

Perspectives from the Disciplines
Sociological Contributions to Education Policy Research and Debates

AERA Handbook on Education Policy Research

Douglas Lee Lauen

University of North Carolina at Chapel Hill

Public Policy

and

Karolyn Tyson

University of North Carolina at Chapel Hill

Sociology

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I. Introduction

Émile Durkheim and Max Weber laid the foundation for a sociological approach to the study of education, but the subdiscipline of the sociology of education did not emerge until the late 1950s and early 1960s in the U.S. and the U.K. (Dreeben 1994; Karabel and Halsey 1977). The dominant social science perspectives on education at the time included psychology, which examined cognition and the learning process; economics, which through human capital theory attempted to account for individual and societal investments in education; and structural functionalism, a sociological theory which attempted to describe the major social systems, including education, and their interrelationships.

Since the time of the emergence of the sociology of education as a subdiscipline, sociological research has shed light on the contribution of educational achievement and attainment to occupational attainment, equality of educational opportunity, the role of schooling in reproducing the existing social order, the social organization of schools, tracking and other within-school processes, and approaches to examining the effects of schools as institutions. While these topics are varied, sociological research on education often shares one implicit goal: to contribute to knowledge that may be used to understand and in some cases improve society, education, and schools.

Advancing theory about schools has advanced popular conceptions of schools, so we begin this essay with some of the major theoretical and empirical contributions of the sociology of education. Following a summary of how sociological theory and research has contributed to the way we think about education and schools, we will outline some of the successes, failures, and challenges inherent in making sociological contributions to educational policy. We argue that the sociological study of education has helped inform public policy about K-12 education.

This chapter will focus on these contributions, though it must be noted that assessing the impact of sociological theory and research on education policy, or indeed theory and research from *any* of the social sciences, is probably impossible to pin down precisely. We conclude this essay with reflections on the differences between academic and policy research, the audiences for social science research, and the major modes of empirical inquiry, including a discussion of qualitative research and the recent turn towards causal analysis, and draw implications about how mode of inquiry affects the policy relevance of research.

II. Major Theoretical and Empirical Contributions to Education Research

Since the mid 1950s, sociology has developed a rich tradition of theoretical work on education and schools. This broad base of knowledge covers questions big and small and addresses macro- and micro-level processes, ranging from analyses of education as an institution and its purpose and effects on society, to analyses of classroom practices and policies and the influence of schooling on individuals.

The public's understanding of the limits and possibilities of schooling is informed to a large degree by knowledge gained from sociological analyses of education, both theoretical and empirical. Sociological theory outlines the general purposes of education as an institution, the effects of schooling on individuals, and how schools facilitate particular societal goals, such as preparing young people for their adult roles. These theories, in turn, contribute to empirical studies of education and schools. Sociologists conduct research to assess how well schools are meeting society's varied needs, the factors that explain the allocation of individuals to positions in society, and how factors such as funding, leadership, curriculum, pedagogy, school practices and policies, and teacher, student, and parent attitudes and behaviors impact and influence educational outcomes. Indeed, sociology plays an important, although largely anonymous, role

in education policy, because as Stevenson (2000:548) notes, much of the “standard empirical work of sociologists of education [has] become the background knowledge of policymakers.” In the sections that follow we highlight some of the theoretical and empirical findings of sociological research on education that have made a significant contribution to our knowledge of the effects of schools.

Functionalist Theory

At the core of the sociological study of education are questions about social change and the relationship between schools and society. When the subdiscipline was emerging in the 1950's, structural functionalism was the dominant theoretical approach to understanding how society and its various institutions, including schools, work. Early sociologists like Emile Durkheim, Pitirim Sorokin, and Talcott Parson were interested in schools not just in and of themselves, but in relation to the wider society, to their connection and value to other institutions and the overall functioning of the social system. The functionalist perspective posits a view of society as a system of interrelated institutions, each fulfilling particular roles, working in concert to maintain the stability of the system. The school's primary roles in the social system are to socialize young people in the national culture and prepare them for social life, and to determine and develop their particular talents and abilities so that they are prepared to fulfill the adult roles for which they are best suited. Functionalists contend that the school's allocation of individuals to positions in society is based on the principle of meritocracy and therefore provides a mechanism for social mobility because it reduces the effects of ascribed characteristics such as gender, race, and social class. By the 1960s, however, the view of school as a neutral institution charged with socializing youth and allocating them to their appropriate place in the occupational

structure according to ability and motivation, began to fall out of favor as approaches with a less cohesive view of society became more popular.

Conflict Theory

Advancing a decidedly Marxist perspective and building as well on the work of Max Weber, conflict theory views education as a tool of domination that aids in the maintenance of the existing stratification order. Conflict theorists argue that as elite-driven institutions, schools inculcate in young people attitudes and values that foster respect for the dominant culture. Thus social stability is maintained through coercion, and not, as functionalists posit, as a result of a consensus of values and interests. The conflict perspective holds that socialization and allocation function for the benefit of the elite rather than the society as a whole, because students are allocated according to race, class, and gender. This set of arrangements creates a source of constant tension among competing status groups in schools, as the less advantaged challenge the elite in an attempt to gain a greater share of the society's relatively scarce resources.

The conflict perspective continued to develop through the 1970s with a number of other significant theoretical contributions from sociologists and other social scientists (e.g. Bowles and Gintis 1976). Sociologists such as Basil Bernstein (1977) Pierre Bourdieu and Jean Claude Passeron (1977) offered theories that elaborated on the process by which the class structure is reproduced through schooling, with a focus on language and cultural codes. Bourdieu's concept of cultural capital, used to explain the intergenerational transmission of privilege and disadvantage through culture, is now widely used among scholars conducting education research. Other scholars were critical of reproduction theories, however, arguing that they placed too much emphasis on structure and too little on human agency, leaving individuals powerless to resist the forces of the institution. Scholars such as Paul Willis (1977) called for greater attention to the

lived experience of youth in schools and to their capacity to respond in a variety of ways to systems of domination.

The concept of credentialism, used by Randall Collins (1979) to explain the rise in the level of education required in the labor market, has also become part of the everyday discourse of education researchers. Collins rejected the functionalist position that the change in educational requirements reflects the increasing complexity of jobs and argued instead that it is a strategy of the elite to maintain and justify their high-status positions. Collins proposed that as the percentage of the population possessing the minimum educational requirement (e.g., a high school diploma) becomes universal, occupational groups raise the educational requirement. This action provides a means to ration high-status positions and allows employers to select applicants whose credentials signal particular cultural characteristics.

These more critical approaches to understanding education presented new ways to understand social change, stability, and inequality. They also presented new questions for study. Thus, sociological research on education shifted from a focus on the forms, structure, and function of schools to questions about the effects of the determinants of inequality (social class, race, and gender). For example, research framing the educational problems of poor, working-class, and minority students in terms of the groups' cultural shortcomings gave way to studies examining the impact of background characteristics on students' educational and occupational outcomes. Status attainment research burgeoned during this period.

Status Attainment Research

Status attainment research focuses on social mobility by attempting to identify the contribution of family background, parental education, and achievement on educational, occupational, and economic aspiration and attainment. Beginning in the 1950s on rural

Wisconsin males and then expanded to other populations, studies in this tradition have proliferated during the past 50 years (Blau and Duncan 1967; Duncan and Hodge 1963; Featherman and Hauser 1976; Sewell, Haller and Portes 1969; Sewell, Haller and Strauss 1957; Sewell and Hauser 1980; Sewell et al. 2001), and represent the dominant paradigm in the sociology of education and the study of stratification (Dreeben 1994). Consistent findings of status attainment research are that 1) educational attainment explains a large portion or variance in occupational attainment, 2) school or neighborhood characteristics have virtually no effect on educational aspirations after controlling for individual characteristics, and 2) schools have no effects on educational aspirations because most variance in educational aspirations is *within* and not *between* schools (Sewell and Hauser 1980).

Arguably, the most prominent and influential piece of education research in the 1960s was a report commissioned by the federal government in 1966 called the *Equality of Educational Opportunity (EEO)* study conducted by a team of researchers led by Columbia-trained sociologist James Coleman. Ten years after the Supreme Court outlawed segregated schools in the landmark *Brown vs. Board of Education* decision, the United States Department of Health, Education, and Welfare hired Coleman and his colleagues to study how minority students were faring in American schools compared to whites. The report concluded that family background and other non-school factors have a greater impact on student achievement than school factors such as resources and curriculum, a conclusion which raised doubts about federal policies designed to improve life outcomes through school reform.

The *Coleman Report* was significant because its findings ran counter to conventional wisdom, and because it reconceptualized equality of educational opportunity to include equality of results by including analysis of both inputs (the resources to which students had access) and

outputs (the academic achievement of students). The report signaled a major shift in focus in debates on educational inequality and accountability. Although this focus on outputs is now standard practice throughout the United States (as evidenced in federal policy such as No Child Left Behind, for example), it was the *Coleman Report* that ushered in this momentous shift toward examining inequality in outcomes, particularly student test scores (Heckman and Neal 1996).

Building on Coleman's findings by reanalyzing the *EEO* data and conducting secondary analysis on many other (mostly cross-sectional) surveys, Christopher Jencks and colleagues (1972) argued that government attempts to reduce inequality through education were misguided because economic success is due to luck and on-the-job competence (which is largely due to personality, not test scores). Jencks argued that the War on Poverty was based on the assumption of equal opportunity—that everyone enters the competition for status and income with equal chances of winning—and that school reform should equalize cognitive skill and bargaining power in the marketplace. Jencks found, however, that 1) helping children escape poverty would be ineffective because poverty was not primarily hereditary or intergenerational; 2) raising cognitive skills would not reduce poverty because there was just as much economic inequality among those with high test scores as in the general population; and 3) education reform could not compensate for inadequate parenting because there was no evidence that either school resources or segregation had an appreciable effect on test scores or educational attainment. Jencks (1972:265) concluded by arguing that public policy that proceeds by “ingenious manipulations of marginal institutions like the schools” will lead to only glacial progress on reducing inequality. Instead he argued for income redistribution and “what other countries usually call socialism” (ibid).

Studies in the status attainment tradition raised questions about the effectiveness of education as a means for social mobility. These studies, however, have been critiqued for conceptualizing schools as “black boxes” in an economic production function in which inputs (student and parent characteristics) lead to outputs (life outcomes). This approach has been criticized for methodological individualism (Lynch 2000) that discounts the role that social structural features such as school and neighborhood contexts can play in status attainment. It has also failed to distinguish between “school” (an institution) and “schooling” (a social process) (Bidwell and Kasarda 1980).

The Social Organization of Schooling

The status attainment model conceptualized school as a homogenous entity theorized to have common effects across students.¹ This model limited the policy relevance of this type of education research because it failed to identify and examine levers to drive school improvement. It was assumed that schools did not differentiate the treatment of students based on student background, prior achievement, or learning style. Scholars who spent time in schools, however, understood that teachers and administrators made adaptations in practice based on student background, behavior, and local circumstances (Metz 1978; Swidler 1979; Cookson and Persell 1985). Bidwell and Kasarda (1980) argued that the status attainment model mistakenly attributed variation in school organization to individual students. They argued that teachers and administrators set formal and informal policies that influenced student access to resources for learning. For example, teachers make decisions about pedagogy and ability grouping that condition student access to educational opportunity.

As scholars began examining the formal and informal organization of schools, a puzzle began to emerge. Schools did not seem to be organized like other enterprises, such as businesses.

In one of the earliest theoretical treatments of the school as a formal organization, Bidwell (1965) hypothesized that while schools attempted to apply universalistic principles to students (e.g., equal access to rigorous math instruction), this task was made difficult by the diversity of their clientele. The implications of this tension and the difficulty of simultaneously coping with turbulence in the external environment (i.e., changes in law, policy, culture) for the formal organization of schools were twofold: 1) internal differentiation to adjust instruction to student background, and 2) structural looseness, which provides teachers the autonomy to adapt instruction to individual student needs (Bidwell 1965). This concept of structural looseness was independently developed by Weick (1976), who argued that schools were “loosely coupled systems” due to the uncertainty about the goals of schooling, the technology to bring about improved student learning, and the influence of changes in the external environment. He noted that schools tended not to be organized around authority of office or close attention to the technical core (i.e., teaching and learning), but rather were loosely coupled to cope with conflicting interests both inside and outside the school walls. As noted by Dreeben (1994), the conceptualization of schools as loosely coupled both opened up the possibility of systematic analysis of the internal workings of schools and also provided an explanation for the paradoxical lack of school effects found in empirical research. Meyer, Scott, and Deal (1983), for example, argued that schools are organized not to coordinate their technical activities, but rather to adhere to rules institutionalized by external actors (parent groups, unions, business groups, district, state, and federal officials).

Status attainment research and neoinstitutional theory about schools as organizations raised doubts about the effects of schools as institutions that promote student learning. Later

work with more advanced methods advanced our understandings of the effects of schools on outcomes and the effects of within-school processes on students.

School and Teacher Effects

School effects research seeks to understand the effects of educational context on life chances while taking into account the characteristics of the individuals themselves. Dreeben (2000:108) defines structural effects as “net of the effect of an individual characteristic believed to shape a pattern of conduct, a group property based on the aggregation of that characteristic influences that conduct.” For example, one may consider the effect of socio-economic status on test scores at two levels: individual SES and average SES of a school. Assuming proper specification of a multi-level analysis framework, if one finds that net of the effect of individual SES, average SES has an association with an individual’s test score, one could call this a structural effect of SES on achievement. In the case of racial school segregation, we might want to examine whether black students who attend racially homogenous schools have lower achievement, attainment, and aspirations, holding constant important student-level variables that also predict achievement, attainment, and aspirations. While there are many varieties of structural or contextual analysis—some that rely on social psychology, some that rely on social networks, for example—the analytic task is to attempt to explain individual behavior and/or life outcomes by membership in some group, whether it be a workplace, a neighborhood, a gang, or a school. This harkens back to Durkheim (1951) who sought to explain differing rates of suicide by membership in different social groupings such as family circumstances and religious faith.

In contradiction to early school effects research, where one goes to school can also affect the likelihood one stays in school and graduates, an important precondition of attending college and increasing one’s probability of a middle-class lifestyle and a lifetime of positive wage

differentials. Toles, Schulz, and Rice (1986) noted that there is wide between-school variation in dropout rates even once student differences are controlled. Bryk and Thum (1989) found that high levels of differentiation within high schools and weak normative environments were associated with the probability of dropping out. Rumberger and Thomas (2000) found that while much of the between-school variation in dropout rates can be attributed to student characteristics, about half was due to factors under the control of policymakers such as student-teacher ratios, teacher quality, school control, school size, and average daily attendance. Lee and Bryk (1988) found that curriculum, school size, and positive student-teacher relationships affected school drop out rates.

Though the *Coleman Report* called into question the impact of schools on student achievement, more recent work has highlighted the important role teachers play in raising student achievement. To the extent that teachers are the main resource schools provide to students, it may seem to be merely an academic matter whether it is schools rather than teachers that influence student achievement. The fact that there is more variance in student achievement within schools than between them (Sewell and Hauser 1980; Nye, Konstantopoulos, and Hedges 2004) has important policy implications, however. Specifically, this suggests that policies aimed at altering the sorting process of students among schools (i.e., school choice, desegregation) may be less effective than policies aimed at raising teacher quality or altering the distribution of teachers across classrooms. Given that econometric studies find substantial cumulative effects of being assigned a high quality teacher over a number of years (Aaronson and Barrow, 2007; Rivkin, Hanushek, and Kain, 2005; Rockoff, 2004), the match of high quality teachers with disadvantaged students has important implications for equality of educational opportunity and closing test score gaps.

Perhaps the most important factor affecting student achievement, other than teachers, is the curriculum to which students are exposed. Sociological interest in the curriculum has centered on what is taught, both in the informal (e.g., Dreeben 1968; Swidler 1976) and formal curriculum (e.g., Cookson and Persell 1985), and to whom (Rosenbaum 1976; Oakes 1985; Spade, Columba and VanFossen 1997). Most schools use some form of curriculum differentiation, either tracking or ability grouping, to separate students for instruction based on measured ability. However, studies of these practices consistently show a correlation between student assignment and social class and race and ethnicity: working-class and minority students are more likely to be placed in lower-ability groups and tracks and middle-class and white students are more likely to be assigned to higher-ability groups and tracks (Rist 1976; Barr and Dreeben 1983; Gamoran and Mare 1989; Hallinan 1996; Lucas 1999). The evidence to explain this pattern is less consistent. Some studies find that the variation is explained by group differences in prior achievement and other factors such as aspirations, motivation, or significant others' expectations, but other studies find a significant direct effect of social class even after controlling for these factors (see Dougherty 1996).

Nonetheless, the evidence is clear that even if there is no discrimination in track and ability group assignment, students in the lower groups do not benefit from these practices as much as students in the higher groups do. Research on the effects of curriculum differentiation on student achievement shows that compared to their peers in the higher groups, students in the lower groups do not learn as much, because they are exposed to less challenging curricular materials and given less rigorous assignments (Barr and Dreeben 1983; McPartland and Schneider 1996; Hallinan and Kubitschek 1999; Lucas 1999), and tend to have less experienced teachers (Oakes 1985) and to be in classrooms that experience more disruptions (Eder 1981).

Thus, rather than catching up to their higher-status peers, working-class and minority students assigned to low-track classes tend to fall further behind. The preponderance of evidence on tracking and ability grouping, then, suggests that the practices reinforce rather than reduce inequality. Consequently, calls for schools to detrack have been increasing in recent years (Oakes et al. 1997; Burriss and Welner 2005). In summary, sociologists have changed conceptions about the role of education in social mobility, developed and tested hypotheses about the equality of educational opportunity, opened up the black box of schooling to uncover hidden within-school processes such as ability grouping and tracking, and have advanced the theory and measurement of school, sector, and teacher effects.

Social Processes

Findings from studies using qualitative research methods have also made important contributions to our understanding of schooling processes. Although qualitative research may have a less direct impact on education policy, for reasons we discuss below, the findings from these studies are no doubt part of the taken-for-granted and background knowledge of policymakers and other researchers. Qualitative studies have been particularly effective in highlighting the subtle everyday practices that often go unnoticed in the classroom but which have significant consequences for the educational outcomes we care most about, including students' social and cognitive development. As Hugh Mehan has written (1992:1), "It often takes intimate contact with people and a close analysis of their words and deeds to capture subtleties, contradictions, and nuances of everyday life."

Sociologists of education have been especially engaged in studies examining race, social class, and gender socialization processes. These studies reveal a variety of ways that schools fall short of the goal of leveling the effects of background characteristics and instead reinforce social

inequality through the curriculum, textbooks, and school policies and practices. Sociologists have used ethnographic research methods to describe the context of schooling in rich, vivid detail and show how race, class, and gender structure students' daily lives at school. The findings show the various ways that students' identities are constructed and reinforced through the schooling process (e.g., Bettie 2003), as well as how some youth resist the identities and the norms that the school attempts to impose on them (Stinchcombe 1965; Willis 1977; MacLeod 1986). Paul Willis's (1977) study shed light on the nature of resistance to school norms among working-class, disaffected youth in England and brought us to an improved understanding of both the school's and the student's role in reproducing the class structure. Indeed, sociologists have helped us to understand how profoundly social class shapes the culture and structure of American schools and how the middle-class culture of American schools often alienates and disadvantages working-class children and their families (Lareau and Horvat 1999; Lareau 2000).

Other sociological studies show the deeply rooted nature of gendered patterns of interaction in the classroom. These studies find that children enter the classrooms as gendered beings and that schools reinforce gendered social relations and identities in the messages conveyed by teachers and peers about the appropriate role for girls and boys (Grant 1983, 1984; Eder and Parker 1987; Thorne 1993). For example, researchers find that teachers reward and punish the behavior of girls and boys differentially according to particular gender norms. These studies have helped us to understand how some schooling processes may be linked to children's future family and career aspirations, choices, and attainment, and enduring patterns of gender inequality.

Numerous ethnographic studies have also helped us to understand the ways in which race and ethnicity affect students' schooling experiences, peer relationships, and achievement

outcomes, and how students from diverse racial and ethnic backgrounds make sense of and respond to schooling (Lee 1996; Valenzuela 1999; Ferguson 2000; Lewis 2003; Carter 2005; Perry 2002). For example, various studies have helped us to understand how some of the negative behavior, attitudes, and outcomes of minority students are linked to school structures. The studies showed the complexity of the students' behaviors and explained that minority students, like many of their working-class peers, are often resisting the ways in which the schools' treatment of them denies them their full humanity and dignity by viewing them solely in terms of their race and/or class and gender. Ann Ferguson's (2000) study examining the beliefs and practices that produce a racialized system of discipline in an elementary school describes how teachers' negative beliefs about black males leads to the heavy policing and disciplining of this group in ways that mark black boys as dangerous and in need of fixing, and push them further and further from the mainstream.

Sociologists have also devoted considerable attention to understanding the effects of peers in school, and their findings reveal the powerful effect that youth have on one another, particularly during adolescence (Coleman 1961; MacLeod 1996). The literature on peer effects provides greater understanding of how peer relationships and interactions affect school engagement and achievement, attitudes toward school, and involvement in illicit activities, as well as how the goals of schools are misaligned with the goals of adolescents. This work has contributed to changes in the way many schools structure academic activities to encourage and improve student learning, motivation, and academic achievement (Coleman 1996; Heckman and Neal 1996).

Understanding the day-to-day experiences and interactions of individuals in schools is a central objective in research in the sociology of education. The extensive body of literature on

social processes has substantially informed our knowledge of the development of student attitudes and identity, how teacher practices affect student behavior and achievement, and how peers influence on one another. Indeed, qualitative research in the sociological tradition has been especially instrumental in calling attention to “possible hidden or latent consequences” of schooling as well as “how conditions outside the consciousness of individuals can affect their actions” (Schlechty and Noblit 1982: 291).

The power of sociological conceptions of schools, whether from quantitative research of large scale datasets or nuanced studies of the social relations of a single school, has influenced public policy through several avenues. Today sociologists and other social scientists are often called upon to provide expert testimony before Congress and the courts on a variety of education-related issues, and their research is used by policymakers to provide a public rationale for policies as well as to design policies (Stevenson 2000). Sociologists in particular play an increasingly active role in policy debates because the public and governmental concerns with equality of opportunity and equity in access are in line with what have been and continue to be primary areas of research interests to sociologists. Thus, litigators and policymakers are likely to turn to sociologists and sociological research to understand educational phenomenon and address the pressing educational problems of the day (Schlechty and Noblit 1982; Hallinan 2000). Sociologists also take an active approach to education policy by filing amicus briefs in court cases on which sociological research has something to say. Although it is not clear just how much influence amicus briefs have on court decisions, they have become an increasingly important way for sociologists and other social scientists to have access to the judicial decisionmaking process and input on important educational issues of the day (Kearney and Merrill 2000).²

The contribution of sociologists and sociological research to education-related litigation, while not new, has not always been as prominent or visible as it is today, particularly compared to other social science fields, especially psychology. The 1954 *Brown vs. Board of Education* case relied most heavily on psychological research: psychologists accounted for seven of the nine social scientists providing expert testimony (only one sociologist was involved). And it is the testimony of psychologists, particularly Kenneth Clark and Mamie Clark, which is best remembered for its influence on the Court's ruling on the psychologically damaging effects of segregation on children's developing personalities. A decade later, sociological research gained national visibility in education policy circles with the *EEO* study. Since that time, sociologists have remained actively involved in policy-relevant education research and are regularly called upon to provide research findings to government agencies as well as expert testimony in education-related cases, especially on some of the more challenging questions of equality of educational opportunity and issues of equity.

Through the power of their ideas, high quality research, congressional testimony, and expert testimony in court cases, sociologists have played an important role in shaping policy debates about education. We turn next to the challenges and opportunities sociologists face when attempting to conduct research relevant to policy debates. These include becoming aware of the important differences between academic and policy research, understanding the differences in the audiences for academic and policy research, and how mode of inquiry affects the policy relevance of sociological research.

III. Challenges and Opportunities

Academic vs. Policy Research

When considering the contribution of sociology to education policy research, it is important to keep in mind the differences between academic research in sociology—indeed in any academic discipline—and policy research. To be clear, most sociologists pursue academic rather than policy research (Bulmer 1996). However, understanding the differences between these two enterprises will help elucidate what kind of sociological research is more likely to influence education policy. Weimer and Vining (2005) outline the differences between academic and policy research. These differences are shown in Table 1. Policy research employs the methods of social science disciplines to examine “relationships between variables that reflect social problems and other variables that can be manipulated by public policy” (Weimer and Vining 2005:25). Academic research, on the other hand, is about constructing and testing broad theories for understanding society. In policy research there are three types of variables: outcomes, policy variables, and control variables. Policy variables measure something policymakers can alter, such as class size, rather than something they cannot, like gender. Control variables are included in the analysis to better understand the effect of the policy variable on the outcome. This is particularly important when the analysis is conducted with non-experimental (i.e., regression analysis) rather than an experimental (i.e., random assignment) methods.

[Table 1 about here]

For example, if policy research is aimed at determining the impact of class size reduction on student achievement gain using regression analysis, the policy variable is class size and the outcome is the year-to-year student gain in academic achievement as measured by test score. If teacher skill is associated with class size and student test score gain, however, we must somehow include teacher skill in our analysis. Assume that high skill teachers are better at raising student

test scores and we do not account for teacher skill in the analysis. In this case, if high skill teachers are assigned to smaller classes, then the estimate of class size on student test score gain would *overstate* the true effect. In other words, we would assume that smaller class size had a positive effect on student test score gain when in fact at least part of this effect is due to the fact that highly skilled teachers are more likely to teach smaller classes. On the other hand, if high skill teachers are assigned to *larger* classes, then the estimate of class size would *understate* the true effect. Therefore, it makes sense to statistically control for teacher skill in a regression equation estimating the effect of class size reduction on student test score gain. In fact, the importance of controlling for relevant control variables applies to both academic and policy research; the difference is in what kind of research questions are of most relevance to policymakers.

The types of variables that are of most interest to policymakers are within the political and cultural domain of policymaking control. While the “effect” of gender on test score gain may be of interest to policymakers, policymakers can do little to change students’ gender. The same may be said of racial or ethnic background. While the black-white test score gap is of great interest to policymakers, simply noting the presence of a gap does not inform policymakers about what to do about the problem. To better inform policy about the test score gap requires analysis of policies and practices that may reduce this gap, such as teacher treatment of students, school desegregation, tracking, “double-dose” instruction of basic subjects like reading and math, tutoring programs, and summer school.³ Moreover, social practices within the domain of the family, for example, may be considered beyond the reach of policymakers. Child discipline practices, such as parental spanking, may be related to student incidence of disciplinary

infractions in elementary school, but because parental spanking is considered an acceptable practice in most U.S. states, policymakers may be reluctant to intervene.⁴

Therefore, while academic sociologists might be interested in gender, race, and class, policymakers are more interested in the effectiveness of educational policies that “work” for all students regardless of background. The preferences of the audiences for the findings of education research can shape not only research questions, but methodology, and interpretation of findings as well.

Social Science Research Audience and Use

Like other social science research, most sociological research on education is published in scholarly journals and other outlets targeting an academic audience. Sociologists are generally more interested in speaking to other sociologists and social scientists than to educational practitioners and policymakers. Indeed, Pamela Walters (2007) argues that much of the current scholarship in the sociology of education is oriented to advancing sociological theory rather than to improving education. This is no doubt related to the ever-present concern within sociology with maintaining the discipline’s legitimacy as a scientific enterprise. Yet because the audience for academic research is other academic researchers, the common style of social scientific academic research is elegance of formal theory, rigorous methods for testing these theories, and retrospective analysis of empirical evidence.

Policy research, on the other hand, is targeted to two audiences: actors in the policy arena, and other academics with an interest in the type of policy research being conducted. Research problems in policy research tend to come from practical considerations of social or policy problems rather than theoretical debates in the discipline, and the results are tailored to what Coleman (1972) called the “world of action,” which is characterized by time constraints

and the necessity of making decisions under uncertainty. In a perfect world, researchers could produce flawless information with great dispatch. In reality, and especially in the policy world, the best we can hope for is imperfect information in a timely fashion. This fact led Coleman to propose redundancy as a safety mechanism: multiple studies, each using different data sources addressing the same question, allowing policymakers to “triangulate” each of the admittedly imperfect studies to aid decisionmaking.

The ultimate purpose of policy research is to serve the public good. Defining the public good, however, is complex and subject to multiple interpretations and value conflicts. For example, in the case of policy research funded by a governmental entity, the researcher’s and the client’s perception of the public good may, in fact, conflict. Neutral problem definition and interpretation of research findings is quite difficult to carry out in practice and, in fact, much policy research reflects the interests of the client and is advocacy oriented. This tendency conflicts with academic norms to retain objectivity, at least with respect to the analysis and interpretation of results. For this reason, policy research is not as highly valued in the academy as is academic research. Moreover, translation of research findings into policies that can be implemented often requires attention to practical considerations of little interest to other academics but of great interest to policymakers. On the other hand, if research is too technical or not policy relevant enough, it is not of much use to policymakers. Therefore, scholars wishing to conduct policy research must traverse the narrow bounds of ideological and pragmatic considerations when deciding how much time to devote to academic and policy research, respectively.

Sociologists have long wrestled with questions about the uses of sociological knowledge and the role social scientists should play in public policy. C. Wright Mills (2000) believed that

the social scientist, particularly the sociologist, has a social responsibility to reveal to the public the connections between the problems they encounter in their individual lives and larger structural forces. The social scientist also has the obligation to make those in positions of power, that is, those who have a hand in creating institutional and structural conditions, aware of how their decisions and actions are affecting the lives others. Mills did not believe that social scientists could “save the world,” but he saw nothing wrong with their attempting to do so; thus he posed the question, “If there *are* any ways out of the crises of our period by means of intellect, is it not up to the social scientist to state them?” (2000:193)

Like Mills, many sociologists believe that sociology can make unique contributions to public policy with the tools of empirical data and social theory. James Coleman has written extensively on the role of sociology in social policy. For him, conducting research that has the potential to contribute to policy issues and “make a difference” was among the most important motivations for undertaking a project. He has described social policy research as “the systematic search for information that can aid social policy” (1976:304), and he believed strongly that social science research findings should form the basis of policy debates.

Social science findings, whether about the contribution of educational resources, tracking, the effects of desegregation, or teacher treatment, are subject to interpretation and debate. As Bulmer (1996) reports in his analysis of Coleman’s contribution to social policy, people interpreted the *EEO* findings to suit their own interests, and this led to differing conclusions about the implications of the results. For some, the results suggested the need to intervene in family and community rather than to change schools; for others, the results indicated that the way to improve black children’s academic performance was to integrate schools; and for others the results suggested the need for black community control of neighborhood schools. Such

disagreement among social scientists is a major obstacle to the vision of the improvement of social policy research that many hold and it calls into question the extent to which social scientists should be involved in making policy recommendations, which some view as overadvocacy (Bulmer 1996). Many scholars believe that academics are uniquely positioned to provide objective input in the policy arena, but as Bulmer (1996:112) points out, academics also have “value standpoints” and “interests at stake” which may affect their policy recommendations.

Modes of Empirical Research and Policy Implications

Qualitative Research--- Ethnography is the preferred method of many education researchers (Rist 1980; Eisenhart 2001). Schooling is a social enterprise, consisting of a complex set of social arrangements and interactions, which qualitative methods like ethnography are well-suited to illuminate. When done well, both with respect to design and analysis, qualitative studies, as described earlier in this chapter, present rich and vivid portraits of life in school and reveal perspectives and experiences of school actors that previously had not been widely known or well understood. For example, according to Schlechty and Noblit (1982), in the 1960s sociologically oriented qualitative research was instrumental in helping evaluators to understand why federally funded school innovations did not produce the expected outcomes. The authors contend that sociologists brought attention to the importance of the “cultural, social, political, and organizational contexts in and around schools” for how programs are understood and implemented at the local level (1982:289). Indeed, qualitative studies reveal much in their detail about school context, cultures, and social systems, and about how individuals make sense of their lives within these institutions, and they greatly enhanced our knowledge and understanding of

various schooling processes, school (Mehan 1979) and classroom organization (Rist 1970), student conformity and resistance (McFarland 2001), and parental involvement (Lareau 2000).

While qualitative research can enrich our understanding of the complexity of how social processes unfold, research of this kind has its limitations for informing policy. Among the most serious is their lack of generalizability beyond the communities and individuals studied.

Although team ethnographies with numerous researchers and multiple sites are becoming more common, ethnographic studies are typically relatively small in scale, focusing in depth on one or two schools and a limited number of informants, usually no more than 20 or 30.⁵ As Coleman (1994:30) has argued, the increase in government funding for social science research in the late 1950s contributed to a “decisive shift” from studies combining qualitative and survey methods, in the tradition of the classic community studies of sociologists such as Robert Lynd’s Middletown, to pure survey methods: “Governments are less interested in analysis of social system functioning than in descriptive statistics for well-defined populations, such as the population for which they have some responsibility. Thus they will favor research which gathers data on a representative sample, from which inferences about the population can be rigorously drawn.” [cite and page number.] Hence, for all their richness, critics contend that many qualitative studies are not useful for informing policy, because while they reveal a great deal about one or two schools or a small group of individuals, they tell us very little about larger trends and the degree to which the findings can be generalized to other schools, regions of the country, or groups. Furthermore, qualitative studies do not easily lend themselves to replication, a hallmark of the scientific model of research. In fact, many qualitative studies are impossible to replicate, and thus limit opportunities for the research community to test the reliability and validity of their findings.

Qualitative research is also widely criticized because of the poor quality of data collection and/or analysis of some studies (Rist 1980). This criticism is unfortunate and not uniformly applicable. There are many examples of well-designed qualitative research studies that use rigorous and systematic techniques of data collection and analysis. Indeed, notwithstanding the criticisms about generalizability and causation, qualitative research once held a rather prominent place in the discipline of sociology, built on work by sociologists such Robert Lynd, W. Lloyd Warner, W. E. B. DuBois, Robert E. Park, William Foote Whyte, and Sinclair Drake. In fact, qualitative research was once the dominant research method in the discipline of sociology.

The criticisms of qualitative research are neither new nor unique to sociology or educational research. Nonetheless, they are not trivial issues, and they are of particular consequence for education policy research because of the significance Americans accord to education and its relationship to other important quality of life outcomes. Thus, research used to inform education policy must be high-quality, and the evidence must be solid because, as Karl Alexander (1997:18) has argued, eventually we all suffer “if misguided thinking about the schools leads to misguided policy.” To achieve sound education policy, we must have sound evidence to support policy recommendations. This is a point with which everyone can agree. It underscores the need for more publications dedicated to addressing the concerns and criticisms about qualitative methods in education policy research and offering proven prescriptions for overcoming them. In this way, the potential contributions of qualitative methods to policy are not lost. A number of publications like this already exist (Eisenhart 2001; Levison, et al., 2002; Stritikus and Wiese 2006), but sociologists have been less involved than anthropologists have in this endeavor.

Quantitative Research and Causal Inference

The field of education policy research has expanded and matured since the publication of the *Coleman Report*, but the lessons learned from that study continue to influence the field. The report provided a model for education policy research, demonstrating, as Heckman and Neal (1996:84) assert, “the value of large-scale data sets and empirical social science research for evaluating social programs.” And although findings from such studies often are vigorously contested, as they were even with the *Coleman Report*, nationally representative survey data are still considered to be among the most valid, rigorous, and reliable sources of evidence for education policy research, second perhaps only to experiments.

Since the publication of *A Nation at Risk* (1983), American education policy has been dominated by standards-based reform and accountability. These policies involve setting standards for what students should know and be able to do, designing assessments linked to these standards, testing students on a regular basis, and establishing sanctions and rewards for schools, principals, teachers, and, at times, students based on high-stakes test results. Though there is some evidence that school-based accountability programs may increase achievement (Figlio and Ladd 2008; Carnoy and Loeb 2002; Hanushek and Raymond 2005; Jacob 2005) there is also some concern that accountability based on high-stakes tests may narrow and fragment the curriculum, promote rote, teacher-directed instruction, and encourage schools to teach test-preparation skills rather than academic content, tendencies that may be stronger in schools with high minority and low income populations (Orfield and Kornhaber 2001; Valenzuela 2005; Nichols and Berliner 2007).

The emphasis placed on accountability has increased the desire among policymakers and funding agencies for methods that provide stronger causal inference. The strongest causal

inference comes from a randomized research design, which involves randomly assigning subjects to treatment conditions, as is commonly done in drug trial studies. Such a design if carried out correctly ensures that subjects are alike in all respects with the exception of the treatment.⁶ For example, suppose we want to test the causal effect of teacher experience on student test score gains, defined as the test score gain difference between students who had a teacher with less than three years of experience and students who had a teacher with more than 20 years of experience. Randomly assigning students to treatment (novice vs. experienced teachers), eliminates the problem of selection bias (that students in the treatment and control conditions would differ on “pre-treatment” covariates). Eliminating selection bias is one of the most important conditions of establishing a causal inference. Others include temporal precedence, which in this case could be addressed by ensuring that the outcome (test score gain) is measured subsequent to teacher assignment; causal manipulability, discussed previously; and eliminating alternative explanations. Due to the cost and difficulty of implementing random design trials, and the political and ethical barriers of withholding treatment to a subgroup of students, such designs have been relatively rare in social scientific studies of educational programs. In some cases, it is possible to use observational data analysis techniques that approximate random design to reduce selection bias. These techniques, which include fixed effects models, regression discontinuity, propensity score matching, and instrumental variables estimation are becoming increasingly prominent, especially in policy analysis and the economics of education.

The recent turn toward causal analysis for policy research is made clear in the 2001 reauthorization of the Elementary and Secondary Education Act, NCLB. This Act encourages research studies based on scientifically based evidence, and the U.S. Department of Education has signaled its preference for random assignment and quasi-experimental designs in grant

competition announcements.⁷ These designs have also been a point of emphasis for education research funding at the National Science Foundation, the National Institute of Child Health and Human Development, and are becoming institutionalized through the What Works Clearinghouse (funded by the newly formed Institute of Education Sciences) and disseminated through the Interagency Education Research Initiative, a program designed to bring promising interventions to scale.⁸

V. Conclusion

The institutionalization of causal analysis through federal funding priorities has shifted the balance toward understanding systematic effects. It is important to keep in mind, however, that an understanding of systematic effects is only one question that drives scientific research. There are at least two others: 1) what is happening? and 2) why or how is it happening? (National Research Council 2002).

Due to the breadth of the discipline of sociology, sociologists are perhaps uniquely situated to address all three realms of scientific research on education. Sociologists, along with psychologists and economists, are designing randomized field trials and using quasi-experimental techniques to estimate the causal effects of educational interventions. Accounting for the presence or absence of causal effects, however, requires understanding “the implementation problem,” that is, what is happening and why or how it comes about. Such an understanding requires systematic analysis of how the “cultural, social, political, and organizational contexts in and around schools directly shape the meaning of given programs and the actions that take place within programs” (Schlechty and Noblit, 1982). This type of analysis involves developing a qualitative understanding of such things as how process emerges over

time, how actors create meaning in the face of complexity, and how norms of cooperation and competition shape the pursuit of collective goals. These nuances will not emerge from a regression equation, causal or not, but are also critical to our understanding of the educational process and the effects causes are theorized to bring about.

Therefore, sociologists can contribute to education research designed to test causal effects of “what works,” describe in great depth what is happening in schools, and test hypotheses about why and how. This unique perspective bodes well for the continuing relevance of sociological inquiry on education despite the many differences between academic and applied research. One of the strengths of sociology is the interplay between qualitative and quantitative research methods, the ability of each to inform the other. Good sociologists understand and appreciate both types of research and they understand the importance of selecting the appropriate methods for the research questions.

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Table Name?Paradigm	Major Objective	“Client”	Common Style	Time Constraints	General Weaknesses
Academic Social Science Research	Construct theories for understanding society	“Truth,” as defined by the disciplines, other scholars	Rigorous methods for constructing and testing theories; usually retrospective	Rarely external time constraints	Often irrelevant to information needs of decision makers
Policy Research	Predict impacts of changes in variables that can be altered by public policy	Actors in the policy arena; the related disciplines	Application of formal methodology to policy-relevant questions; prediction of consequences	Sometimes deadline pressure; perhaps mitigated by issue recurrence	Difficulty in translating findings into government action

Adapted from Weimer and Vining, 2005, Table 2.1.

¹ This section draws heavily from Dreeben (1994).

² According to legal scholar Rachel Moran, it is very rare for amicus briefs to be cited in court decisions.

³ In the case of reducing the black-white test score gap, it may be most effective to target effective educational services and programs specifically at low-achieving black students rather than providing for all students, black or white. Targeted policies, however, may lack the necessary political support that more universalistic policies can garner.

⁴ Corporal punishment in schools is banned in about half of U.S. states. Corporal punishment in the home is explicitly allowed in some legislation and it is banned by statute in only one state, Minnesota.

⁵ Here we are referring to in-depth qualitative interviews as opposed to survey interviews.

⁶ There is the possibility that due to sampling error there may be some observable differences between treatment and control groups. The likelihood of detecting a statistically significant difference between treatment and control on an observable characteristic would shrink toward zero as sample size increases.

⁷ See, for example, the January 25, 2005 Federal register, p. 3586, as cited in Schneider and Keesler (2007).

⁸ See Schneider et al. (2007) for a discussion of how causal analysis is becoming institutionalized through federal funding initiatives and useful summaries of education research studies that use experimental and quasi-experimental methods.