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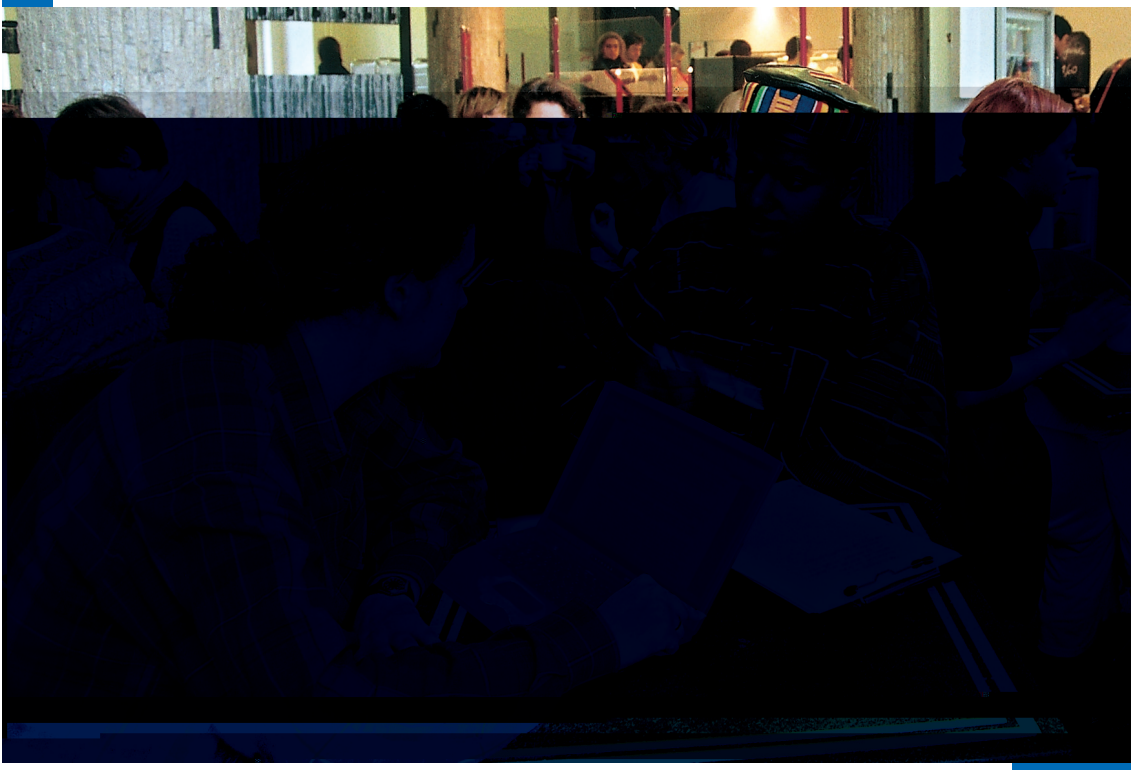
Liberales Institut

David C. Berliner

The State versus the Poor



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The State versus The Poor

Inequality in Education and its Reduction

David C. Berliner

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Introduction

The United States has a persistent problem, and it is getting worse. Even though the government is using methods that vastly underestimate the number of people who are poor, it is still the case that these indicators reveal that the numbers of poor people in the US are increasing. In fact, despite a modest economic recovery in the worlds' economic powerhouse, the numbers in poverty in the US have risen in each of the last four years (Miller and Paulson, 2005). At the same time as poverty becomes more common, the knowledge needs of the economy are thought to be rapidly increasing. The problem that is the subject of this paper arises from the fact that the correlation between family income and children's educational attainment is always positive and usually high. With its current and growing rate of childhood poverty, this problem results in the US being unable to meet its educational aspirations.

It is likely that if the US cannot educate poor children well, almost all the better paying jobs still left in the US economy inevitably will go to workers whose family wealth obtained for them residences with access to good public schools, or such wealth purchased good private education or other educational opportunities not available to poor children. With college almost always required for a high paying job, it is the young workers from wealthier families who compete for those better jobs in greater and greater percentages. In a single generation social mobility could be reduced to levels even lower than they are now. This could change the United States in dramatic ways, none of which are appealing.

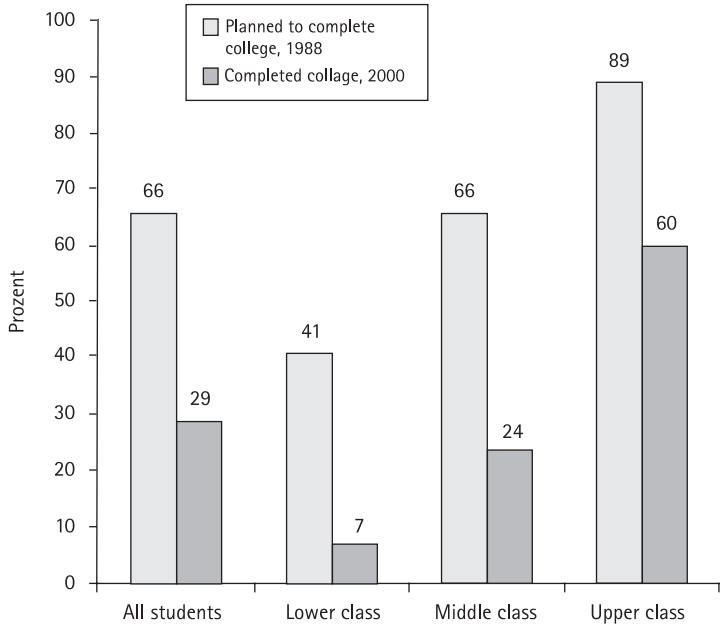
Figure 1 illustrates the problem. It reveals that in a 1988 survey of eighth grade students two-thirds of the students said they planned to complete a four-year college degree. But when followed up twelve years later, only 29 percent of those surveyed had actually earned a four-year degree. That might be enough to sustain economic growth, but hidden in these aggregate data are social class differences that need to be understood.

Almost ninety percent of students from upper class families said they planned to complete college, compared to less than half of the students from lower class families-a ratio of two to one. But twelve years later these differences by social class were even more pronounced then they were at the start of the survey. Sixty percent of upper class students completed college, compared to only 7 percent of lower class students-a ratio of more than 8 to 1. In other words, upper class students were eight times more likely to complete college than lower class students, and the jobs they enter are much more likely to pay well then those of their age-mates who did not finish college. Moreover, these differences in college

attainment are not due to ability differences. When eighth grade test scores were used to control for academic ability, students from upper class families were still five times as likely to complete college as students from lower class families with exactly the same academic ability.

Data such as these certainly are not new in American society. But now the consequences of not having a college degree are much more pronounced than in the 1950s, or before then. And the class lines now seem less permeable. For example, the correlation of income between siblings in the Nordic countries is around .20, indicating that only about four percent of the variance in the incomes of siblings could be attributable to joint family influences (Björklund, Eriksson, Jäntti, Raum, & Österbacka, 2002). But in the US the correlation between the income of siblings is over .40, indicating that about 16 percent of the variance among incomes of siblings in the US is due to family. This makes the Nordic countries appear to be much more meritocratic than the US. Family, for good or for bad, exerts 4 times the influence on income earned by siblings in the US than in the Nordic countries. Sibling income also provides evidence that class lines in the US are harder

figure 1: social class, college aspiration, and college completion. (Rumberger, 2005).



to overcome today than previously (Mazumder & Levine, 2004). Sibling incomes have grown quite a bit closer in the US over the last few decades, indicating that family resources (or the lack of them) play an increasing role in one's success in life. At least one reason for that is the increasingly unequal schooling provided our nation's middle- and lower-class children.

Anyon (2005, p. 69) bluntly describes the pervasive failure of all our efforts at school reform in our inner cities. She says:

> *„Currently, relatively few urban poor students go past ninth grade: The graduation rates in large comprehensive inner-city high schools are abysmally low. In fourteen such New York City schools, for example, only 10 percent to 20 percent of ninth graders in 1996 graduated four years later. Despite the fact that low-income individuals desperately need a college degree to find decent employment, only 7 percent obtain a bachelors degree by age twenty-six. So, in relation to the needs of low-income students, urban districts fail their students with more egregious consequences now than in the early twentieth century."*

Mythological America prides itself on having an educational system that allows all children, regardless of race and family income, to reach their maximum educational potential. That surely was never as true as it should have been, but it seems even less true today than ever before. Such a state of affairs is profoundly un-American, and so it can be expected that someday the public will demand more educational equity to promote more fiscal and social equity in our society. But in the mean time, the electorate is now voting for politicians who promote both income disparities and who also believe that the problems in the schools for poor children originate with lazy and uncaring teachers and administrators, who provide a non-rigorous curriculum for lower social class children.

As these politicians see it the solution to the problem is more testing, with severe consequences for schools, administrators, teachers, and children that fail the tests. It is a business model of accountability: Define an indicator, measure it well, and set standards for achievement using the indicator to judge success and failure. If that is done then anyone who does not meet the standard can be fired, and rewards can be given to those who exceed the standard. This model of accountability may be reasonably appropriate for the manufacture and the sale of widgets. But this also is the model that underlies the No Child Left Behind Act (NCLB) successfully passed a few years ago by President George W. Bush, with the full support of both political parties of the US congress. For many reasons an

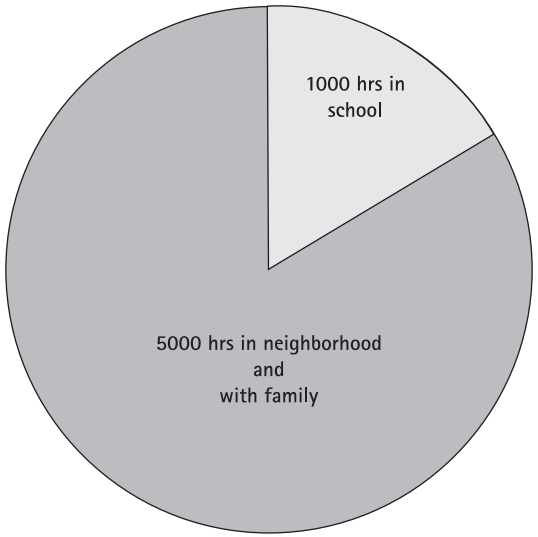
overwhelming majority of educators and psychometricians see this model as quite inappropriate for assessing schools and children (Nichols & Berliner, 2005).

One of the many reasons for opposing NCLB is that the accountability model used in NCLB ignores completely how exogenous variables such as poverty influence school achievement. Furthermore, the NCLB act was not needed to tell policy makers or parents precisely where failing schools are located in the US, and who inhabits them. The nation has had that information for over a half century and politicians have not cared enough to do anything about it. It has been well known for over a century that the common characteristic found across most failing schools is poverty. By consistently ignoring poverty and its many direct and indirect effects on school achievement, thinking about how to make America's schools better is severely limited.

The Basic Problem of Poverty and Educational Reform

In the rush to improve student achievement through accountability systems relying on high-stakes tests, policy makers seem to have forgotten that our children live most of their lives outside of schools. Figure 2 presents a typical pattern of time allocation across a year for the waking hours of students in most US districts.

Figure 2: Approximate waking hours, per year, for students in school and in neighborhood and with family.



In the US, neighborhoods are highly segregated by social class, and thus, also segregated by race and ethnicity. So educational efforts that focus almost exclusively on classrooms and schools, as does NCLB, could be negated by family and neighborhood. School effects might easily be subverted or minimized by what happens to children outside of school. Anyon (1995) says it well:

> *„... the structural basis for failure in inner-city schools is political, economic, and cultural, and must be changed before meaningful school improvement projects can be successfully implemented. Educational reforms cannot compensate for the ravages of society (p. 88)."*

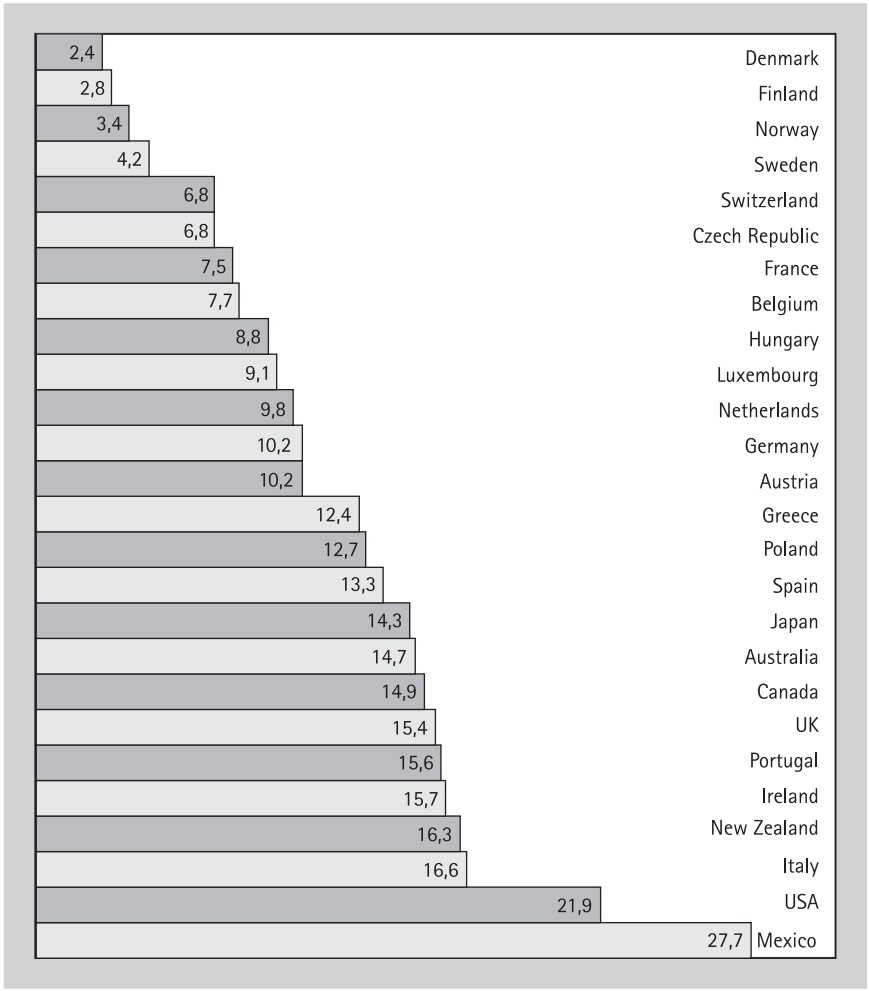
James Traub (2000) writing in the New York Times said this all quite well a few years ago. He noted that it was hard to think of a more satisfying solution to poverty than education. School reform, as opposed to other things that might be done in the US to improve achievement, really involves relatively little money and, perhaps more importantly, asks practically nothing of the non-poor, who often control a society's resources. Traub also noted that school reform is accompanied by the good feelings that come from the collective expression of faith by US citizens in the capacity of the poor to overcome disadvantage on their own. The myth of individualism throughout the US fuels the school reform locomotive.

On the other hand, the idea that schools *cannot* cure poverty by themselves sounds something like a vote of no confidence in the great American capacity for self-transformation, a major element in the stories that the American nation tells itself. Traub notes that when American's question the schools' ability to foster transformation they seem to flirt with the racial theories expressed by Richard Herrnstein and Charles Murray, who argued in The Bell Curve (1994) that educational inequality has its roots in biological inequality. But an alternative explanation to Herrnstein and Murray, „is that educational inequality is rooted in economic problems and social pathologies too deep to be overcome by school alone. And if that's true, then there really is every reason to think about the limits of school" (Truab, 2000, p. 54). Schooling alone may simply be too weak an intervention for improving the lives of most children now living in poverty. These views are echoed by economist Richard Rothstein in his recent book, *Class and schools* (2004).

America's Poverty Problem

The UNICEF report from the Innocenti Foundation, (UNICEF, 2005), which regularly issues reports on childhood poverty, is among the most recent to reliably document this problem. The entire report is summarized quite simply in one graph, presented as figure 3.

Figure 3: Childhood poverty rates in rich countries. (Reprinted from UNICEF, 2005, used by permission.)



In this set of rich nations, The US is among the leaders in childhood poverty over the decade of the 1990s. The only nation with a record worse than ours is Mexico, and, contrary to UNICEF, I would not consider Mexico a rich nation. Using 2003 data to compute Gross National Income per capita, the USA ranked fourth at $37,750 per capita, while Mexico ranked 80th with $8,900 per capita (World Bank, 2005). In the imaginary world in which US citizens live, it should not be in the same league as Mexico, but, alas, the US turns out to be closer to Mexico in poverty rate than to others whom it might, more commonly, think of as its peers.

Figure 3 informs us that the US has the highest rate of childhood poverty among the rich nations, which is what other studies have shown for over a decade (Berliner and Biddle, 1995). The good news about poverty in the US is that over the decade of the 1990s its embarrassing rate of poverty was lowered a great deal, almost 2.5 percent. The graph in Figure 3, therefore, presents a measure of childhood poverty in the USA after years of improvement. But there is also some bad news. The expansion of jobs and income growth in the in the US stopped at the end of the 1990s, and the gains that had been made have been lost. With the sharp increase in housing prices that has occurred since then, no noticeable increases in the real wages for the poor, an economic expansion that has failed to create jobs, and a reduction in tax revenues (resulting in a reduction of aid to the poor), it is quite likely that the US rate of childhood poverty is back to where it was. That would be about 2 or more percentage points higher than the figure given in the recent UNICEF report. Apparently this is about where the US wants the rate to be, since the graph makes it abundantly clear that if US citizens cared to do something about it they could emulate the economic policies of other industrialized nations and reduce childhood poverty dramatically.

Figure 4 presents the percentage of people in the US who are living at half the rate of those classified as merely poor (Mishel, Bernstein & Allegretto, 2005, p. 323, from data supplied by the US Bureau of the Census). These are the poorest of the poor in the US, constituting over 40 % of the tens of millions of people that are officially classified as the „poor" by the US government. But it should be noted that the classification scheme used by the US government is suspect. Almost all economists believe that the level of income at which the government declares a person to be poor misleads citizens into thinking there are fewer poor than there really are. So it is likely that there are more very poor people than suggested in this graph.

Attention is called in Figure 4 to the overall upward trend of the desperately poor in this graph, particularly the upturn after 2000. That is why the rates given in Figure 3 may be an underestimate of the conditions that pertain now, in 2005. Something else needs to be noted about the poverty seen in the US. It is not random. Poverty is unequally distributed across the many racial and ethnic groups that make up the American nation.

Figure 5 makes clear that poverty is strongly correlated with race and ethnicity (Mishel, Bernstein & Allegretto, p. 316, from data supplied by the US Bureau

of the Census). Note once again the upward trend for poverty among minorities after the roaring 90's ended. New immigrants, African-Americans, and Hispanics (particularly those who live in urban areas), are heavily over represented in the groups that suffer severe poverty. Thus, while this is a paper about poverty, it is inextricably tied to issues of race in America. There is no easy way to separate the two, though here the focus is on poverty, perhaps the more tractable issue.

The UNICEF report (2005, p. 8) also reminds readers that there is a charter about the rights of children to which 192 UN members have agreed. Only two nations have refused to sign this treaty. One of these nations is Somalia, the other nation is the US. Apparently the American people do not agree with article 27 of the UN charter, which states, that governments should: „recognize the right of every child to a standard of living adequate for the child's physical, mental, spiritual, moral and social development" (UNICEF, 2005, p. 8).

Actually, the US does have many programs to help parents and children, but because they are so fragmented, do not cover everyone eligible, and are subject to variability in funding at every level (local, state, and federal), they end up not nearly as good nor as helpful as similar programs found in many other countries. This is quite evident when examining how other nations' attend to their poor.

Figure 4: Percent of the poor living at half the official poverty rate. (Reprinted from Mishel, Bernstein and Allegretto, 2005, by permission of the publisher, Cornell University Press.)

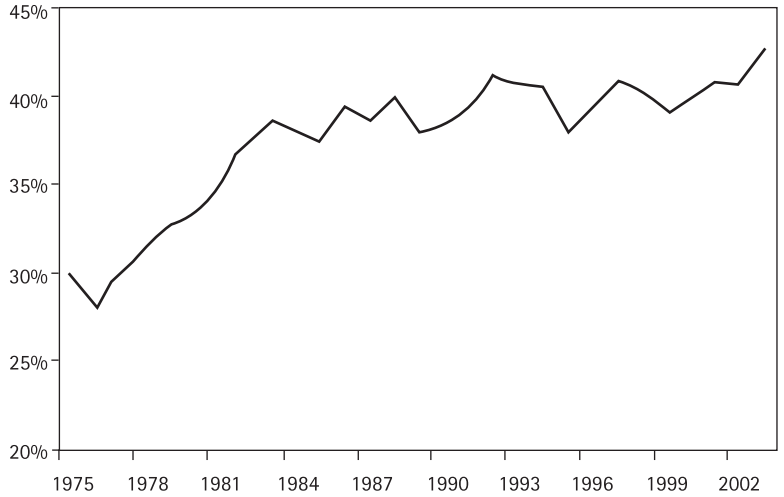


Table 1 shows that the US is a leader among the rich nations of the world in terms of failing to help people exit from poverty once they have fallen in to poverty (Mishel, Berstein & Allegretto, p. 409, from data supplied by the OECD). One column in this table shows the percent of individuals who became impoverished once in a three year time period, say through illness, divorce, child-birth, or job loss-the big four poverty producers among those who had previously been non-poor. There we see that the US rate is quite high, but not much different than that of many other nations. Poverty befalls many people, in many countries, once in a while.

The problem that plagues the US is found in the next column. There, the percent of people who stayed poor for the entire three years after they had fallen into poverty is displayed. At a rate roughly twice that of other wealthy nations, the US leads the industrialized world. Unlike other wealthy countries, the US has few mechanisms to get people out of poverty once they fall in to poverty.

Figure 5: US poverty rates by ethnicity. (Reprinted from Mishel, Bernstein and Allegretto, 2005, by permission of the publisher, Cornell University Press.)

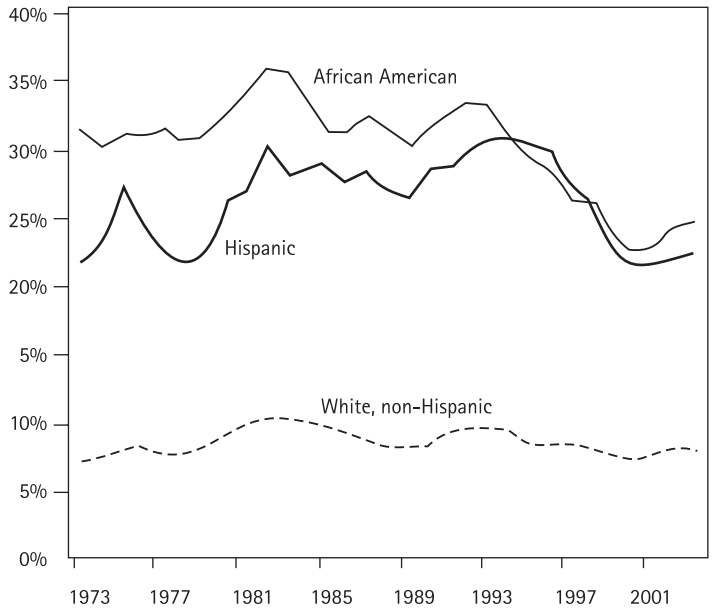


Table 1: Poverty in OECD countries over a three-year period, and permanent poverty, during the 1990s. (Reprinted from Mishel, Bernstein and Allegretto, 2005, by permission of the publisher, Cornell University Press.)

Country	Percent poor once in three years	for all three years	permanently poor
United Sates	23,5	9,5	14,5
Denmark	9,1	0,8	1,8
Ireland	15,3	1,3	5,3
Netherlands	12,9	1,6	4,5
France	16,6	3,0	6,6
Italy	21,5	5,6	10,4
United Kingdom	19,5	2,4	6,5
Canada	18,1	5,1	8,9
Belgium	16,0	2,8	5,2
Germany	19,2	4,3	8,1
Finland	25,1	6,5	12,2
Portugal	24,2	7,8	13,4
Spain	21,3	3,7	8,7

The last column of Table 1 suggests how catastrophic it can be to stumble into poverty in the US, compared to many other nations. In that column we see the percent of people who stayed below the poverty level on a relatively permanent basis. The US claims the highest rate of the permanently poor of all the other industrialized nations. If the data from Denmark, Ireland or the Netherlands are compared to that of the US it is easy to see the difference between nations that abhor poverty, and one that accepts poverty as a given.

Poverty and Student Achievement

But what does this mean for the US in terms of student achievement? The effects of poverty on student achievement can be examinined using some of the international studies of educational achievement. First to be examined is the Trends in International Mathematics and Science Study, known as TIMSS 2003, released at the end of 2004 (Gonzales, Guzmán, Partelow, Pahlke, Jocelyn, Kastenberg, & Williams, 2004).

Table 2 presents data on mathematics and science scores for American 4th and 8th grade youth, disaggregated by the degree of poverty in the schools they attend. In this table three aspects of the performance of US students are instructive. First, scores in both subject areas and at both grade levels were correlated almost perfectly with the percent of poor students who attend a school. The second noteworthy point is that the average scores for the schools with less than 50 percent of their students in poverty exceeded the US average score, while the average scores for the schools with greater than 50 percent of their students in poverty fell below the US average score. This tells us who is and who is not succeeding in US schools.

Table 2: Fourth and eighth grade mathematics and science scores from TIMMS 2003 (Gonzales, et. al., 2004).

Poverty level of school (percent free or reduced lunch)	Fourth grade math scores	Fourth grade science scores	Eighth grade math scores	Eighth grade science scores
Less than 10 % in poverty (schools with wealthy students)	567	579	547	571
10 % - 24,9 % in poverty	543	567	531	554
25 % - 49,9 % in poverty	533	551	505	529
50 % - 74,9 % in poverty	500	519	480	504
75 % or more in poverty (schools with poor students)	471	480	444	461
US Average Score	518	536	504	527
International Average Score	495	489	466	473

The third noteworthy point pertains to schools that serve the most impoverished students, where 75 % or more of the students are eligible for free or reduced lunch. In these schools most students live in extreme poverty and their scores fall well below the international average obtained in this study. In general, Table 2 suggests that poor students in the US are not competitive internationally, while middle classes and wealthy public school children in the US are doing well in comparison to the pool of countries that made up TIMSS 2003.

The European community has instituted a three-year cycle for looking at reading, mathematics, and science for 15 year olds, called the PISA studies-The Program for International Student Assessment (Lemke, Calsyn, Lippman, Jocelyn, Kastberg, Liu, Roey, Williams, Kruger, & Bairu, 2001). Unfortunately, PISA has not done a very good job of breaking down the data by social class. So here ethnicity and race are used to examine the effects of poverty on achievement. The high inter-correlations between poverty, ethnicity, and school achievement in the USA allows for the use of ethnicity as a proxy for poverty.

Table 3 displays the performance in 2000 of US 15 year olds in science in relation to other nations. The PISA score distribution of the US in mathematics and literacy look almost identical to this, so only this table will displayed. What stands out first is a commonly found pattern in international studies of achievement, namely, that US average scores are very close to the international average. But in a country as heterogeneous and as socially and ethnically segregated as the US, mean scores of achievement are not useful for understanding how that nation is doing in international comparisons. Achievement data must be disaggregated.

Table 3: Sciences scores (mean 500) from PISA 200 (Lemke, et al., 2001).

Country	Score
Korea, Republic of	552
Japan	550
Finland	538
United States Average Score for White Students	**535**
United Kingdom	532
Canada	529
New Zealand	528
Australia	528
Austria	519
Ireland	513
Sweden	512
Czech Republic	511
France	500
Norway	500
United States Average Score	**499**
Hungary	496
Iceland	496
Belgium	496
Switzerland	496
Spain	491
Germany	487
Poland	483
Denmark	481
Italy	478
Greece	461
Portugal	459
Luxembourg	443
United States Average Score for Hispanic Students	**438**
United States Average Score for African American Students	**435**
Mexico	422

When that is done, white students (without regard for social class) were found to be among the highest performing students in the world. But US African American and Hispanic students, also undifferentiated by social class, were among the poorest performing students in this international sample.

Looking at all three subject areas reveals something very important about inequality in the US. If the educational opportunities available to white students in US public schools were made available to all US students, that nation would have been the 4th highest scoring nation in science, the 7th highest scoring nation in mathematics, and 2nd highest scoring nation in reading. Schooling for millions of US white children is clearly working quite well. On the other hand, were US minority students „nations," they would score among the lowest of the industrialized countries in the world. White students score high, Hipanic and African American students score low. The 2003 PISA data mirror the 2000 data, however, all US scores were lower (Lemke, Sen, Pahlke, Partelow, Miller, Williams, Kastberg, & Jocelyn, 2004). The 2006 testing cycle will reveal whether the US is making any progress or not in reducing the achievement gap between ethnic groups and improving in overall achievement, as promised by those who passed the NCLB law.

Given these PISA findings, what plausible hypotheses might differentiate the education of white, African American, and Hispanic students from one another? Segregated schooling seems to be one obvious answer. Orfield and Lee (2005) make clear how race and schooling are bound together, as illustrated in Table 4.

Orfield and Lee's data indicate that segregation may be an overriding contributor to the obvious scoring disparities that exist between races. Only 12 % of white children go to schools where the majority of the students are not white. Eighty-eight percent of white children are attending schools that are majority white. In contrast, almost all African American and Latino students are in schools where there are students very much like them racially and socio-economically.

Table 4: Minority makeup of schools attended by different racial/ethnic groups (Orfield & Lee, 2005).

	Minority make-up of school		
	50 – 100 %	**90 – 100 %**	**99 – 100 %**
White Students	12	1	0
Lation Students	77	38	11
Black Students	73	38	18

Latinos and African Americans are as segregated by their poverty, as they are by race and ethnicity. And it is their poverty that is the more important issue with which our schools have to deal.

One more study is informative in this brief look at poverty and the performance of US students in international comparisons. This is the PIRLS study (Ogle, Sen, Pahlke, Jocelyn, Kastberg, Roey, & Williams, 2003). PIRLS stands for Progress in International Reading Literacy, a reading assessment administered to 9 and 10 year olds in 35 nations. The data from this comparison are presented in Table 5. The US did quite well, ranking ninth, though statistically, this placed the US in a tie with others at third place.

But PIRLS revealed more than the fact that for the second time in about a decade US 9 year olds showed remarkably high literacy skills. For instance, the mean score of US white children, without any concern about their social class status, was quite a bit higher than that of the Swedish children, who in this study showed the highest level of literacy in the world. Once again millions of US white children are found to be doing well against international benchmarks. Further, when social class is taken into consideration by looking at the scores of US students who attend schools where there are few or no children of poverty, it is learned that this group of public school children performed extraordinarily well. In fact, these higher social class children from the US scored 585, an average of 24 points higher than the average score obtained by Swedish students. So public school students by the millions, from US schools that do not serve many poor children, are apparently doing fine in international competition.

Table 5: Highest scoring nations in reading literacy for nine- and ten-years-olds in 35 countries (PIRLS 2001, Ogle et al., 2003)

Rank	Country	Score
1	Sweden	561
2	Netherlands	554
3	England	553
4	Bulgaria	550
5	Latvia	545
6	Canada	544
7	Lithuania	543
8	Hungry	543
9	U.S.A.	542
10	Italy	541

But the scores obtained by students attending schools where poverty is prevalent were shockingly low. The mean score on this literacy test in schools where more than 75% of the children are on free and reduced lunch was 485, 100 points below the scores of the wealthy US students, and well below those of nations that are economic competitors. The PIRLS study revealed that compared to other nations, the USA had the largest urban/suburban score difference among the competing nations. In that finding, as in the segregation data, is found a major contributor to many of the nations' educational problems. The urban/suburban social class differences in the US result in de facto segregation by race and ethnicity. Middle- and upper-class white families in the suburbs live quite separately from the poor and ethnically diverse families of the urban areas. School and community resources differ by social class, they therefore differ also by race and ethnicity. Kozol (2005) convincingly argues that the different school systems that result from this inequality resemble those of an apartheid state.

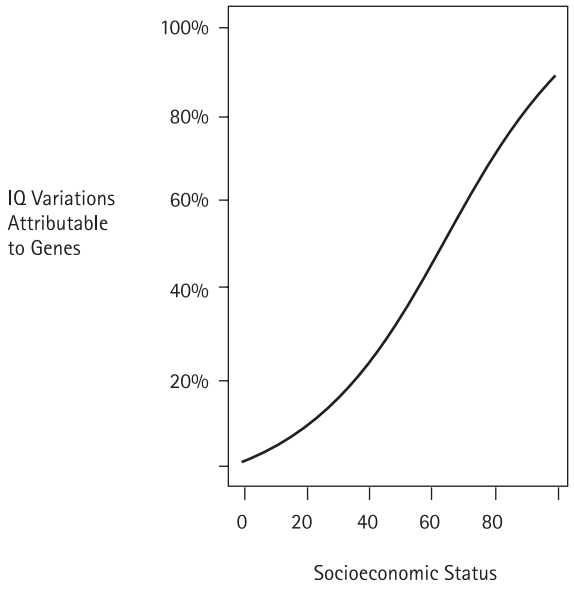
From these recent international studies, and from literally thousands of other studies both domestic and international, we learn that the relationship between social class and test scores is positive, high, and well embedded in theories that can explain the relationship. In California urban schools for example, only three variables predict school level achievement scores: percent of students on free lunch, percent of students that are non-English speaking, and the mobility rate of students at that school. These three variables predict about 80 percent of the variance in school level achievement (Powers, 2003). A further illustration of the importance of social class is found in a recent meta-analysis of social class and achievement at the school level. The average correlation across many studies was found to be about .65 (Sirin, 2005). Thus about 40 percent of the variance in achievement between schools is explained by the social class makeup of the schools' students. These kinds of research studies suggest a hypothesis that is frightening to hear uttered in a capitalist society, namely, that if the incomes of our poorest citizens were to go up a bit, so might achievement scores and other indicators that characterize a well-functioning school. Sometimes correlations exist because causation exists.

How poverty affects achievement

Can a reduction of poverty improve the achievement of the poor and the schools they are in? A few of the many studies that suggest this are presented next. One such study even demonstrates that poverty, pure and simple, prevents the genes involved in academic intelligence to express themselves (Turkheimer, Haley, Waldron, D'Onofrio, & Gottesman, 2003).

For example, stories have emerged about the occasional feral child, or about the child kept locked in a closet for some years. What was learned from those stories was that under extreme environmental conditions whatever genetic potential for language, height, social relationships or intellectual functioning that a child had could not be expressed. The powerful and awful environment in which these children lived suppressed the expression of the genes necessary for a normal life. There is now a study demonstrating that a similar suppression of genetic talent for academic work takes in the very lowest social classes in the USA.

Figure 6: Percentage of variation in IQ attributable to genes, for various levels of socioecomomic status (Turkheimer, et al., 2003, used by permission of the authors).



Turkheimer and his colleagues (2003) determined the hereditability of IQ in twins who were and were not economically advantaged. The findings are clear and presented in figure 6.

Figure 6 presents the smoothed curve of the relationship between genotype and phenotype, between hereditability and its expression. At the low end of the 100 point scale that was used to measure socioeconomic status, say at SES level 20, the heritability of IQ was found to be about 0.10 on a scale of zero (no hereditability) to one (100 percent hereditable, as is eye-color). At the other end of the SES scale, say at SES level 80, for families of the highest socioeconomic status, the heritability was estimated to be it 0.72.

That is, among the lowest social classes, where the mean IQ is quite a bit lower than that of those in the higher social classes, only 10 percent of the variation we see in measured IQ is due to genetic influences. Thus, the environment accounts for almost all the variation in intelligence that is seen. Genetic variation in intelligence in these impoverished environments is not being strongly expressed in the measures we use to assess intelligence. At the top end of the SES scale, almost three quarters of the variation found in measures of intelligence is due to genetic influences. These findings suggest a number of things.

First, among the poor, the normal variation we see in academic talent has been vastly restricted. Second, all charges of genetic inferiority in intelligence among poor people, minorities or not, have little basis. Genes are not accounting for much of their phenotypic IQ. Environment is the overwhelming influence on measured IQ among the poor. This suggests that unless environments for the most impoverished improve we will not see the expression of the normal human genetic variation in intelligence that is expected. If we desire to let all the genetic talent that exists among the poor flower, then their environments need to be changed.

Third, if genes are not accounting for a great deal of variation in IQ among the poor, and environment is, then environmental interventions for poor people are very likely to change things. In fact, environmental changes for poor children might be predicted to have much bigger effects than similar changes made in the environments for wealthier children. This often appears to be the case, a conclusion reached by Duncan and Brooks-Gunn (2001) using different data. Examining the studies of the effects of small class size for the poor, or the effects of early childhood education for the poor, or the effects of summer school programs for the poor, it is discovered that the largest effects are found among the poorest children. Thus Turkheim et al., bring good news from their study of genetic influences on IQ. The racism and pessimism expressed in the Bell Curve by Herrnstein

and Murray (1994) can now be seen as completely unjustified because among the very poor genes are not very powerful influences on intelligence, while environments are.

Resilient children and exemplary schools that exist amidst poverty attest to the fact that individual children can overcome handicaps and that teachers and administrators can make a difference in the lives of children. But the facts also inform us that most children in poverty and most schools that serve those children are not doing well. Perhaps the simplest way to get a healthier environment in which to raise poor children is to provide more resources for parents to make those changes for themselves. Despite the shortcomings of many parents at every level of social class, it seems reasonable to suggest that a solution to the problem of low achievement and restriction of genetic talent among poor families is by making those families less poor. This is not a recommendation for a government giveaway. What is sought is only employment that can supply families with the income that gives them the dignity and hope needed to function admirably, allowing them to raise their children well.

How money affects school achievement

How would a bit more income per family influence educational attainment? Improved health care and better neighborhoods are the two answers that first spring to mind.

Health issues affecting the poor. The many medical problems that are related to social class provide obvious and powerful examples of problems affecting school achievement that are remediable with a little extra money. For example, otitis media is a simple and common childhood ear infection, frequently contracted by rich and poor children alike between birth and 3 years of age. In a number of studies, recurring otitis media in the first 3 years of life has been related to hearing impairments, and thus to language development, and thus to reading problems in school, and therefore to deficits on tests such as the Stanford-Binet intelligence test. Otitis media is also implicated in the development of Attention Deficit and Hyperactivity Disorders (see, for example, Agency for Healthcare Research and Quality, 2005; Hagerman & Falkenstein, 1987; Knishkowy, Palti, Adler & Tepper, 1991; Luotonen, Uhari, Aitola, Lukkaroinen, Luotonin, Uhari, & Korkeamaki, 1996). The problem is that poor children have more untreated cases of otitis media than do those who are financially better off, especially those with medical insurance.

Recurrent otitis media as well as other childhood diseases before age 3 are strongly and negatively related to breast-feeding-the less breast feeding, the greater the rate of a number of childhood diseases. But breast-feeding of infants in America occurs significantly less frequently among women who are poor (Center for Disease Control, 2005). Breast-feeding is also done significantly less often by those who only have high school degrees or have not finished high school, and by those mothers who are under 19 and who are not married (Center for Disease Control, 2005).

In other words, poverty affects otitis media and other childhood diseases indirectly through home practices that are more common among the poor and less common in the middle class. Another example makes this point as well. The relationship to recurring otitis media is also strongly positive for pacifier use (Niemela, Pihakari, Pokka, Uhari, & Uhari, 2000). Pacifiers are used more commonly, and for longer periods of time, among the lower social classes.

In the final analysis, while otitis media isn't a disease of the poor, the characteristics of child rearing and of home environment among the poor of all races and ethnicities leads to more medical problems for the children of the poor. And then, since the poor often lack proper medical insurance, they have a much greater chance of having hearing handicaps at the stage of their lives where language is being developed.

dents improve in school than does direct intervention in their health and welfare, perhaps most easily accomplished by ensuring that the families of these children earn adequate incomes and are provided medical insurance.

The complexity of the medical problems increases when we discuss asthma. Asthma has now reached epidemic proportions among poor children. One survey in the South Bronx found a fourth grade teacher where 12 of his 30 students have asthma and 8 of those have to bring their breathing pumps to school every day (Books, 2000). Seven years ago, according to the National Institutes of Health, asthma alone resulted in 10 million missed school days a year, with many individual children missing 20 to 40 school days a year (National Institutes for Health, 1998, cited in Books, 2000). In 2005, however, a survey put missed school days due to asthma at 21 million (Children & Asthma in America, 2005). Asthma is preventing millions of children of all social classes from attending school and studying diligently. But asthma's effects on children from middle-income families are not nearly as severe as they are on the children of low-income families. Since time-on-task is one of the strongest predictors of learning in schools, it is no great leap of logic to point out that poor children, compared to their middle class counterparts, miss a lot more school because of asthma. Therefore they will learn a lot less.

Another level up in the seriousness of the medical problems that afflict the poor has to do with the effects of lead on mental functioning (Martin, 2004). No one in the medical profession disputes the fact that very small amounts of lead can reduce intellectual functioning and diminish the capacity of a child to learn., Moreover, the damage from lead is irreversible. The good news is that lead poisoning is in decline. The bad news is that the Centers for Disease Control still estimates that some 450,000 children in the United States between 1 and 5 years of age show levels of lead in their blood that are high enough to cause cognitive damage (Center for Disease Control, 2004). The K-12 schooling population contains at least another million students with levels of lead in the blood high enough to cause neurological damage. These lead damaged nervous systems among our youth are associated with a variety of problems including learning disabilities, ADHD, increased aggression, and lower intelligence. Among older children lead poisoning is also linked with drug use and a greater likelihood of criminal behavior (see reviews by Books, 2000; and Rothstein, 2004). Noteworthy is that these are precisely the student problems that new teachers discus when they teach in schools that serve the poor.

Though a reduction of, say, 4 or 5 IQ points is not disastrous in a single poisoned child, that IQ reduction in a population will increase by 50 percent the number of children who qualify for special education. This is just about what we see in the schools serving the poor. Bailus Walker, a member of both the National Academy of Sciences and the Institute of Medicine says:

The education community has not really understood the dimensions of this because we don't see kids falling over and dying of lead poisoning in the classroom. But there's a very large number of kids who find it difficult to do analytical work or [even] line up in the cafeteria because their brains are laden with lead (cited in Martin, 2004)

Space limitations do not allow a discussion of mercury poisoning – a terribly powerful neurotoxin that gets into the air around medical waste disposal plants and coal fired power plants. Poor families, however, mostly Hispanics and African Americans, are those who live closest to these toxic facilities. That is the basis for charges about environmental racism, though it is even more accurate to call it environmental classism, because the poor feel the brunt of these problems regardless of ethnicity.

It is important to note that the symptoms presented by lead and mercury exposure, like ADHD, irritability, problems of concentration, and the like, are problems that display degrees of impairment (Lanphear, Dietrich, Auinger, & Cox, 2000). But even slight neurological and behavioral impairments translate into misbehavior in school, probably resulting in more poor children receiving punishment and having negative school experiences than might their healthier middle-class peers.

There is another medical problem that is directly related to poverty. Premature births and low birth weight children are much more common problems among the poor. Neural imaging studies show that premature and low birth weight children are several times more likely to have anatomic brain abnormalities than do full-term, full birth weight controls (Peterson, Anderson, Ehrenkranz, Staib, Tageldin, Colson, Gore, Duncan, Makuch & Mendt 2003). Quantitative comparisons of brain volumes in 8-year-old children born prematurely, and age-matched full-term control children also found that brain volume was less in the prematurely born. The degree of these morphologic abnormalities was strongly and inversely associated with measures of intelligence (Peterson, Vohr, Staib, Cannistraci, Dolberg, Schneider, Katz, Westerveld, Sparrow, Andersobn, Duncan, Makuch, Gore, & Mendt, 2000). Unfortunately, social class and birth defects have been found to be significantly correlated in hundreds of studies. Some of the reasons for this seem associated with life style problems (drug and alcohol use, vitamin deficiencies), while some seem neighborhood related (waste sites, lead, pesticides). But in

either case, neurologically impaired newborns will show up in the public schools five years later.

How neighborhoods affect the poor

Neighborhoods communicate norms for behavior, such as in the case of drugs and alcohol use, breast-feeding or pacifier use, and achievement. Garner and Raudenbush (1991), for example, looked at student achievement in literacy in 16 secondary schools and in 437 neighborhoods in a set of school districts. The neighborhoods were scaled to reflect socio-demographic characteristics, precisely the kinds of things that make one choose to live in (or not live in) a neighborhood. These included overall unemployment rate, youth unemployment rate, number of single parent families, percent of low earning wage earners, overcrowding, and permanently sick individuals. When Hierarchical Linear Modeling was used to analyze these data, significant school-to-school variance was found even when controlling for family background and neighborhood. Happily, this tells us that we should continue working on making schools better. This study and many others demonstrate that school effects are real and powerful: Schools do exert positive influences on the lives of the poor.

But the analysis did not stop there. The neighborhood deprivation variable showed a negative effect on educational attainment even after variation in the individual students and the schools they attended were stringently controlled. This was not a trivial statistical finding. For two students with identical prior background in achievement, with identical family backgrounds, and even with identical school membership, the differences in their educational attainment as a function of their neighborhood deprivation was estimated to be a difference of between the 10th and the 90th percentile on an achievement tests (see also Catsambis and Beveridge, 2001, for a replication of these findings.) Tragically, good parents too frequently loose their children to the streets because neighborhood effects are strong. Families who have enough money to move out of a dysfunctional neighborhood do so. On the other hand, poverty traps people in bad neighborhoods that affect their children separately from the effects of home and school.

It is not surprising that Brooks-Gunn, Duncan, Klebanov, & Sealand (1993) found that neighborhood effects actually rival family effects in influencing child development. In addition, these researchers also found that the absence of more affluent neighbors is more important then the presence of low income neighbors. This means that well-functioning adult role models are needed in low-income neighborhoods, and that such positive role models count for a lot in the lives of poor children.

In sum, zip codes matter. But the zip codes of the middle class have influence too. Several empirical studies have found that attending a middle class school exposes minority students to higher expectations and more educational and career options. One team of researchers studied voluntary transfer policies in metropolitan St. Louis (Wells & Crain, 1997). They observed that minority students who attend middle- and upper-class schools had higher educational achievement and college attendance rates than their peers in schools where poverty was concentrated. Studies of Boston students who attended suburban public schools revealed that they had access to knowledge and networks of knowledge that their peers in inner city Boston lacked (Eaton, 2001). These experiences increased their educational and professional opportunities. The famous Gautreaux study of Chicago made this plain years ago (Rubinowitz & Rosenbaum, 2000). In that natural experiment a random set of families received vouchers to move from the ghetto to the suburbs. Their children succeeded much better than did an equivalent control group. The Gautreaux study provides convincing evidence of the power of neighborhood, and the schools available to those neighborhoods, to influence our nation's youth.

Appaently, when a middle class culture is well entrenched in a neighborhood, it is insurance that the schools in that neighborhood will have the quality and the student norms for behavior that lead to better academic achievement. Perhaps that is because middle class and residentially stable neighborhoods often manifest a collective sense of efficacy and that, in turn, determines the ways that youth in those neighborhoods are monitored as they grow up (Sampson, Raudenbush & Earls, 1997). On the other hand, neighborhoods that perpetuate the culture of poverty cannot help but have that culture spill over into the schools their children attend. Obviously, then, one way to help the American schools achieve more is to weave low-income housing throughout more middle class zip codes. This would provide more low-income people with access to communities where sta-

Yet another way to harness neighborhood effects on achievement is by ensuring that low-income people have access to better paying jobs so they can spend more on decent housing. Poverty is what drives families into zip codes that are not healthy for children and other living things. And all those unhealthy things they experience end up, eventually, to be dealt with inside the school house.

Poverty is also associated with many other events that influence school achievement. For example, the rates of hunger among the poor continue to be high for an industrialized nation (Nord, Andrews & Carlson, 2004). In 2003 about 12.5 million households, around 36 million people, suffered food insecurity. About 4 million of those households, or around 9.5 million people, actually went hungry some time in that year. Sadly, one-third of this group experienced *chronic* hunger. Seventeen percent of the households with food insecurity have children, and these children do not ordinarily learn well. Perhaps equally unfortunate is the fact that the neighborhood norms for people who are poor promote non-nutritional foods and diets that lead to medical problems. Anemia, vitamin deficiencies, obesity, diabetes and many other conditions that affect school learning help to keep the academic achievement of poor children lower than it might otherwise be.

The lack of high quality affordable day care and quality early childhood learning environments is a problem of poverty that has enormous effects on later schooling. The early childhood educational gap between middle class and poor children is well documented by Lee and Burkham (2002). More recent studies of the economic returns to society of providing better early childhood education for the poor have looked at the most famous of the early childhood programs with longitudinal data. From projects such as the Perry Preschool, the Abecedarian Project, the Chicago Child-Parent Centers, and the Elmira Prenatal/Early Infancy Project, scholars find that the returns to society range from $3 to almost $9 for every dollar invested. Grunewald and Rolnick (2004, p. 6), of the Minneapolis Federal Reserve, noted that when expressed as a rate of return „the real (adjusted for inflation) internal rates of return on these programs range from about seven percent to above 16 percent annually" (see also Lynch, 2004, for a similar argument). Since the return on investment to society for making high-quality early childhood programs available to all of the nation's children is remarkably large, why are those investments not being made? A plausible answer is that US citizens will not invest in poor children's futures due to simple mean spiritedness. It is clearly not due to economics!

Family income also plays a role in determining the learning opportunities that are available to children during the summer months. Children of the poor consistently show greater learning losses over summer than do children of the middle-class (Cooper, Nye, Charlton, Lindsay & Greathouse, 1996). Middle class children apparently get a more nutritious cultural and academic diet during the summer than the poor. This results in middle class children gaining in reading achievement over the summer, while lower class children lose ground. Every summer the gap between the affluent and the poor that shows up on the first day of kindergarten gets larger and larger.

The effects of smoking, alcohol and other drugs, lack of adequate dental and medical care, increased residential mobility, fewer positive after school groups in which to participate, and many other factors all take their toll on the families and children of the poor. While these factors all interact with the quality of the teachers and the schools that poor children attend, these social, educational, medical, and neighborhood problems are also independent of the schools. Thus poverty severely limits what our schools can be expected to accomplish.

A summary of the arguments made above is that reliable information indicates that a) the US has the largest percentage of poor children in the industrialized world, b) people stay poor longer in the US than elsewhere in the industrialized world, c) poverty is negatively related to school achievement and poverty's effects on our international competitiveness appear to be serious, d) poverty has powerful effects on individuals that limit the expression of genetic diversity, as well as strongly influencing the health and place of residence in which children are raised, and e) improvement in the school achievement of students from low income families will have to come as much from improvements in their outside-of-school lives as from their inside-of school lives. In fact, there is every reason to suspect that changes in the income of poor families will lead to changes in the school related behavior and achievement of their children. That thesis is examined next.

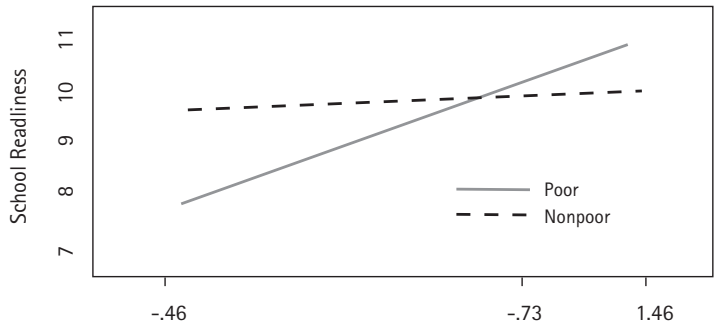
How increased family income affects student behavior and school achievement

Three studies from a growing number about the effects of income growth on families and children will be discussed. First is the study by Dearing, McCartney, and Taylor (2001), who used as a measure of poverty the ratio of income available to the needs faced by a family. A ratio of 1.00 means that the family is just getting by, that their family income and their needs such as housing, food, transportation, and so forth, are matched. A ratio of 3.00 would be more like that of a middle class family, and a ratio of .8 would indicate poverty of some magnitude. A large and reasonably representative sample of poor and non-poor

families were followed for 3 years and their income-to-needs ratios computed regularly, as were their children's scores on various social and academic measures. What was found was that as poor families went from poor to less poor, their children's performance began to resemble that of the never poor children with whom they were matched.

Figure 7 presents data illustrating the performance of poor children on a measure of school readiness, as the income of poor and non-poor children changed over these three years. The mean change in income-to-needs ratios over the time period of the study is where the lines cross. Plotted against a measure of school readiness, the slope of the non-poor children is seen to hardly have changed at all. Whether family income-to-need ratios went up or went down seemed unrelated to the school readiness scores of the non-poor. But the slope of the poor children showed quite a large change. Poor children in families experiencing loss of income over the three years lost ground to the non-poor on this measure of academic readiness. But children in families whose income improved showed growth in school readiness over the three years. Most interesting of all, the poor children in families whose income went up, ended up scoring as well as the students who had never been poor. This was true even though the set of families who were not poor earned considerably more money than those who had been poor. Although there are many possible explanations for this, a reasonable one is that rising incomes provide families with dignity and hope, and these in turn promote greater family stability and better childcare.

Figure 7: The relationship between school readiness and income change among poor and non-poor families (reprinted from Dearing, McCartney & Taylor, 2001, used by permission of the authors).



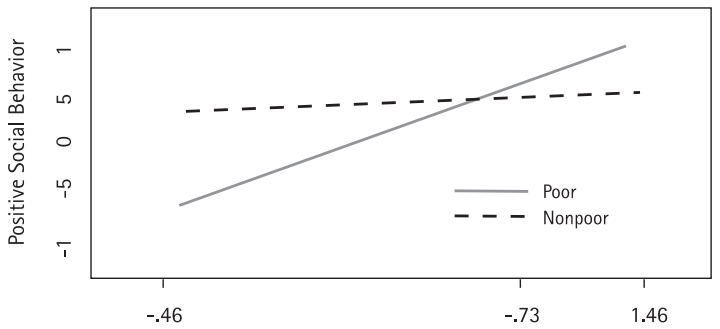
An almost identical relationship was found when plotting change in income-to-needs ratios against other academic-like outcome measures such as measures of a child's expressive language, or of their receptive language. And in Figure 8 we see the same relationship shown for a measure of social behavior, a non-academic measure that identifies children whose presence in classes will promote or impede the work of their teachers.

Figure 8 illustrates that as income-to-need ratios changed for the poor and the non-poor, the poor again showed significant slope changes and the non-poor once again did not. Furthermore, poor children in families experiencing growth in income over the three years once again ended up scoring as well in social behavior as the children who had never been poor.

As noted earlier, bigger changes are expected to occur for the poor than the non-poor as positive changes in their environments occur. We see that here. Also worth noting is that Duncan and Brooks-Gunn (2001) found that the greatest impact of family income on children's academic outcomes is when they are the youngest, and this was a study of children from birth to three years of age.

In an interesting follow-up to the original study, these researchers went on to estimate the effect size of making the income changes that had occurred permanent in the sample of poor families, and comparing that effect size to those that the Department of Health and Human Services estimates for the early head start program (Taylor, Dearing & McCartney, 2004). Both in the Head Start study

Figure 8: The relationship between positive social behavior and income change among poor and non-poor families (reprinted from Dearing, McCartney & Taylor, 2001, used by permission of the authors).



and this one the same Mental Development Index was used to look at intellectual functioning and both studies measured students' negative behavior, as well. Those interesting findings are presented as Table 6.

The first row of table 6 shows that children enrolled in the head start program increased between 12 and 15 percent of a standard deviation on the Mental Development Index. These children also showed a decline of 10-11 percent of a standard deviation in their negative behavior. Those outcomes are socially significant and large enough to claim effectiveness for the gigantic head start apparatus. The second row of this table are Taylor, Dearing & McCartney's (2004) estimates of what would happen were the income of the poor families in their study increased one standard deviation, or about $13,000 per year. This estimate shows that the children for low income families would have had gains in IQ of about 15 percent of a standard deviation, and that the children would decline in negative behavior about 20 percent of a standard deviation.

The success brought about by an increase in the incomes of poor families apparently matches or exceeds the success the US obtains from running a giant program like Head Start, that enrolls only about 60% of those that are eligible. Equally intriguing in this study was that raising the income of families to improve the lives of poor children was actually a bit less expensive than the annual cost per-child of attending Head Start. It is impossible not to speculate about what the results might be for US society if they combined both approaches to school improvement, providing both high quality early childhood programs and better incomes for the poor!

The second study of income change and school success is from North Carolina and is almost a natural experiment in income redistribution (Costello, Compton, Keeler, & Angold, 2003). A Duke university team noticed that their study of psychiatric disorders and drug abuse within a rural community included a group

Table 6: Comparison of the effects of traditional head start and simple growth in family income on children´s cognitive and affective behavior (reprinted from Taylor, Dearing & McCartney, 2004, by permission of the authors).

	Mental Development Index (percent of a Standard deviation)	Negative Behavior Index (percent of a standard deviation)
Head Start Program	Up 12-15 percent	Down 10-11 percent
Income Growth Study	Up 15 percent	Down 20 percent

of people who had risen out of poverty because of the income derived from a recently opened gaming casino. During these changes the researchers had been giving annual psychiatric assessments to about 1,400 children, 350 of them American Indians, and they did so over an eight-year period. The children ranged in age from 9 to 13 and were in three distinct groups: those who had never been poor, those who had been persistently poor, and a group that had been poor until the casino came to the reservation.

The researchers discovered that moving out of poverty was associated with a decrease in frequency of psychiatric symptoms over the ensuing four years. In fact, by the fourth year, the psychiatric symptom level was the same among children whose families moved out of poverty, as it was among children whose families were never in poverty. A small replication of the findings was available for a group of non-Indians that also moved out of poverty over this same time period. Once again, as in the Dearing, McCartney and Taylor (2001) study, and in the main part of this study, negative psychiatric symptoms disappeared as income rose. The researchers offered an explanation for these findings, namely, that relieving poverty appeared to increase the level of parental supervision of children. One last finding of interest from this study is that additional income for the families of the never-poor had no effect on frequency of behavioral or emotional symptoms. As is common in this area of research, and also noted earlier, improving the income of the very poor has large effects, while improving the income of the less poor has smaller effects.

A third study comes from economists working with the National Bureau of Economic Research (Dahl & Lochner, 2005). These researchers used the Earned Income Tax Credit (EITC), a federal subsidy given to the working poor, to estimate if the increases in family income associated with the tax credit were associated with student achievement gains. All the families studied were poor, earning on average only about $15,000 per year. That is very poor by US standards. These data indicate that for every $1000 of increased income for the poor families, student achievement in reading went up by an average over 2% of a standard deviation and by over 3% of a standard deviation in mathematics. It was among the poorest of these families that children gained the most in achievement from changes in income that were sustained over time.

Although the literature is not voluminous, these are not the only studies to show that a lessening of poverty helps young children succeed better at school and in life (see Salkind & Haskins, 1982; also Huston, Duncan, Granger, Bos, McLoyd, Mistry, Crosby, Gibson, Magnuson, Romich, & Ventura, 2001). The evidence of the positive influence on student achievement when families are able to leave po-

verty is consistent and replicable, suggesting that inside-of-school reform needs to begin with outside-of-school reform.

What we need to do

Poverty, through its many connections to other parts of people's lives, is an obstacle that is not easy for most educators to overcome. Poverty in a community almost ensures that many of the children who enter their neighborhood schools cannot maximally profit from the instruction provided there. Helping to eliminate some of that poverty is not just morally appropriate, though it is that, first of all. But to a convincing degree reducing poverty to improve schooling is evidence based. It takes no complex theory to explain the phenomena: Families with increasing fortunes have more dignity and hope, and are thus able to take better care of their children than do families in more dire straights, where anxiety and despair are the more common emotional reactions.

So when US citizens push for higher qualifications for the teachers of the poor, as they should, they may also need to push themselves to stop shopping at companies like Wal-Mart. The logic of this is simple: if the US wants to primarily hold its teachers responsible for increasing their students' educational attainment, then the US needs, at a minimum, to provide those teachers with children who enter their classrooms healthy and ready to learn. Twenty years ago this was one of the nation's goals, to be reached by the year 2000. But one of the impediments to reaching that goal was Wal-Mart, now the largest employer in the USA. Wal-Mart and companies like them do not provide the great majority of their employees the income, medical insurance or retirement plans needed to promote healthy families or raise healthy children. Wal-Mart, in particular, has a horrible record in its treatment of woman with children, a group who make up a big share of the poor households in the US (Shulman, 2003). Thus Wal-Mart and companies like it, are an impediment to school reform and although it is not usually noted, the employment practices of Wal-Mart and similar companies is one of the reasons the US did not reach their national goal.

When citizens push for more rigorous standards for their schools they should also push for a raise in the minimum wage, or better yet, for livable wages. If the US does not do this then it ensures that the vast majority of those meeting the increasingly rigorous requirements for high school graduation will be students fortunate enough to be born into the right families. If the US wants a more egalitarian set of educational outcomes, that nation needs a more equalitarian wage structure.

For these same reasons, when citizens push for more professional development for teachers and mentoring programs for new teachers, they might also demand that woman's wages be set equal to those of men doing comparable work It is working woman and their children who make up a large percentage of America's poor.

When citizens push for advanced placement courses, or college preparatory curricula for all US students, they might want to simultaneously demand universal medical coverage for all those children. Only then will all US children have the health that allows them to attend school regularly and learn effectively, instead of missing opportunities to learn due to a lack of medical treatment.

When citizens push for all day kindergarten, or quality early childhood care, or de-tracked schools they need also to argue for affordable housing throughout our communities, so neighborhoods have the possibility of exerting more positive influences on poor children. Affordable housing in decent neighborhoods removes people from lead and mercury polluted areas, allowing children in those neighborhoods to avoid neurotoxins likely to cause birth defects. Educators, parents and other concerned citizens need to be in the forefront of the environmental movement. To fight for clean air and water, and for less untested chemicals in all our food products, is a fight to have more healthy children for our schools to educate. The psychological and financial costs on families and the broader society because of students needing special education can be reduced by providing a healthier environment for all US citizens.

The thesis of this paper is that we will get better public schools by requiring of each other participation in building a more economically equitable society. This is of equal or greater value to our nation's future well-being then a fight over whether phonics is scientifically based, whether standards are rigorous enough, or whether teachers have enough content knowledge.

Conclusion

Schools, all alone, can not do what is needed to help US students achieve higher levels of academic performance. As Jean Anyon (1997, p. 168) put it „Attempting to fix inner city schools without fixing the city in which they are embedded is like trying to clean the air on one side of a screen door."

To clean the air on both sides of the screen door we need to begin thinking about building a two-way system of accountability for contemporary America.

The obligation that educators have accepted to be accountable to their communities must become reciprocal. Communities must also be accountable to those who work in the schools, and they can do this by creating social conditions for the nation that allow educators to do their jobs well. Citizens need to face the fact that the whole society must be held as accountable for providing healthy children ready to learn, as our schools are for delivering quality instruction. One-way accountability, where the schools are always blamed for the faults that are found, is neither just, nor likely to solve the problems that the US wants to address. Perhaps the old African saying is as appropriate in modern cities as it was in the rural jungle: It takes a village to raise a child.

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