations than most other nations surveyed.
[8] Since the size of the school-aged population (and thus of the potential membership in the PTA) varied greatly over this period, it is clearly necessary to standardize the raw membership figures in some way. Figure 1 standardizes for the number of families with children under age 18, but the same basic pattern appears when adjustments are made for other plausible parameters, such as enrollment in public primary and secondary schools. For contrary survey-based evidence that, however, does not provide continous coverage over this entire period, see Ladd, 1996.
[9] Epstein, 1988 cited in Fullan, 1991: 228.
[10] In addition to the literature reviewed above, the idea that social networks and the associated norms can influence educational outcomes is also suggested by the large literatures on "peer group effects," including Coleman (1961, 1966, and 1988), and Coleman, Hoffer, and Kilgore (1982) and on "neighborhood effects," as reviewed in Jencks and Mayer (1990) and Aber (1993).
[11] We have discovered state-level data from four nationwide NAEP tests, as reported in National Center for Educational Statistics (1992a, 1995): Average reading proficiency for public school 4th graders in 1994 (available for 39 states), average math proficiency for public school 4th graders in 1992 (available for 41 states and the District of Columbia), and average math proficiency for public school 8th graders in 1990 (available for 37 states and the District of Columbia) and 1992 (available for 41 states and the District of Columbia). All of these measures are very highly correlated, suggesting that interstate differences in elementary school achievement are highly reliable. The three statewide math measures are all intercorrelated at r=.95-.98; the statewide reading score is correlated with the three math measures at r=.83-.87. In order to maximize the number of cases, while simplifying the reporting of our results, therefore, we have combined these four measures into a composite Index of Academic Achievement, based on the average standardized scores across all tests available for each state. This Index is essentially identical (r=.9997) to a factor score based on the four measures. All four scores are available for 30 states; three scores are available for 11 states and the District of Columbia, two scores are available for 1 state, and one score is available for 3 states. No scores are available for 5 states. All essential results reported below are confirmed when we limit our analysis to states for which at least 3 of the 4 scores are available. In addition,

because the District of Columbia is an outlier on many of our measures, we have replicated our findings while excluding it from the sample.

[12] Powell and Steelman (1996) have demonstrated that state SAT scores must be corrected for very substantial interstate differences in SAT participation rates. Our analysis therefore uses their participation-adjusted SAT scores (Powell and Steelman, 1996: 38).

[13] Three slightly divergent measures of dropout rates are available: the percentage of "status dropouts", ages 16-19 for 1990, as reported in National Center for Education Statistics (1992b): 13; the percentage of those aged 16-19 in the 1990 Census who were not in regular school and had not completed 12th grade or a GED (as reported in the Statistical Abstract of the US, 1995: 159); and the "public high school graduation rate, 1989-1990," as reported in Van Son (1993): 106. In our analysis we combined these three measures into a single factor score; in fact, the essential results reported here are confirmed in separate analyses of the three measures.

[14] We shall present evidence predicting each of these three measures of educational achievement separately. It is worth noting, however, that the three are themselves closely intercorrelated. Our NAEP-based Index of Academic Achievement is correlated r= -.78 with the composite dropout measure and r= .63 with the participation-adjusted SAT scores. The SAT measure is correlated r= -.49 with the dropout measure.

[15] Since 1972 social trust has been repeatedly measured in the General Social Survey by responses to this question: "Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?" Altogether 20,752 people have responded to this question over the last two decades. Aggregated at the state level, this question generates reasonably reliable measures of social trust for 46 states and the District of Columbia. This GSS-based measure is correlated with a comparable measure based on this same question in the National Election Studies (1960-1992): r = .65. If we limit our analysis to the 32 states with a minimum sample of 100 respondents each for both the NES and the GSS measures, the reliability coefficient over three decades is r = .78.

[16] Since 1974 associational membership has been repeatedly measured in the General Social Survey by responses to this question: "Now we would like to know something about the groups or organizations to which individuals belong. Here is a list of various organizations. Could you tell me whether or not you are a member of each type?" Our measure is the average number of different types of groups (corrected for a recently discovered error in the GSS aggregation algorithm) to which respondents of a given state belong. Altogether 19,326 people have responded to this question over the last two decades. Aggregated at the state level, this question generates reasonably reliable measures of social trust for 46 states and the District of Columbia. Of course, both this measure and the comparable measure of social trust are less reliable for very small states in which the total sample size is small. This measurement error has the effect of artificially attenuating correlations involving these measures and other variables, such as educational achievement. The cross-state correlation between social trust and associational membership is r=.49.

[17] Our measure of turnout is simply the average percentage of the voting age population who voted in the Presidential elections of 1988 and 1992, as reported in the US *Statistical Abstract, 1994*: 289. These data are available for all 50 states and the District of Columbia. Turnout is correlated with our measures of social trust (r=.55) and associational membership (r=.40).

[18] Our measure of the incidence of non-profit (501[c]3) organizations is simply the number of such organizations in each state in 1989 (as reported in the *Non-Profit Almanac* for 1992-93), divided by the state's population in 1990. (We wish to thank Professor Thomas Rice for pointing us to these data.) These data are available for all 50 states, but not for the District of Columbia. This measure is significantly correlated with turnout (r=.59) and with our GSS-based measures of social trust (r=.35) and associational membership (r=.36).

[19] This index is simply the average of the standardized scores on the four component measures. To maximize the number of cases, we computed this average even for those few cases in which data were missing on one or more of the underlying measures. Effectively, this Index is virtually identical (r=.999) to the factor score on the only factor to emerge from a principal components factor analysis of the four

component variables. The Index is correlated with its components as follows: trust: r=.77; memberships: r=.73; turnout: r=.84; non-profits: r=.75.

[20] Our Index of Social Capital is highly correlated as follows with each of the four NAEP tests, taken separately: 4th grade reading, 1994: $r^2 = .52$; for 4th grade math, 1992: $r^2 = .59$; for 8th grade math, 1990: $r^2 = .66$; for 8th grade math, 1992: $r^2 = .68$.

[21] Our measure here is personal income per capita in 1990.

[22] From a variety of possible measures of state-wide educational levels, we chose the percentage of the population aged 25 and over in 1990 who had completed at least four years of high school, as reported in the *Digest of Educational Statistics* (1992): 21. We chose this measure because it was more closely correlated with educational outcomes than alternative measures, such as the percentage of the adult population who had graduated from college or had completed fewer than two years of high school, and we wished to "stack the deck" in favor of explanations other than social capital.

[23] We explored several possible measures of statewide racial composition, including the percentages of African-Americans, Hispanics, Asian-Americans, and whites in the 1990 census. Across states, these measures are very highly correlated with measures of the racial composition of 1991 public school enrollment (r=.99 for the three minority groups and r=.89 for whites). In the end, the most broadly and closely correlated of these measures with our three educational outcomes proved to be the percentage of whites in the state population.

[24] Our measure here is the mean percentage of the state population living below the poverty line as measured in the Current Population Survey over the four years from 1987 to 1990.

[25] Figures for both teachers' salaries and per-pupil educational spending have been adjusted for inter-state cost-of-living differences, following Nelson (1991), although we have also conducted parallel analyses using the unadjusted figures, as reported in Nelson (1991): 109 and National Center for Education Statistics (1995): 165. The salary data are for 1989; our spending measure is based on the mean annual figure for the three years from 1989-90 to 1991-92.

[26] Our measure of class size is the mean pupil-teacher ratio 1988-1990, as reported in National Center for Education Statistics (1995), Table 65.

[27] Family structure is measured by the fraction of 8th graders in 1990 and 1992 who reported as part of the NAEP that both their parents were living at home. Not all states participated in both years, but the correlation across the two years for the 35 states that did is a remarkable r=.97. Thus, in order to include all 45 states that participated in the NAEP at least one year, we have constructed a composite measure based on either one or both of these scores.

[28] Religious affiliation here is measured by the portion of the population that is Catholic (Van Son 1993: 228). Although this variable does not appear in Tables 1-3, its inclusion has absolutely no effect on the results.

[29] Tables 1-3 show only the full model (including all possible independent variables) and the reduced model (including only those variables that are statistically significant in the full model). Not shown are results of intermediate analyses in which we sequentially added and deleted the less significant variables, looking for unexpected interactions. A rare case in which this further analysis turned up a modestly significant additional relationship is shown in the bottom half of Table 1, in which the racial composition of the state turned out to be statistically significant in a more fine-grained analysis, despite its insignificant relationship in the full model.

[30] In bivariate analyses state racial composition is significantly associated with all three educational outcomes, but this association is substantially or entirely eliminated when family structure is included in the analysis.

[31] High per pupil spending is positively associated with both small classes and high teacher's salaries, but class size and salaries are themselves strongly negatively correlated. This pattern implies that states are implicitly making a financial trade-off between class size and teachers' salaries. Furthermore, the pattern of correlations between these three variables and educational outcomes implies that increased spending is associated with improved outcomes if and only if it is used to reduce class size.

[32] Powell and Steelman 1996 report that adjusted SAT scores are associated with higher per pupil spending, and we confirm that in a simple bivariate analysis. However, we find that that relationship vanishes under controls for social capital.

[33] For example, in the General Social Survey Vermont displays surprisingly low levels of trust and group membership, but even when the GSS samples over two decades are combined, those estimates are based on only 37 and 13 cases, respectively.

[34] We have reversed the polarity of the Elazar-Sharkansky Index, so that a higher numerical score corresponds to more civic politics.

[35] This measure is the percentage of 8th graders in 1990 & 1992 who report watching six or more hours of television daily.

[36] Children's TV-watching, as measured here, is correlated $r = -.86$ with two-parent families and $r = -.74$ with community-based social capital.

[37] In this sense our work tends to converge with that of Heath and McLaughlin 1993.

[38] Putnam 1993.

[39] Coleman shared this view to some extent. Speaker of the House of Representatives Newt Gingrich recently attributed the decline in PTA membership, for example, to the expansion of school bureaucracies.

[40] On the other hand, we need to beware of stereotypes. Both in the broader public arena and in the educational arena, there is some evidence that, controlling for socioeconomic status, African Americans are (or at least have been) more likely to participate than whites.

EA 028 713

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement (OERI)
Educational Resources Information Center (ERIC)

NOTICE

REPRODUCTION BASIS

☐ This document is covered by a signed "Reproduction Release (Blanket)" form (on file within the ERIC system), encompassing all or classes of documents from its source organization and, therefore, does not require a "Specific Document" Release form.

☑ This document is Federally-funded, or carries its own permission to reproduce, or is otherwise in the public domain and, therefore, may be reproduced by ERIC without a signed Reproduction Release form (either "Specific Document" or "Blanket").