

If Families Matter Most, Where Do Schools Come In?

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FAMILIES AND SCHOOLS

Most people believe that a child's family is the most important determinant of his or her life outcomes—not just family-related outcomes like marriage but also achievement outcomes like test scores, whether the child graduates from college, and wages later in life. Most people are right: the widespread belief in families' importance is amply supported by statistical evidence, some of which I review in this chapter. Nonfamily influences on children have much less powerful effects on childrens' outcomes—by at least an order of magnitude.

Some people find such evidence profoundly discouraging because they would like children's outcomes to be largely independent of family circumstances. Such people tend to react to the evidence in one of two ways. Some resist the statistics and hope that, by combining the numbers in some new way, they will find that families are not very important (and that nonfamily factors, such as schools, are). Others decide that policy efforts should be focused on improving family circumstances (through income transfers, antidrug programs, and so forth) instead of reforming

schools or other institutions that affect children more directly. Neither of these reactions is very productive. On the one hand, family effects are of such great magnitude that varying how statistics are computed has little effect on the central conclusion that families are extremely important. On the other hand, a key family factor that affects children is parents' own education, so that it is hard to improve one generation's achievement without having first improved the achievement of the previous generation!

Moreover, both of these reactions are misguided because it is wrong to think of families and schools as *alternative* influences on children—so that, if families are important, schools are not. In fact, one of the ways in which “good” families benefit their children is by choosing good schools for them. On the one hand, it is right to attribute this “good school” effect to families because school quality is a resource that they choose to provide (like nutritious meals or comfortable living space). On the other hand, if no good schools were available, a family's ability to benefit its children would be limited. Moreover, well-planned school reforms can exploit the power of families, making their influence better. Essentially, the logic of such a reform is to improve parents' influence by giving them incentives to be better, more informed, more active consumers of education. Reforms can also make parents better consumers by eliminating arbitrary constraints on their choices. Finally, a reform can improve parents' effects by raising their incentives to make investments in their children's education that are complementary to schools.

An example unrelated to schools may help with the essential logic. Families produce good nutritional status by being good consumers at the grocery store and by preparing food wisely. If a change in the grocery store industry—say, better labeling of food and availability of nutritious recipes—made families into better grocery consumers and better producers of meals, nutritional status would increase. The improvement in nutrition would take place even though the vast majority of nutritional status was determined within the family, both before and after the change in the industry.

This chapter is about the links between families and schools. I explore the importance of families for children's outcomes, paying particular attention to the school-related channels through which family effects work. I also describe how family effects work better under some schooling institutions than under others. This description naturally leads toward some discussion about school reform, but the primary purpose of the chapter is evidentiary.

THE IMPORTANCE OF THE FAMILY

From precolonial times onward, observers of American children have seen widely differing levels of achievement, regardless of whether the measure was literacy, numeracy, familiarity with literary and scientific works, or the ability to prepare and write sophisticated arguments. Observers attributed the variation in achievement to several sources: differences in children's ability and motivation, differences in the schooling resources available to children, and differences in children's home environments.¹ By the early 1960s, however, many people who were concerned about disparate achievement had become focused on the idea that schooling *resources* accounted for most of the disparity. In particular, they believed that differences in resources accounted for most of the achievement disparities among ethnic groups and income groups. For instance, they thought that, although there were more- and less-able white students and more- and less-able black students, the difference between the achievement of the *average* white student and the *average* black student was largely attributable to the black students' attending schools with lower spending, fewer textbooks, fewer teachers, and so on.

1. The United States Bureau of Education (later the Office of Education and then the Department of Education) published numerous studies comparing the persistence, promotion, educational attainment, and achievement of different groups of students, especially urban, rural, black, white, and immigrant children. The Bureau of Education also published studies comparing resources (spending, buildings, books, teachers, and so on) across different schools. See the *Bulletins* of the Bureau of Education—for instance, no. 39 (1916).

Into this (rather complacent) belief system was dropped, in 1966, the Equality of Educational Opportunity Commission (EEOC) report. The EEOC report revealed that, once researchers controlled for differences in students' family backgrounds, differences in school resources accounted for almost *none* of the disparity in achievement. That is, the report concluded that families mattered a lot and that schools hardly mattered at all:

It is known that socioeconomic factors bear a strong relation to academic achievement. When these factors are statistically controlled, however, it appears that differences between schools account for only a small fraction of differences in pupil achievement.²

Reviewing the EEOC report, Mosteller and Moynihan noted that, if anything, the above statement greatly understated the results:

The pathbreaking quality of the EEOC had to do with its analysis of the relation of variation in school facilities to variation in levels of academic achievement. It reported so little relation as to make it almost possible to say there was none.³

Because the report had been expected to verify existing beliefs, its conclusions were shocking to the very groups that had proposed that it be commissioned: educators, civil rights leaders, and much of the United States Congress. (The 1964 Civil Rights Act included the commission for a study which became the EEOC project. Because the survey and analysis was conducted by a team headed by James Coleman of Johns Hopkins University, the report is often called the "Coleman Report.")

The basic statistics contained in the Coleman Report were valid.

2. James S. Coleman, Ernest Q. Campbell, Carol J. Hobson, James McPartland, Alexander M. Mood, Frederic D. Weinfeld, and Robert L. York, *Equality of Educational Opportunity* (Washington, D.C.: United States Government Printing Office for the National Center for Education Statistics, 1966), pp. 21–22.

3. Frederick Mosteller and Daniel P. Moynihan, "A Pathbreaking Report: Further Studies of the Coleman Report," in Frederick Mosteller and Daniel P. Moynihan, eds., *On Equality of Educational Opportunity* (New York: Random House, 1972), p. 15.

In fact, when the report was issued, a number of scholars scrambled to reanalyze the EEOC data and found (somewhat to their surprise) that their analyses broadly confirmed the statistics in the report.⁴ Moreover, the report's statistics remain largely valid: a researcher could generate similar statistics today using up-to-date educational surveys. Despite the general accuracy of its statistics, however, the Coleman Report created untold confusion about families and schools. This was because James Coleman misinterpreted the statistics. Unfortunately, Coleman's problems with interpretation were followed by nearly everyone who commented on or reanalyzed the EEOC data in the fifteen years following the report's release.

The interpretation problem began with the fact that Coleman (and his followers and critics) largely failed to recognize (and certainly did nothing to account for) the fact that school resources are not randomly assigned to families. The school that a child attends is determined by her or his own family's income, job location, tastes, knowledge about educational opportunities, and so on. In 1964, it was no accident that the children of bankers and educators tended to attend schools replete with resources, while the children of poor farmers tended to attend schools with meager resources.

One consequence of not recognizing that family characteristics determine children's schools was that Coleman *underestimated* the importance of families relative to schools! That is, it is not enough to compare two families who appear to be similar but whose children attend schools with widely different resources. The family whose child attends the well-financed schools is likely to, say, have

4. See, for instance, Eric Hanushek and John F. Kain, "On the Value of *Equality of Educational Opportunity* as a Guide to Public Policy," in Mosteller and Moynihan, eds., *On Equality of Educational Opportunity*; David J. Armor, "School and Family Effects on Black and White Achievement: A Reexamination of the USOE Data," in Mosteller and Moynihan, eds., *On Equality of Educational Opportunity*; and Marshall S. Smith, "*Equality of Educational Opportunity*: The Basic Findings Reconsidered," in Mosteller and Moynihan, eds., *On Equality of Educational Opportunity*.

more wealth (a variable not measured by the EEOC survey) than the family whose child attends the poorly financed one. In other words, Coleman and his contemporaries attributed the effects of many unobserved *family* characteristics to *schools*.

This first flaw in Coleman's interpretation did not greatly alter reception of the EEOC report because readers were already shocked by the degree to which families, instead of schools, accounted for the variation in achievement. If a thoughtful critic had revealed that Coleman's statistics understated the importance of families and overstated the importance of schools, it is doubtful whether he would have intensified the (already strong) reaction to the report.

The second consequence of Coleman's neglecting the fact that family circumstances determine children's schools was far more serious. He (and his followers and critics) ignored the fact that one of the key ways in which families affect their children is through choosing or determining the schools that they attend. What are the implications of this fact?

- First, giving parents information and resources that enable them to choose schools more wisely is likely to improve student achievement significantly.
- Second, relaxing arbitrary institutional or resource constraints on parents that prevent them from sending their children to the school they prefer is likely to improve student achievement significantly.

What Coleman's evidence *did* show was that simply giving more resources to schools (in the absence of interaction between families and those resources) was unlikely to improve student achievement significantly.

Put another way, Coleman (and those who followed him) framed the question as families *versus* schools, perhaps because their implicit agenda was to find support for policies that worked by imposing resources on schools, regardless of the cooperation of

local families. They therefore ignored the implications of evidence that families who sought high achievement consistently sought good schools as a mechanism for achieving their goals. If achievement-prone families could have attained their goals without schools, it is not likely that they would have consistently sought out some schools and avoided others. A better way to have framed the question would have been to hypothesize that there is (1) some achievement that a school can create without any interaction with families; (2) some achievement that families can create without using a school as a learning device; and (3) some achievement that is created in a school when the families it serves are “invested” in it, help determine how its resources are used, and support its activities. It is the goal of this chapter to focus on the last of these three channels by which achievement can be improved. I describe the interactions between families and schools and point out policies that are likely to improve such interactions. In this, the chapter departs from much of the ongoing literature on families and schools, which is still (unproductively) obsessed with families *versus* schools.

There is substantial evidence that his or her family is the most important determinant of a student’s outcomes. In practice, social scientists rely on a limited number of relatively crude measures of family background: parents’ education, family income, number of children in the family, race/Hispanic ethnicity, parental involvement with the school, and availability of learning-related resources (like books) in the home. It is possible to augment this list, of course, but even this short list of variables explains far more variation in student outcomes than is explained by school input variables, such as per-pupil spending, class size, teachers’ salaries, teachers’ credentials, books per student, and computer availability in the school. Indeed, the *combined* explanatory power of school input variables and neighborhood variables (such as the educational, income, and racial composition of the local population) does not come close to matching that of family background variables.

Some of the most recent evidence on this point comes from the National Educational Longitudinal Survey (NELS), which began following a group of 24,599 eighth-graders in 1988.⁵ The students are still too young to have finished their education or earned wages that reflect their likely careers, but they were tested in May 1992 (at the end of the twelfth grade for the typical student) in four subjects: reading, mathematics, history, and science. One can use regression to apportion the explained variation in the students' test scores among family background variables, school input variables, and neighborhood variables. I used a regression that included, specifically:

Family variables: the maximum of parents' years of completed education, family income, indicators for race and Hispanic ethnicity, number of siblings; indicators for parents' having attended a school event, parents' having planned courses with child, parents' knowing graduation requirements, having more than 50 books at home, having a calculator available for child's use with homework, family having used the library, family having visited a museum.

School input variables: per-pupil spending, average class size, minimum teacher salary, average teacher salary, maximum teacher salary, percentage of teachers who are certified in their teaching area, percentage of teachers who have masters' degrees, average experience of teachers, number of books per student, number of computers per student, number of counselors per student.

Neighborhood variables: in addition to indicators for census region in which the family lives, the following variables are used, both at the level of the school district in which the family lives and at the level of the metropolitan area in which it lives: mean household income, an index of income inequality, percentage of households below poverty, percentage of households with incomes above \$50,000, percentage of population who are black, percentage of the population who are Hispanic, percentage of the population who are Asian, percentage of the adult population with a high school degree, percentage of adult popu-

5. The NELS used a complex sampling scheme, which called for purposeful dropping of some students and "freshening" the sample with other students. As a result, the 1988 wave of the survey contained 24,599 eighth-graders, but the 1990 wave contained 19,402 students and the 1992 wave contained 16,315 students.

lation with some college education, percentage of adult population with a baccalaureate degree.⁶

In the regression just described, the family variables account for 34 to 105 times as much variation as the school input variables do. (There is a range of estimates because family variables account for different amounts of variation on different subject tests.) Family variables account for 12 to 24 times as much variation as neighborhood variables (income, educational attainment, and racial composition of the school's district population; region of the country) do.⁷ Put another way, family variables explain 11 to 14 times as much variation in students' test scores as school inputs and neighborhood variables *combined*. See figure 1 for a summary of how the explained variation in students' mathematics scores is apportioned among family, school, and neighborhood variables.

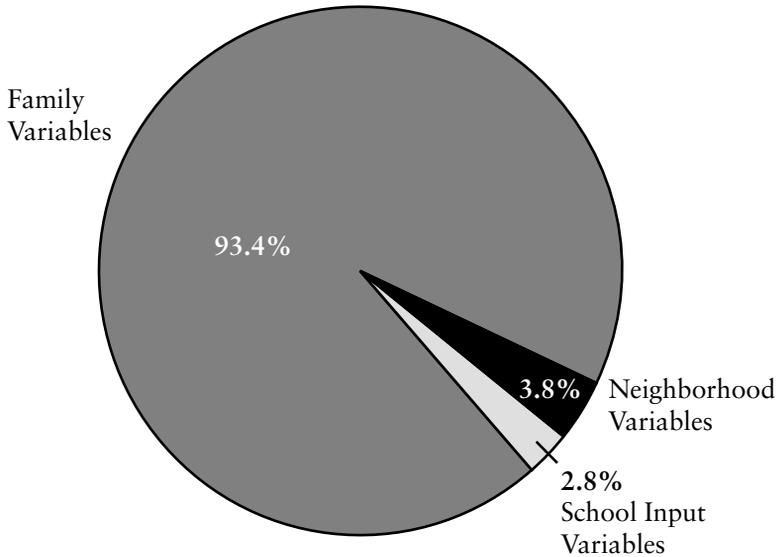
Of course, test scores have their limitations as outcomes. The advantage of using test scores is that they are available for people who were students only a few years ago. The disadvantage of test scores is that they are an intermediate outcome—that is, one cares about test scores not so much for themselves, but because they are good predictors of other, later outcomes about which one cares more directly: a student's ultimate educational attainment, occupation, income, and so on.

To examine some later outcomes, I turn to the National Longi-

6. There are nine census regions. The Gini coefficient is the index of household income inequality.

7. Author's calculations using United States Department of Education, National Center for Education Statistics, *National Education Longitudinal Study, 1988: Third Follow-up*, restricted access computer file (Washington, D.C.: National Center for Education Statistics, 1996). It may be useful to know that the $F_{14,8345}$ -statistic for the hypothesis that the family variables are jointly equal to zero is 146 for reading and language arts, 213 for mathematics, 157 for history, and 178 for science. The $F_{11,8345}$ -statistic for the hypothesis that the school input variables are jointly equal to zero is 5 for reading and language arts, 6 for mathematics, 5 for history, and 8 for science. The $F_{30,8345}$ -statistic for the hypothesis that the neighborhood variables are jointly equal to zero is 2 for reading and language arts, 7 for mathematics, 4 for history, and 3 for science.

FIGURE 1. VARIATIONS IN TWELFTH-GRADERS' MATH SCORES THAT ARE EXPLAINED BY FAMILY, SCHOOL INPUT, AND NEIGHBORHOOD VARIABLES



tudinal Survey of Youth (NLSY), another representative survey that began following 12,686 young Americans in their teens and has continued through their middle thirties.⁸ I examine their outcomes at age thirty-three, by which age most have completed their education and settled into a job that is reasonably indicative of their career prospects. The two later outcomes that are most often examined are income and completed years of education. If one uses regression to explain these two outcomes with the family, school, and neighborhood variables described above, one finds that family variables explain fourteen times as much variation in income as school input variables do and that family variables explain twenty-three times as much variation in income as neighbor-

8. Specifically, the NLSY began in 1979 with 12,686 young people between the ages of 14 and 21 (inclusive). The NLSY respondents have been resurveyed every year since then, and the most recent available data are from the 1998 survey, when the respondents were aged 33 to 40.

hood variables do.⁹ Also, one finds that family variables explain nineteen times as much variation in educational attainment as school input variables do and that family variables explain twenty-four times as much variation in educational attainment as neighborhood variables do.¹⁰ Summarized another way, family variables generally account for nine to eleven times as much variation in later outcomes as school inputs and neighborhood variables *combined*. See figures 2 and 3 for how the explained variation in students' later income and educational attainment is apportioned among family, school, and neighborhood variables.¹¹

If one is interested in school reform, is it useful to know how much of the variation in outcomes is accounted for by family effects? The answer is yes if school reform can affect the relationships between families and schools and can thereby alter family effects. Because family effects explain so much more variation in outcomes than do school effects, a small improvement in family conduct that comes about through school reform may be much more useful than a relatively large change in school inputs. In other words, family effects are so important that school reformers are neglectful if they do not attempt to partly improve family effects.

CHANNELS FOR FAMILY EFFECTS

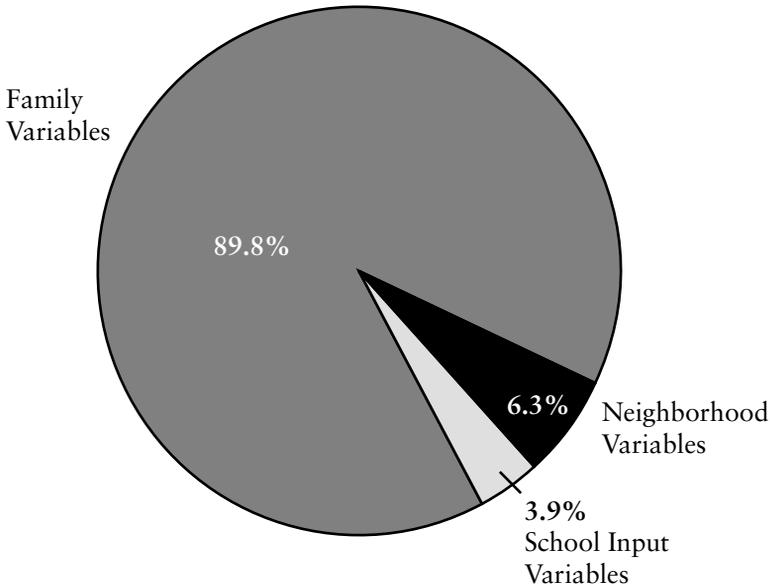
One can distinguish between three types of family variables: (1) those that are not under the family's control (race, ethnicity); (2)

9. Author's calculations using United States Department of Labor, Bureau of Labor Statistics, *The National Longitudinal Survey of Youth, 1979-1998*, release 10.0, restricted access computer file (Columbus, Ohio: Center for Human Resource Research, Ohio State University, 1999).

10. For the regression in which completed years of education is the dependent variable, the F-statistic for the hypothesis that the family variables are jointly equal to zero is 205, the F-statistic for the hypothesis that the school input variables are jointly equal to zero is 3, and the F-statistic for the hypothesis that the neighborhood variables are jointly equal to zero is 3.

11. The NLSY does not have a twelfth-grade test, but its respondents did take the Armed Services Vocational Aptitude Battery (ASVAB) set of tests. It is interesting to note that if one takes students' standardized scores on the language arts and mathematics components of the ASVAB tests and regresses these scores

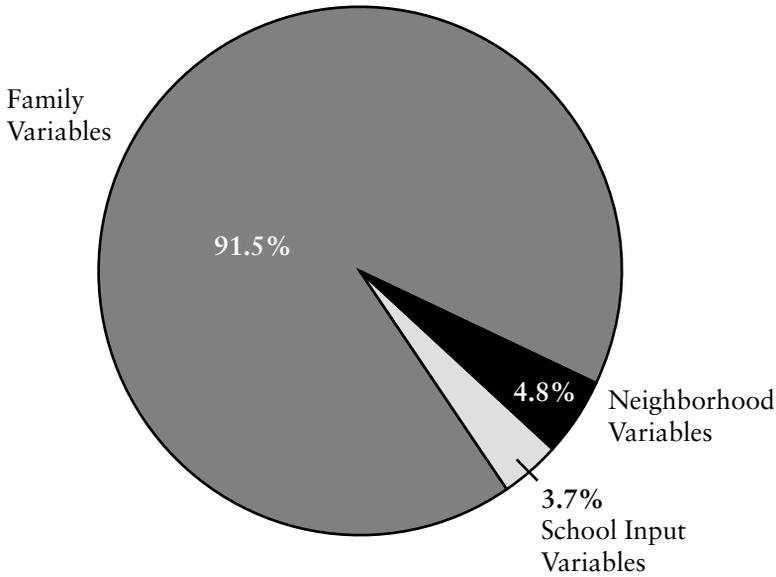
FIGURE 2. VARIATIONS IN 33-YEAR-OLDS' INCOMES THAT ARE EXPLAINED BY FAMILY, SCHOOL INPUT, AND NEIGHBORHOOD VARIABLES



those that are partially under the family's control but are unlikely to be affected directly by the family-school relationship (parents' education, family income); and (3) those that describe family conduct that is intimately related to schooling or learning (visiting the school, planning courses with the child, using the library, and so on). School reform—or, more broadly, the way that schools operate—can change the family effects associated with all three types of variables. Most obviously, if school reform affects family conduct (measured by variables of the third type), it can change family effects. In addition, the effects of variables of the first and second type may be related to schools. For instance, if racial discrimina-

on the family, school, and neighborhood variables, one obtains results that are similar to the NELS results described above. The similarity suggests that the results are not unique to the NELS or NLSY but are general across time, specific tests, and samples.

FIGURE 3. VARIATIONS IN 33-YEAR-OLDS' EDUCATIONAL ATTAINMENT THAT ARE EXPLAINED BY FAMILY, SCHOOL INPUT, AND NEIGHBORHOOD VARIABLES



tion has traditionally limited the residential choices of some race—and thereby limited their ability of choose among schools—then a school reform that affects the relationship between race and school choice may alter the effect of race. Similarly, if income has traditionally limited families’ ability to choose among schools, then a school reform that affects the relationship of income and school choice may alter the effect of family income.

Finally, one should not forget that school reform may have indirect effects on the second type of variable (parents’ education, parents’ income) because a reform that affects one generation’s schooling can change the educational and income “inheritance” of the next generation.

Naturally, one would like to know the exact mechanism by which each family variable affects student outcomes, but—for the purposes of this chapter—is it *necessary* to know the exact mecha-

nisms? The answer to this question is no because it turns out that, on the whole, the reforms that are likely to improve some family effects are also likely to improve other family effects. The fact that various family effects are affected in the same direction is not pure coincidence. Intuitively, a reform will tend to improve family effects of many kinds if it makes parents more informed, more active, and less constrained by arbitrary factors.

Nevertheless, we may be interested in the family characteristics that are associated, statistically, with a child's being successful academically. Although the effect of a given characteristic does vary slightly with the outcome that one uses to measure a child's success—test scores, educational attainment, income, and so on—the family characteristics that are important statistically for one outcome are important statistically for other outcomes. All the family characteristics included in the regression described above are typically statistically significant predictors of outcomes.¹²

Parents' completed years of education is the family characteristic that typically has the greatest statistical significance in regressions like that described above. Family income has less importance but is another significant predictor of a child's achievement.¹³ Not surprisingly, parents who are more educated and families with higher incomes tend to have children who are higher achievers. Family *conduct* variables that are statistically significant predictors of good student outcomes include owning an atlas, owning a dictionary, owning more than fifty books, having a computer for child's use with homework, having a calculator for child's use with

12. In a regression, t-statistics are commonly used to measure the statistical significance of effects. If an effect has a t-statistic with an absolute value of 1.96, then it has only a 5 percent probability of being a zero effect. A t-statistic that is larger than 1.96 in absolute value has an even smaller probability of being a zero effect.

13. For instance, when test scores are the outcome, parents' education has a t-statistic between 19 and 22 while parents' income (which is also important) has a t-statistic between 9 and 11. When students' later educational attainment is the outcome, parents' education has a t-statistic of 29, while parents' income has a t-statistic of 2. When students' later income is the outcome, parents' education has a t-statistic of 8 while parents' income has a t-statistic of 5.

homework, having attended a school event, parents' checking that homework is done, parents' planning course-taking with child, using the library, visiting science or history museums, parents' knowing what courses child is taking, parents' knowing how well child is doing in school, and parents' knowing graduation requirements.¹⁴

Does it really matter if each of the above-mentioned family conduct variables has an independent, causal effect on children? For instance, it may be that using the library and having a calculator available are symptoms of parent's knowing more about their children's schooling. For the purposes of this chapter, it does not matter *which* family conduct variables have a causal effect so long as *some* alterable behaviors or attitudes have a causal effect. Why does it not matter? First, in each case in which I present evidence that schools can affect family conduct, I rely on a source of variation in schools' operation that does *not* depend on the decisions of individual families. This is an important distinction that will become clear through examples. Second, when I present evidence that schools' operations foster a particular family behavior (such as attending school events), I am not attempting to focus attention on that particular behavior. Indeed, the conduct variables are

14. The t-statistics for these family characteristics are owning an atlas, t-statistic of about 3; owning a dictionary, t-statistic of about 5; owning more than fifty books, t-statistic of about 5; having a computer for child's use with homework, t-statistic of about 3; having a calculator for child's use with homework, t-statistic of about 5; having attended a school event, t-statistic of about 4; parents' checking that homework is done, t-statistic of about 4; parents' planning course-taking with child, t-statistic of about 7; using the library, t-statistic of about 11; visiting science or history museums, t-statistic of about 9; parents' knowing what courses child is taking, t-statistic of about 4; parents' knowing how well child is doing in school, t-statistic of about 3; and parents' knowing graduation requirements, t-statistic of about 3.

The effects described come from regressions in which the explanatory variables are the relevant family conduct variable plus all the other family, school input, and neighborhood variables listed on pages 95–96. The dependent variables are twelfth-grade reading scores, twelfth-grade mathematics scores, educational attainment at age 33, and income at age 33. The t-statistics are approximate because they vary slightly with the outcome.

highly correlated, and the effect is probably on several related behaviors.

Parents' Choosing Better Schools

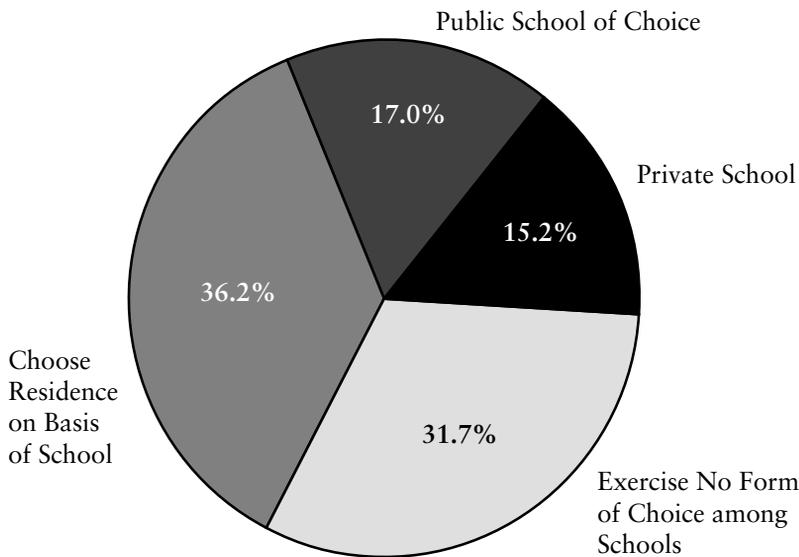
Some commentators doubt whether most families make intentional choices about their children's education. Other commentators assert that, to the extent that families do make intentional choices, they are guided by superficial characteristics such as the appearance of buildings or success in sports.

Survey evidence suggests that the majority of parents *do* make intentional choices about schools. Among nonrural parents surveyed in the 1996 National Household Education Survey (NHES), 15.0 percent chose their child's school by selecting a private school, another 16.8 percent chose their child's school by selecting a magnet school or other public school of choice (that is, some form of public school choice was available in their area and they took advantage of it), and the remaining parents sent their children to the school assigned to their residence. Within this last category of parents, however, 54 percent exercised some choice among schools by choosing their residence partly in order to choose a school. All in all, 68.6 percent of parents made an intentional choice about their child's school.¹⁵ See figure 4 for a summary of these statistics.

Another type of evidence—and a type that suggests that parents care about achievement and not just buildings or sports—comes from the amount that families are willing to pay for schools that produce better educational outcomes. House prices are the main form by which such payments are made in the United States. When the price of a house reflects the quality of the school associated with it, it is evidence of a demand for school quality among parents

15. Author's calculation using United States Department of Education, National Center for Education Statistics, *National Household Education Survey, 1996*, restricted access computer file (Washington, D.C.: National Center for Education Statistics, 1998). I exclude rural parents from this analysis because, in many rural areas, there is only one school that is reasonably nearby.

FIGURE 4. PARENTS' VARIOUS FORMS OF INTENTIONAL CHOICE AMONG SCHOOLS (in percent)



that is widespread. Why? If just a few families were willing to pay for schools that produced better educational outcomes, then their choices would have little effect on house prices. A systematic relationship between house prices and public school outcomes associated with them is evidence of a widespread parental interest in schools.

The best house price evidence on parents' willingness to pay for schools that produce good educational outcomes comes from neighboring houses that are situated on the boundary of different schools' attendance districts. Black (1999) considers physically similar, neighboring houses in Massachusetts that are in the same school district but on opposite sides of a boundary dividing two school attendance areas.¹⁶ Such houses differ only in the school

16. Sandra E. Black, "Do Better Schools Matter? Parental Valuation of Elementary Education," *Quarterly Journal of Economics* 114, no. 2 (May 1999): 577-600.

that their residents' children must attend; they share the same neighborhood, the same property tax rates, and local public goods other than schools (such as police, fire, and recreation services). She finds that a house associated with school that has test scores that are 5 percent higher carries a market price that is 2.5 percent higher. She does not find evidence that people are willing to pay for superficial characteristics of schools such as newer buildings.

Other evidence from house prices comes from school finance equalization programs, some of which force districts to invest in fewer school inputs than local taxpayers are willing to purchase. In districts that are constrained to spend less than they voluntarily spent, the response to the imposition of an equalization program is a fall in house prices—showing that local families valued the ability to choose (and pay for) the resources in their school.¹⁷ Moreover, Brunner and Sonstelie show that, in such districts, foundations arise that solicit donations from local families and pay for the school inputs banned by the school finance equalization programs.¹⁸ In short, the evidence from the housing market suggests that many parents do value their ability to choose better schools—and are willing to pay for them.

Although the survey and house price evidence suggests that many parents do make intentional choices about schools, the evidence does not imply that all parents are equally able to exert a “good” family effect by making the investment in their child’s education that they would like to make. A better school costs more—within the public sector as well as the private sector. Families may have restricted school choices because they can afford only a limited range of housing, because they would face racial or

17. See Caroline M. Hoxby, “All School Finance Equalizations Are Not Created Equal,” *Quarterly Journal of Economics*, 2001. Such districts exist especially in states like California and New Mexico that effectively imposed binding restrictions on per-pupil spending as part of their school finance equalization programs.

18. Eric Brunner and Jon Sonstelie, “Coping with Serrano: Voluntary Contributions to California’s Local Public Schools,” in *1996 Proceedings of the Eighty-Ninth Conference on Taxation*, held under the auspices of the National Tax Association, 1996, 372–81.

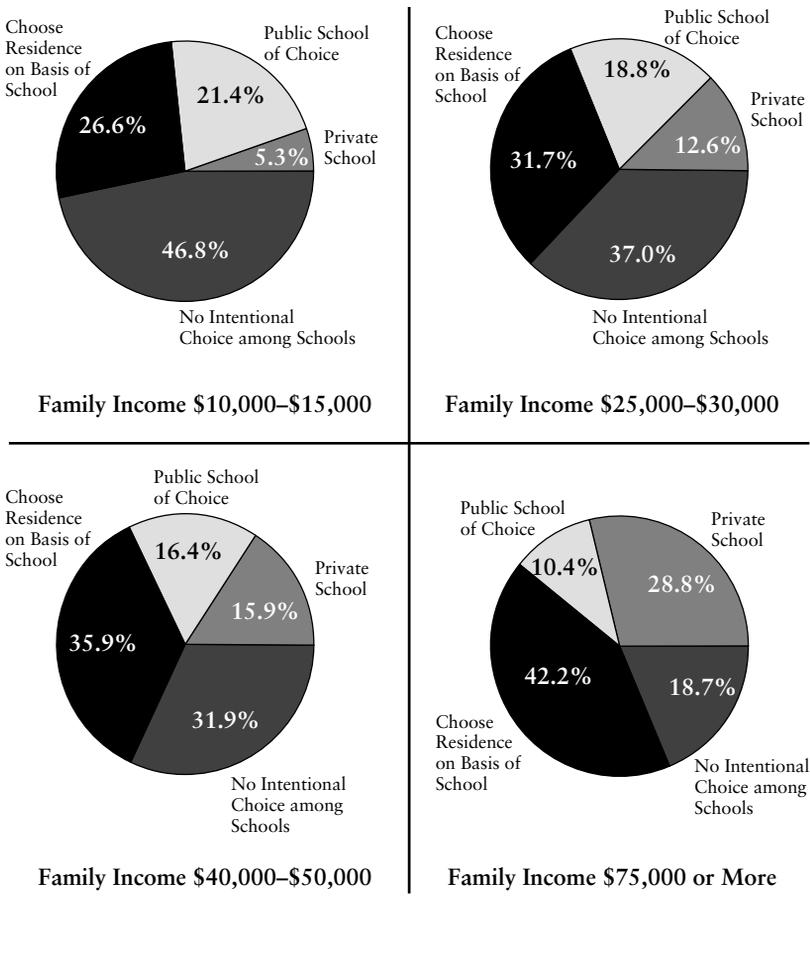
ethnic discrimination outside of a limited range of housing, because they cannot afford private school tuition, or simply because there are few public school districts and/or few private schools in their area.

For instance, in the NHES survey, the probability that a family exercised some choice over their child's school varied with the family's income and race. For instance, among nonrural families with incomes between \$10,000 and \$15,000, 5.3 percent selected a private school, 21.4 percent took advantage of a local public school choice program, and 26.6 percent chose their residence partly on the basis of the school. In contrast, among nonrural families with incomes of \$75,000 or more, 28.8 percent selected a private school, 10.4 percent took advantage of a local public school choice program, and 42.2 percent chose their residence on the basis of the school¹⁹ (see figure 5).

Controlling for income, black and Hispanic families are *more* likely than white families to make intentional school choices by selecting a private school or a public school of choice, but they are less likely than white families to make intentional school choices by choosing their residence on the basis of the school. This suggests that discrimination that differs across residential areas may indeed be a constraint on black and Hispanic families. That is, their ability to exercise choice among public schools may be limited by residential housing patterns. For instance, consider a relatively narrow income band such as \$30,000 to \$35,000—that is, examine racial differences in school choice while effectively holding income constant; 14.8 percent of black families, 14.1 percent of Hispanic families, 4.6 percent of Asian families, and 12.1 percent of white families with incomes of \$30,000 to \$35,000 use private schools. Within the same income band, 25.6 percent of black families, 17.0 percent of Hispanic families, 36.4 percent of Asian families, and 10.3 percent of white families use public schools of choice. Finally, within the same income band, 29.9 per-

19. These calculations and those in the next two paragraphs are author's calculations using the NHES, United States Department of Education, 1998.

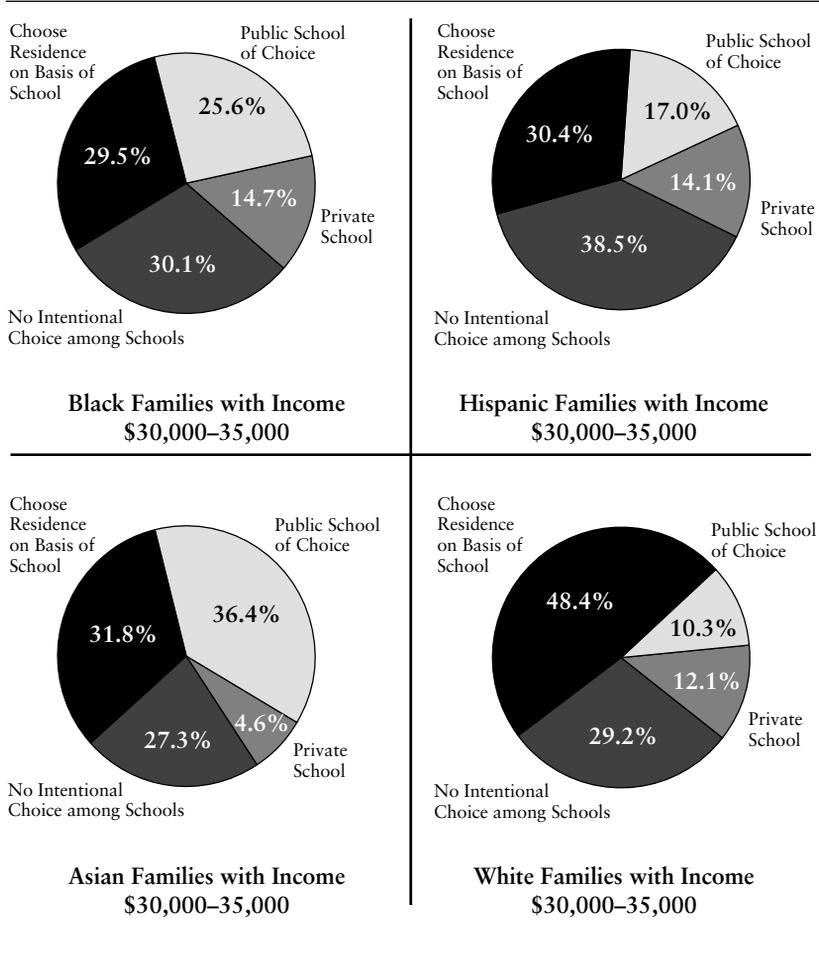
FIGURE 5. PARENTS' VARIOUS INCOME RANGES WHO EXERCISE FORMS OF CHOICE AMONG SCHOOLS (in percent)



cent of black families, 30.4 percent of Hispanic families, 31.8 percent of Asian families, and 48.4 percent of white families choose their residence on the basis of the school (see figure 6).

Of course, income constraints and discrimination do not account for all the parents who make no intentional choices about schools. For instance, when one looks just at white parents with incomes of \$35,000 to \$40,000, one finds that parents who have more education are more likely to make intentional school choices:

FIGURE 6. PARENTS OF VARIOUS RACES/ETHNICITIES WHO EXERCISE FORMS OF CHOICE AMONG SCHOOLS (in percent)



55 percent of parents who have only a high school degree do so while 63 percent of parents with a baccalaureate degree do so. Perhaps more educated parents are more informed or more motivated to purposefully choose a school for their children. One must be cautious, however, before jumping to the conclusion that parents who do not currently seek much information about various schools’ quality have little inclination to choose good-quality

schools. Many families that appear to be disinclined to focus on school quality are also families that have a restricted set of choices. A family with a restricted set of schools from which to choose has little incentive to invest in information about schools.

In short, some family effects that appear to be income effects or racial/ethnic effects are probably not direct effects of income or race/ethnicity but indirect effects of parents' limited ability to choose a school for their children. Can one measure the share of family income and race/ethnicity effects that is related to schools through this channel? It is difficult to get a perfect measure, but a crude measure of the public school choice available to a family is a count of the number of districts in its metropolitan area where the family would be likely to be able to afford housing and the family would not be more than twice as racially/ethnically isolated as its racial/ethnic group generally is in its metropolitan area.²⁰ If one controls for just this crude measure of ability to exercise choice among public school districts, the explanatory power of family income and race/ethnicity drops by a third.²¹ Thus, a good share of the family effect of income and race/ethnicity is probably related to schools. A reform that extended school choice to families who currently have restricted choice would likely decrease the negative effect (on achievement) of coming from a low-income or a minority family.

20. Specifically, one counts the number of districts that a family could choose if it were restricted to choose districts in which at least 20 percent of the housing is such that the annual rent or estimated annual mortgage payments would be no more than 0.3 of the family's annual income. One also counts the number of districts that a family could choose if its racial group in the district has at least 0.5 of the share of the district population that it would have if its racial group were spread evenly over the metropolitan area. For instance, if blacks represented 10 percent of a metropolitan area's population, then a district in that metropolitan area would be counted as "available" to black families if the district's population were at least 5 percent black. If blacks represented 12 percent of a metropolitan area's population, then a district would be counted as "available" to black families if the district's population were at least 6 percent black.

21. Author's calculations using the NELS, United States Department of Education, 1996.

Parents' Influence on Curriculum and Pedagogy

Family effects also work through parents' choosing schools partly based on curriculum and pedagogy. What are parents' preferences? The evidence suggests that parents are results-oriented (their liking for a pedagogical technique depends on how their child reacts, not on the educational theory that underlies it) and skeptical about pedagogical and curricular innovations. For instance, Hess shows that, in schools where parents effectively exercise choice, they forestall the rapid introduction and discarding of curricular and pedagogical fads.²² Center city schools (over which local parents have little influence) are likely to have "policy churn," Hess's term for frequent and erratic changes in pedagogy, curriculum, and school rules. Even the best school policies are likely to be ineffective if introduced with little consistency. Thus, one means by which parents can have a good family effect on their children is by preventing them from being subjected to policy churn.

In addition, parents are a force that tends to keep schools oriented toward student outcomes, rather than educational theories. Some evidence about parents' being results-oriented comes from surveys. For instance, Redfield describes a survey of parents, teachers, students, and principals in a school district.²³ Among these groups, only the parents favored evaluating a school on achievement outcomes such as standardized test scores, the dropout rate, and the share of students who attend college. The "teachers were more concerned with non-academic outcomes that might be attributable to themselves," and the principals were too worried about

22. Frederick M. Hess, "Policy Churn and the Plight of Urban School Reform," in *Learning from School Choice*, ed. Bryan C. Hassel and Paul E. Peterson (Washington, D.C.: Brookings Institution, 1998).

23. Doris L. Redfield, "A Comparison of the Perspectives of Teachers, Students, Parents, and Principals Concerning the Influences of Teaching on Students and the Use of Student Outcomes to Evaluate Teaching," Kentucky Department of Education Research Report, 1987 (available through EDRS, accession number ED290765).

the legitimacy of various tests to favor their use.²⁴ Redfield's findings are confirmed by the NELS parent surveys in which the majority of parents reported that they wanted a greater role in deciding whether schools, teachers, and administrators were meeting standards. In contrast, most parents were content to let schools manage themselves internally with regard to textbooks, teaching strategies, and so on.²⁵

Additional evidence about parents' preferences, however, comes from schools that have incentives to submit to parents' preferences because they (the schools) are affected by parents' choices. This is evidence based on parents' *revealed preferences*—that is, the preferences revealed by their behavior. If we compare metropolitan areas in which parents exercise little choice (because there are only a few school districts, given the size of the metropolitan area) to those in which parents exercise significant choice (because there are many school districts, given the size of the metropolitan area), we can learn about the average parent's preferences. Choice among school districts is particularly good to examine because, though a limited form of choice, it is by far the most pervasive form of choice in the United States. Also, different metropolitan areas have very different amounts of this form of choice—mainly due to accidents of history and geography. The diverse experiences of different metropolitan areas provide variation that is useful empirically. Finally, choice among *districts* is important because districts are autonomous, both in control and finance. This means that they have to compete for parents in a meaningful way.²⁶

24. Apparently, the students perceived the questions somewhat differently from the other groups since they were mainly worried about random factors (such as illness) that might have affected *individual* performance.

25. Author's calculations using NELS base year and second follow-up parent surveys, United States Department of Education, 1996.

26. For instance, consider the extremes—metropolitan areas with no choice among school districts and metropolitan areas that given their size have the maximum amount of district choice that is available in the United States. A good measure of school choice is an index equal to the probability that two randomly selected students in a metropolitan area attend the same district. Of course, in a metropolitan area like Miami that has only one district, the index is equal to 1. In a metropolitan area like Boston that has more than 90 districts, the index is

Compared with schools in metropolitan areas with minimal choice among districts, schools with maximum choice are 35 percent more likely to have a curriculum that fulfills the New Basics criteria in English, math, science, social studies, and foreign language.²⁷ Such schools are also more likely to “emphasize discipline” (an increase of 0.6 on a scale of 1 to 3), have classroom activities that are “highly structured” (an increase of 1.2 on a scale of 1 to 3), and have principals who are evaluated (in part) on students’ standardized test scores (an increase of 0.4 on a scale of 1 to 3). In summary, according to their revealed preferences, the average parent prefers a curriculum that is oriented toward core subjects like reading, writing, mathematics, history, and science; uses outcomes like test scores to evaluate school administrators;

approximately equal to 0.01. The source of these statistics is the United States Department of Education, *School District Data Book: 1990 Census School District Special Tabulation*, computer file (Washington, D.C.: National Center for Education Statistics, 1995).

One can compare metropolitan areas with varying degrees of choice among public school districts—minimal, average, maximal. Moreover, one can guarantee that the variation among metropolitan areas is generated by local geography, rather than a layout of school districts designed in response to parents’ behavior. One guarantees this by instrumenting for the choice index with the metropolitan area’s number of *natural* boundaries—streams and rivers turn out to be the most important natural boundaries, in practice. Instrumenting for choice is important because it allows us to see the long-term, *causal* effect of school choice on parental behavior. Instrumenting prevents us from mistaking an association between choice and parental behavior for a causal effect of choice on parental behavior. Intuitively, the instrumenting identifies the causal effect of choice because natural boundaries can (through choice) affect parent behavior but parental behavior cannot affect the existence of streams, rivers, or other natural boundaries. In this chapter, the effect of choice among public school districts is always estimated using the index of choice, instrumental variables based on natural geographic features, and numerous variables that control for metropolitan area characteristics such as population, land area, and demographics. Hoxby (2000) contains much more detail about the empirical strategy that is briefly described here, including details on data sources, measures of public and private school choice, and the effects of using instrumental variables.

27. The New Basics standard in question is equivalent to that used for the National Assessment of Educational Progress (NAEP). To attain the standard, a school’s high school curriculum must contain four Carnegie units of English, three Carnegie units of mathematics, three Carnegie units of science, three Carnegie units of social studies, and two Carnegie units of foreign language.

and has a school environment that provides structure and discipline.²⁸

*Parents' Interacting with and Controlling
Their Child's School*

One means by which parents can have a good “family effect” on their child is by judicious control of their child’s experience at school. Parents know a substantial amount about their child’s abilities and how their child is reacting to school, and a child’s school experience is likely to be better if the school makes use of parents’ knowledge. For instance, a parent may be able to help a school identify a child’s learning style, interests, or disability. In addition, parents can reinforce their child’s teacher—for instance, by emphasizing the importance of the subject that the teacher has identified as most needing work. Finally, parents can get directly involved in their child’s schooling—by participating in school activities, steering their child away from incompetent teachers, planning their child’s course of study, being an advocate for their child’s needs, and so on.

To interact successfully, parents and schools must communicate effectively and share a sense of common purpose. Why are communication and common purpose more prevalent in some schools than others? Both logic and evidence suggest that decentralization of school decision making is one prerequisite for communication and common purpose. Simply put, parents *can* effectively interact with decision makers at their child’s school, particularly if it is a reasonably small school. Most parents *cannot* effectively interact with decision makers who preside over many schools because they (the parents) have little or no direct access to such high-ranking

28. In fact, there is evidence that parents may like good grades to a fault. That is, there is more grade inflation (measured by the relationship of a school’s letter grades to its scores on national, standardized tests) in schools that face significant parental choice. It may be, however, that parents are not fooled by the inflated letter grades but believe that college admissions officers or employers will be fooled.

administrators. In short, if a school is not allowed to make important curricular or other decisions because authority is centralized, then parents have little incentive to interact with the only school staff to whom they have access (school-level staff).

It is possible that another prerequisite for communication and common purpose is parents' being at least somewhat able to choose their child's school. Choice may matter for two reasons. First, when families are able to choose among schools, they are more likely to end up in a school with other families who share their preferences. Such schools naturally have more community feeling and shared purpose. Second, families who have to make choices among schools tend to force schools to communicate information to them that is relevant to their decision making. Naturally, a school prefers to inform parents about its (the school's) successes and prefers to remain silent about its failings. If parents need to decide how well a school is performing relative to the other local schools, they are more likely to insist upon the school's communicating information like performance on statewide tests, college admissions, and so on. Moreover, because schools are more likely to listen to parents in an environment where schools have to remain attractive to parents, parents are more likely to speak up in such an environment.

Evidence on the relationship between parental interaction and school decentralization comes from data on school consolidations. For instance, consider school consolidations in the state of Connecticut between 1988 and 1992. Parent surveys before and after the period show that parental involvement fell and parent-school communication deteriorated in schools that were consolidated or otherwise reorganized so that they grew substantially (an enrollment increase of at least 25 percent). Relative to parents in the *same* schools in prior years, parents in the consolidated schools were 12 percent less likely to respond to questionnaires from the school, 7 percent less likely to say that their school "communicate[d] well" with them, 10 percent less likely to participate in parent-teacher organizations, 10 percent less likely to attend a

school open house, and 5 percent less likely to check their children's homework.²⁹

Evidence on the relationship between parents' being able to choose a school and parents' being involved with a school comes from comparing metropolitan areas in which families have more and less choice among school districts. Compared with parents who have no choice among districts, parents who live in metropolitan areas with maximum choice are 70 percent less likely to be ignorant of the courses their children are taking and 59 percent less likely to be ignorant of the graduation requirements of their child's school. Compared to parents with no choice, parents with maximum choice are also 16 percent more likely to be sent standardized test scores whenever the school administers a test, 43 percent more likely to have attended a meeting at their child's school, 19 percent more likely to have attended a school event, and 50 percent more likely to plan their child's courses with him over multiple conversations.³⁰

As additional evidence, people often cite differences in parental conduct between regular schools and private schools—since parents *must choose* private schools. On the one hand, the differences in parental conduct are striking. For instance, 47 percent of parents visit their child's regular public school, while 85 percent of parents visit their child's private school. On the other hand, it is difficult to interpret this evidence because parents who would interact more with schools under *any* circumstances may be more likely to send their child to a private school. Therefore, it is hard to give much weight to such evidence, intriguing though it is. Much more convincing evidence on this front comes from comparing parents who are “lotteried in” and “lotteried out” of voucher programs: see Paul Peterson's chapter in this volume.

29. Author's calculations, based on Strategic School Profiles 1992 through 1998 and Town and School District Profiles 1987 through 1992, Connecticut State Department of Education, Bureau of Research, Evaluation, and Student Assessment, *Strategic School Profiles, 1992–93 through 1997–98*, computer file (Hartford, Conn.: Connecticut State Department of Education, 1999).

30. The calculations in this and the following three paragraphs are author's calculations using the NELS, United States Department of Education, 1996.

Finally, can parents be sufficiently informed about their child's school to be a force for good? Consider, for example, whether parents can discern a school's value added—that is, how much the school is adding to children's learning each year, taking account of their learning at the end of the previous year. In the NELS survey, parents rate their school on whether it “places a high priority on learning,” whether they are “satisfied” with the education, and whether “the teaching is good.” There is a correlation between parents' rating and their school's value added. In the NELS, a school's value added is based on a school-level average of individual students' value added—specifically, the difference between a student's tenth- and eighth-grade knowledge in reading and math, as measured by standardized tests. For instance, in schools with value added in the lowest quartile, only 19 percent of parents “strongly agree” that their school places a priority on learning and 25 percent of parents “disagree” or “strongly disagree.” In contrast, in schools with value added in the highest quartile, 32 percent of parents “strongly agree” that their school places a priority on learning and only 10 percent of parents “disagree” or “strongly disagree.” In schools with value added in the lowest quartile, only 15 percent of parents are “very satisfied” with the education; but, in schools with value added in the highest quartile, 44 percent of parents are “very satisfied.”

Interestingly, the correlation between parents' ratings and schools' value added is much higher in metropolitan areas where parents have a high degree of choice among districts. In fact, regression results support the hypothesis that the correlation between parents' rating and schools' value added *only* exists in metropolitan areas with an above-average degree of choice. There is no evidence of a correlation in metropolitan areas with little or no choice among districts. For instance, in metropolitan areas with maximum choice, raising a school's value-added from the lowest to the highest quartiles raises its “teaching is good” rating 2 categories (from “disagree” to “strongly agree” or from “strongly disagree” to “agree”) and raises its “satisfied with education” rating 3 categories (from “very dissatisfied” to “very satisfied”). In met-

ropolitan areas with no choice among districts, raising a school's value-added has no statistically significant effect on its rating.³¹

Homes That Complement School Activities

Even if one compares families that are equally supportive of their children's emotional well-being and equally ready to devote resources to their children, one still finds differences in the degree to which families create home environments that actively complement their children's school activities. Parents may create study space or play space for their child; may provide their children with books or with toys; may spend time with their children at libraries or shopping malls; and so on. For instance, compared with children who score in the bottom quartile on reading and math tests, children who score in the top quartile are more likely to use libraries with their parents (79 percent versus 48 percent) and visit science museums with their parents (63 percent versus 27 percent). They are also more likely to come from homes with more than fifty books (96 percent versus 76 percent), with an atlas (81 percent versus 55 percent), with a calculator (98 percent versus 89 percent), and with a computer (60 percent versus 27 percent).

Clearly, parents differ in the degree to which they create a home environment that complements a child's schooling. The relevant question is, then, are there schools that increase parents' inclination to create an environment that complements school? One hypothesis is that parents who have made a personal investment in their child's schooling are more likely to complement the school at home, in order to increase the value of the investment they have already made. Evidence that supports this hypothesis comes from two main sources: parents who are aware of having made a per-

31. The results described are from regressions of the parental ratings on a measure of district choice, an interaction of the choice measure with the school's value added, the school's value added, and a number of metropolitan-level demographic variables. The choice measure and its interaction are instrumented using measures of natural boundaries in the metropolitan area.

sonal investment because they have just shifted their children from public to private school, and parents who are aware of making a personal investment because they have a lot of choice among public school districts (and, thus, are aware of paying—either through their house price or through their local taxes—for a better school).

Parents who shift their children from public to private schools tend to be especially aware of making an investment in their children's education—simply because they have to start paying tuition. It is interesting to see whether families alter their home environment at the same time. Moreover, it is useful to look *within* the same family over time (rather than across private school and public school families at a point in time) in order to hold the family's underlying characteristics constant. In the NELS, 192 families switched their children from public to private schools over the course of the survey (that is, between eighth and twelfth grades). Although this is a small sample of families and we observe only a small number of variables both before and after the school move, it is nevertheless possible to see some statistically significant changes in family behavior. After switching to private schools, the families are 4 percent more likely to own an atlas and 5 percent more likely to have a specific place for their children to study.

In metropolitan areas where families have a lot of choice among school districts, parents are aware of making a personal investment when they choose to live in a high-performing district. This is because, as described above, they have to pay for the district—through their house price, their property taxes, or both. Are parents in such metropolitan areas more likely to make their home environments complement their children's schools? Data from the NELS suggest that they are. Compared to metropolitan areas with minimal choice, in metropolitan areas with maximum choice 8 percent more parents provide a home environment that supports their children's school experience—according to their school's principal. In addition, 14 percent more parents use libraries with their children, 5 percent more visit science museums with their

children, 4 percent more have an atlas, 4 percent more have a calculator, and 18 percent more have a computer.³²

FAMILY INFLUENCE, NOT THE FORCE FOR GOOD THAT IT COULD BE

This chapter is by no means the first work to note the importance of families in student outcomes or to suggest that school reform can be most efficacious when parents are “co-opted.” There is a long tradition of trying to involve parents in their children’s education. These attempts often take the form of parent training. The Title I program, for instance, attempts to train parents so that they can be school aides. The Comer school program uses moral suasion to get parents to learn along with their children.³³ Another approach to “co-opting” parents is getting them into the school to talk about their careers, help with projects, or accompany extracurricular activities. It is not the purpose of this chapter to dismiss such approaches to parents, but it is important to recognize that they essentially try to expand the school to include parents—making them into “extension students” of a sort. It is natural that schools should try to extend themselves in this way—after all, some parents have plenty to learn and teaching is what schools do. But we have seen that school effects on students are not very strong. Should we suppose that school effects will be much stronger on parents, who cannot spend much time at school and whose habits may be more fixed?

School reforms can only exploit family effects in a significant way if they concede the primacy of families as consumers of schools and investors in their children’s education. If a reform concedes such primacy, how does it operate? It gives parents incen-

32. All these estimates control for family background characteristics, control for metropolitan areas’ demographic characteristics, and use instruments for public school choice based on natural boundaries.

33. James P. Comer, *School Power: Implications of an Intervention Project* (New York: Free Press; New York: Maxwell Macmillan International, 1995, ©1993).

tives to be savvy, demanding consumers of schools by making the reward for wise decisions greater and by reducing barriers that constrain parents' choices arbitrarily. In other words, if parents can gain a lot in terms of their children's education by engaging in wise conduct, they have incentives to conduct themselves well. If, on the other hand, the system is such that the school that can be obtained by even the best consumer parent is only slightly better than the one obtained by the worst, parents will not have much incentive to alter their conduct. In summary, a school reform that unreservedly tries to exploit the power of family effects does so by allowing families that conduct themselves well to earn big rewards. This is essentially different from a reform that tries to exploit the power of school effects by extending schools into the parental domain.

Even within reforms that give parents incentives to exert positive family effects, one can differentiate among a few types of reform. Some simply give parents a greater range of choices; some go further and make parents more aware of their investment in education; and some go even further and pressure schools to be responsive to parents. The first type of reform—for example, decentralization of authority—increases parents' incentives to be good consumers by adding variety to their menu of schools. The second type of reform—for example, a voucher supplied by a private foundation (so that no money is withdrawn from the regular public school budget when a student takes a voucher)—increases parents' incentives to compare schools' efficiency. That is, parents should begin comparing schools on the basis of their value added for cost. The second type of reform also gives parents incentives to make investments that are complementary to school, such as family visits to libraries or a computer for their child's use. The third type of reform—for example, a charter school program in which charter fees come from the regular public school district that loses the students—makes parents' more likely to be heard when they have concerns and, therefore, increases parents' incentives to be demanding consumers, even in regular public schools.

Currently, not all parents are able to earn better education for

their children by engaging in wise conduct. As described above, parents currently differ substantially in their ability to exercise choice, and the evidence suggests that these differences account for at least some—possibly a substantial minority—of the effects of family income and family race/ethnicity. There is no structural reason why poorer families should not be able to choose among numerous schools, just as richer families do. To be sure, without drastic changes in school finance, richer families may always be able to spend more on their children's education than poorer families do. But it is essentially arbitrary that richer, nonminority families are more likely to face numerous, small districts while poor and minority families tend to face huge districts from which it is costly to move. Even under a scenario in which families get permanently stuck with the level of per-pupil spending that they currently have, the degree of choice available to poor and minority families could be made much more similar to that of richer, nonminority families. All that would be required is the breaking down of the residentially based monopoly power of huge school districts—through district partition or (more easily) charter schools or vouchers.

Systematic differences by family income and race account, however, for only some of the many limits on parents' ability to choose among schools—and, thus, account for only some of the weakness in the incentives for parents to be good consumers and investors. Many well-off, nonminority families have limited choice because they live in metropolitan areas with only a few districts. Moreover, choice among public school districts is a weak form of choice, even in metropolitan areas with the maximum amount of such choice. It is a weak form of choice because families have limited flexibility once they have made an initial residential decision and because the mechanisms for rewarding effective schools and penalizing ineffective ones are indirect at best.³⁴ Also, public schools are controlled

34. The mechanisms, such as they are, operate through the property tax. See Caroline Hoxby, "The Effects of School Choice on Curriculum and Atmosphere," in *Earning and Learning: How Schools Matter*, ed. Susan E. Mayer and Paul E. Peterson (Washington, D.C.: Brookings Institution, 1999), for a discus-

politically, and parents are a less concentrated (and thus less effective) interest group than teachers, especially if teachers are unionized. In areas where regular public schools are constrained by regulations or unions, they may be so much of a kind that parents' do not face meaningfully different alternatives. Many of these limits on parents' ability to be good consumers are relaxed by school reforms such as vouchers and charter schools.

Finally, it is currently difficult for a parent to be an informed consumer. Schools retain as much control of their students' outcome data as they can. Even schools that face incentives to supply parents with information prefer to release performance information selectively. Parents will not be really informed consumers until schools have incentives to provide information *and* states (or parent coalitions) create consistent standards about the sort of information that schools should release. In fact, it appears that the information environment is currently improving because of a recent upsurge in mandatory, statewide testing and statewide publication of school "report cards" and "profiles." Such state initiatives are consequences of public frustration over achievement, evinced in statehouses (where there is increasing discussion of school accountability) and in federal commissions like Goals 2000.

One may be wary of reforms that attempt to improve family effects by giving parents greater choice because one might worry that, while the reform would make many parents better consumers, it might give other parents greater opportunities to make school-related choices that are unwise or that have negative spillovers. For instance, one might worry that a minority of parents have bizarre ideas about curriculum and would give their children little knowledge of core subjects if they were allowed more choice. To take another simple example, one might worry that parents would leave a school that was financially burdened because it contained disabled students, without giving any consideration to

sion of rewards and penalties for regular public schools that operate through the property tax.

whether their behavior would induce flight by still other parents. Happily, choice-based reforms *lend* themselves to mechanisms that control such potential problems. In particular, the prices in choice-based reforms (such as the size of the voucher or the charter school fee) can be set to discourage choices that have negative spillovers or are otherwise undesirable, while still allowing latitude for a range of desirable consumer behavior on the part of parents.³⁵ In fact, command-and-control programs that attempt to command parents tend to fail because parents find ways to sidestep regulations. Parents do not even feel guilty about contravening regulations if they think the regulations ignore the information that they (parents) have about the children's needs. Programs that work through parents' choices but make parents face the "social prices" of their actions may be the most efficient, least resisted way to manage problematic family behavior.

Ultimately, the argument that school reform needs to make the best use of families does not rely on reformers' *liking* families' preferences. Instead, the argument is practical. While a reformer may—in a deep sense—prefer schools to families as sources of in-

35. The price mechanisms in question are the subject of other work, but an example may be helpful. Consider a school district that is going to implement a charter school program that will be available to all its students. Suppose that the district is afraid that its schools will become more segregated and that it has a target for racial/ethnic desegregation in its schools. Its target might be the racial/ethnic composition of the district as a whole—say, 20 percent African American, 15 percent Hispanic, and 65 percent white non-Hispanic. The following price mechanism will allow charter schools to be widely available and will also encourage schools to reach the segregation target. The per-pupil payment to a charter school should be set at a level that is adequate so long as the school does not diverge egregiously from the district's target. The payment should, however, increase substantially as a school gets closer to the target. With such payments, the district effectively sets a price that parents and school staff have to pay if they make choices that cause their school to deviate from the target. Charter school staff have an incentive to reach out to (and make their program attractive to) students who would make their school more desegregated. Parents can obtain better funding for their children by moving them from schools where their race is overrepresented to schools where their race is underrepresented. Schools have an incentive to keep working toward the target but do not go out of business if they fall short in a particular year.

fluence on children, she or he might still choose reforms that improve family effects for the practical reason that a small, plausibly obtainable improvement in family effects would swamp a large, hopelessly optimistic improvement in school effects. According to the estimates described above, a reform that improved family effects by 5 percent would probably do more for students' outcomes than a reform that improved school effects by 70 percent. It is likely that school reform is capable of achieving at least small improvements in family effects because some of the key channels through which families affect their children are related to schools: choice of schools, pressure on schools to be achievement oriented, control of their children's school experiences through interacting with teachers and administrators, and creation of home environments that complement school.