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## BEYOND EQUALIZATION AND ADEQUACY:

### LITIGATION, EQUITY, AND THE “IMPROVED” SCHOOL FINANCE

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A deep concern with the financing of public schools has been one of the most powerful expressions of equity in American public education. It started a century ago, with the “discovery” by Cubberly (1905) that districts had differing capacities to finance schools. It has proceeded with a variety of legislative efforts, starting with those in the 1930s to establish “foundation” formulas guaranteeing every district a basic or foundation level of funding, and continuing with infinite efforts to tweak these formulas. It has been interspersed with moral texts, like those of Jonathan Kozol (1968, 1992) and his attack on “savage inequalities”, describing the horrendous conditions in urban schools compared to suburban schools. And, since the 1970s, litigation has played an enormous role in advancing equity in school finance, with the *Serrano* case in California, a succession of lawsuits in other states, and recent cases based on claims of adequacy — claims that state constitutions implicitly guarantee that all students should have an adequate education, variously defined (Minorini and Sugarman, 1999; Guthrie, 2004).

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In several ways the emergence of litigation as a principal strategy is itself worrisome, since it indicates that conventional political and legislative solutions to inequality have failed. Not that this is surprising: politics in the sense of values has failed the cause of equity since many Americans (and especially the current administration in Washington) remain unconcerned about or even supportive of inequality, and politics in the sense of interest group liberalism has no effective ways of articulating the public good or of enhancing redistribution (Truman, 1951; Lowi, 1969). But when political deliberation as a route to reform gives way to litigation, the more subtle actions that legislation can potentially foster — in particular, enhancing the capacities of schools to achieve equity, a difficult feat under the best of circumstances — have been replaced by the cruder mechanisms of litigation, which normally prohibit certain practices but can rarely construct more effective alternatives. So litigation may work well when those activities that should be equalized are relatively simple, but as we shift to more complex dimensions litigation may become increasingly ineffective as a mechanism of reform. In the area of school reform, I will present in Section I a variety of conceptions of equity — a “landscape” of possibilities — and argue that while the simplest aspects of education (access and funding) may be addressed through litigation, more difficult dimensions of resources and outcomes are much more difficult to equalize through litigation. So the challenge, in rethinking the evaluating strategies of the past three decades, is also to rethink the strategies for remedies, something I turn to in the concluding section.

In many ways there is little to show for a century of efforts to equalize school finance. To be sure, the distribution of revenues across districts in most states is more equal than it would be in the absence of state aid policies; and the symbolic power of equity litigation should not be dismissed. But the effects of litigation on the distribution

of school resources — those goods and services, including well-prepared teachers and principals, that money might be able to buy and that might be effective in enhancing school outcomes — has been negligible, and the effects on schooling outcomes are completely absent. Furthermore, a more detailed investigation of what resources are effective in enhancing various outcomes, based on what I call the “improved” school finance (Grubb, Huerta, and Goe, 2006), reveals that most effective resources cannot be simply bought, or (in a litigation context) cannot be simply mandated. So, during a second century of litigation and legislation, we need to shift our goals from more equal *funding* to more equal *resources*. Unfortunately, it is precisely this shift for which litigation is ill-suited, and the challenge is therefore to devise remedies that courts can promote but that also affect the more subtle dimensions of schooling.

In this essay I first outline a variety of conceptions of equity that have been applied in education cases. These conceptions can be applied to different dimensions of schooling — to access, to funding, to resources, or to outcomes, creating a vast “landscape” of possibilities. With only a few exceptions, litigation has focused on access and funding, while other approaches have emphasized resources and outcomes. In the second section I demonstrate why the focus on funding has been ineffective, drawing on both the results of litigation over the past 30 years and on my own empirical results showing what kinds of resources are most effective — and showing how weak the connection is between funding and these resources. The implication, as various commentators have argued, is that it is inadequate to equalize funding, in any sense of equity; if students are to have more equal opportunities, it becomes necessary to shift to equity conceptions defined in terms of resources rather than funding. And while there are a few promising lawsuits that do this — particularly the *Williams* case in California and the *Council for Fiscal Equity* case in New York — this shift will require that litigators

and school reformers collaborate more closely in devising remedies that are both enforceable and that are more likely to equalize educational outcomes.

### **I. The Varying Conceptions of Equity: A “Landscape” of Possibilities**

A fundamental issue in education is that conceptions of equity vary substantially. The nineteenth-century common school conception of equity was comparatively simple: All students should have access to a common curriculum and should complete the undifferentiated grammar school (to grade eight). As high schools developed, they were still dominated by a unitary curriculum and a simple conception of equity; as the Committee of Ten declared in 1893, “Every subject which is taught at all in a secondary school should be taught in the same way and to the same extent to every pupil so long as he pursues it, no matter what the probable destination of the pupil may be, or at what point his education is to cease”. . But shifts around 1900 associated with the spread of vocational purposes changed conceptions of equity (Grubb and Lazerson, 2004, Ch. 7). Once schools were preparing youth to become professionals and businessmen, metalworkers and electricians, or (for girls) teachers and secretaries, a uniform education was irrelevant and inefficient (Elson and Bachman, 1910, p. 361):

Instead of affording equality of educational opportunity to all, the elementary school by offering but one course of instruction, and this of a literary character, serves the interests of but one type of children and neglects in a measure the taste, capacity, and educational destination of all others, and of those, too, whose needs are imperative and to whom the future holds no further advantage.

The new conception of equal opportunity provided different experiences for students with different occupational goals: the academic track for middle-class students bound for college and then professional and managerial work; industrial education for

working-class boys bound for factories; commercial education for working-class girls heading for clerical positions; and home economics for future homemakers.

Another shift took place as the goals of schooling modulated from civic and moral purposes to occupational preparation, and as ideals surrounding schooling shifted from political to economic conceptions. Ideals of equality in the U.S. have applied much more to *political* equality — to equality before the law, equality of social and legal stature, and voting rights — than to *economic* equality. The only ideal of economic equality with any real power has been equality of opportunity (Pole, 1978). This promises equity in the race for success, not equality in results — and certainly not in an economy of high and growing inequality like ours. Consistent with an older Protestant ethic of individual effort, it stresses the need for individuals to take advantage of opportunities offered, to earn their positions through diligence and hard work (now especially through schoolwork), and through merit rather than through compensatory efforts like affirmative action.

As equal opportunity has been applied to schools, three reasons help explain why the concept has been so elusive. First, several versions of equality of opportunity have developed historically, in addition to others that philosophers have dreamed up.<sup>1</sup> One was eloquently described by Noah Webster in 1793 (Pole 1978, p. 118):

Here [in the United States] every man finds employment, and the road is open for the poorest citizen to amass wealth by labor and economy, and by his talent and virtue to raise himself to the highest offices of the State.

Outcomes may be unequal, then, because of differences in work, thrift, and talent, but there ought to be no barriers due to family background, race, or other artificial factors.

A stronger version of equal opportunity then emerged, requiring more than the elimination of obvious barriers. Andrew Jackson articulated a complaint about variation in what government provided (Pole, 1978, p. 145):

When the laws undertake to add to the natural and just advantages [of superior industry, economy, and virtue] artificial distinctions, to grant titles, gratuities and exclusive privileges, to make the rich richer and the potent more powerful, the humble members of the society — the farmers, mechanics and laborers — have a right to complain of the injustice of their Government. . . If it would confine itself to equal protection, and, as Heaven does its rains, shower its favors alike on the high and the low, the rich and the poor, it would be an unqualified blessing.

Therefore any inequalities in what government provides to the rich and to the humble should be eliminated. But this in turn leads to two different interpretations: one in which all differences are eliminated, implying a standard of equalization; or one in which differences remain, but the relationship in which government favors the high over the low, the rich over the poor is eliminated — or in which the correlation between income (or any other characteristic of interest, like property value, or race/ethnicity, or language status) and some aspect of education is reduced to zero. Coons, Clune, and Sugarman (1970) advocated the concept of wealth neutrality, in which the relationship (or the correlation) between property value per student and spending per student would be eliminated. However, as the *Serrano* case unfolded, wealth *neutrality* was replaced by *equality* as a standard, and much of the litigation following *Serrano* sought greater equality, not simply wealth or income neutrality. Similarly, advocates for equal access to higher education have argued for policies that eliminate the relationship between race/ethnicity and college access, or college quality, reflecting a neutrality standard; an equality standard would presumably argue that everyone should have access to higher education (the doctrine of College for All), or the impossible option of admitting all students to Harvard or Berkeley or Stanford.

A recent variant of equalization has been adequacy, that each child should be provided an education in which no one falls below a minimum (Minorini and Sugarman, 1999). Adequacy is a weaker standard of equity than is equalization since it

calls only for guaranteeing everyone some minimum, not a common level, and it doesn't argue for neutrality at all. Adequacy suffers a further ambiguity, since the level of adequacy must be defined. The common approaches have been to define adequacy as (1) the spending levels of districts or schools with high levels of performance; (2) the spending necessary for specific resources (qualified teachers, certain pupil:teacher ratios, sufficient textbooks, etc.) that professionals judge to be adequate; or (3) a level of spending sufficient to bring all students to some adequate level of outcomes, which itself needs to be defined.<sup>2</sup> The first two of these *presume* that the levels of spending deemed adequate are sufficient to achieve strong outcomes, but the ways these adequate budgets are constructed do not link spending to outcomes. The third approach does examine explicitly the relation between inputs and outputs, but the empirical work (e.g., Duncombe and Yinger, 1999) relies on conventional production functions with low explanatory power and fails to recognize the uncertain connections between spending and outcomes, reviewed in the second section below. Adequacy has sometimes been viewed as an advance over equalization because of its *potential* to link spending to outcomes, but in practice it rarely does so; it may lead to recommendations for increasing spending over current levels, but has never suggested how that spending should be used.

A fifth version of equal opportunity has emerged repeatedly, since simply equalizing the "gratuities and exclusive privileges" between the rich and the humble might ignore the different levels of preparation children bring to school. A still more active approach has asserted a governmental role in favoring some groups or individuals (Pole, 1978, Ch. 11). These "policies of correction" or compensatory efforts date at least from 19<sup>th</sup> century charity schools for poor children, followed by the common schools and public funding. The compensatory version of equal opportunity

has assumed that some children may be unable to take advantage of opportunities because of their impoverished family backgrounds or their unfamiliarity with the culture of schooling (Deschenes, Cuban, and Tyack, 2001). Along the way, “policies of correction” have suffered from the suspicion that the targets of such policies are deficient in fundamental ways.

So, in the shift from the simple equality of the common schools to equality of opportunity, educational opportunity have been conceptualized in several different ways. A second reason for the elusiveness of equal opportunity is that it has never been clear what aspects of schooling it should address. Conceptions of equal opportunity might be applied to simple *access* to publicly-funded schools, as in the efforts to include black students in all-white schools or colleges, or disabled students to schools from which they had been barred. They might also be applied to the *funding* of schools, the dominant conception in school finance cases. Conceptions of equity might also apply not to funding but to *resources*, the personnel, materials, practices, and conditions that money might be able to buy; for example, the *Williams* case requires adequate textbooks, qualified teachers, and physical facilities, not adequate levels of funding. Both revenues and resources are generally classified as inputs; alternatively, conceptions of equity could apply to *outcomes* — test scores, graduation rates, attitudes and values developed — though the historical tendency to rely on equal opportunity as a *substitute* for equality of outcomes prevents this application from being popular. The goals in NCLB of having all students achieve “proficient” levels of performance on standardized tests is a rare example of equity applied to outcomes.

If there are at least five different conceptions of equal opportunity, applied to four aspects of schooling, Figure 1 describes what I’ll call the “landscape of equity”, with some illustrative policies and court cases. (Since most forms of equity are not

systematically addressed, we might call this the “landscape of *inequality*”). One conclusion from this “landscape” is that we can find school practices, reform efforts, legislation, and litigation in virtually every one of the cells; that is, the different historically-derived conceptions of equity really are used in conflicts over educational equity, and the different applications — to access, funding, resources, and outcomes — are parts of lively and on-going debates.

But my main point is that the different concepts of equity are inconsistent with one another. Wealth neutrality has required eliminating wealth differences among districts as barriers to funding (#10), eliminating only some of the variation that equal funding (#6) or adequacy 1 and 2 (#14) have sought to eliminate. The efforts to provide compensatory funding or resources (#18, #19), or smaller classes for ELL or special education students, or more counselors for Latino students to correct their misperceptions about college-going (Grubb, Lara, and Valdez, 2002), often leads to the “politics of resentment” based on the equity criteria of equal funding or resources (#6, #7), since students and parents not so favored complain that others have unfair advantages — what I think of as the “politics of resentment”. The court in the *Williams* case ordered minimally acceptable levels of textbooks, facilities, and teachers (#15), but left the funding up to the legislature; the resulting funding levels have been wholly inadequate, and the principle of equal (and low) funding of students set by *Serrano* (#6) could weaken the *Williams* solution. When the Bush administration set targets in NCLB of minimum levels of proficiency for all students (#16), but failed to provide sufficient funding or technical assistance required for schools to develop the most effective resources (#18, #19), low-performing schools face targets that they lack the capacity to meet. What is necessary, in legislation as in litigation, is to equalize the capacity of

schools to meet the challenges of accountability or equity, not simply to impose new expectations.

There has often been a dynamic process of shifts among different conceptions of equity. For example, to prevent charges of favoring middle-class and white students, many districts have moved to a standard of equal funding (#6); but this has left especially needy students with the same funding as less needy students, prompting shifts to compensatory funding (#18) via weighted student formulas providing additional revenues to low-income, special ed, and ELL students. The problems with equality in *Serrano*-like cases (#6) led lawyers to develop adequacy lawsuits, partly on legal grounds and partly in the hopes that this might lead to funding based on outcomes (#16); similarly, the *Williams* case (#15) arose because of the ineffectiveness of the *Serrano* case (#6). Reformers thereby change the equity conceptions they use, as policies based on prior conceptions of equity prove ineffective — just I argue in Section II and III to abandon equity based on funding in favor of equity based on effective resources. Policy analysts might be able to come up with rational ways of moving through the “landscape of equity” — starting with access and moving to funding, then resources and outcomes, or worrying about eliminating favoritism (Webster’s barriers), then shifting to neutrality, then equality, before arguing for compensatory efforts. But in practice advocates for equity have based their arguments on a variety of conceptions depending on what problems seem most pressing and on which legal approaches are most available.

A final difficulty is that equality of opportunity presents a never-ending series of evidentiary problems. Equality itself is easy to measure, if hard to achieve. But since opportunity is an abstract quality, it is hard to know when it has been achieved except when outcomes are equal, which is precisely the condition that equality of opportunity

does *not* guarantee. It has been easier to know when equal opportunity fails to exist, and so the dominant approach has been to challenge the conditions that most obviously preclude educational opportunity. Exclusion has been the most obvious example, and challenges to exclusion — a particular form of access — have been prominent in the long struggles over racial segregation, the battles to include students with disabilities, the movements to provide equal access for women, the reforms eliminating tracking, and the debates over language programs for English learners.

In addition, another seemingly-obvious barrier to equal opportunity has been under-provision of funding, at least if one makes the common *assumption* that money is inherently powerful. This has been, of course, the focus of school finance reform and lawsuits, and so the second column of Figure 1 is full of school finance litigation and legislative reform. However, as I argue in the next sections, the focus on funding doesn't solve most of the real problems. So we find ourselves in a vast landscape of conceptions of equity — inconsistent with one another, shifting over time, uneven in their application, and of unknown efficacy.

## **II. The Ineffectiveness of Revenue-Based Approaches to Equity**

There's been an enormous amount of litigation over school finance in the last three decades summarized, for example, in the appendix in Yinger (2004). Virtually all of these cases have sought greater equality, or adequacy, in revenues or expenditures per pupil among districts within states. But their effects have been distinctly mixed, as we can see first from examining the results of such lawsuits. And then we can understand somewhat better why equalizing funding doesn't equalize outcomes by

considering the nature of effective resources, based on empirical work following the “improved” school finance.

### **The Weak Effects of Litigation**

The first problem is that lawsuits do not necessarily result in legislation that is successful in equalizing funding. Any number of studies have examined what the effects of litigation have been on patterns of school funding. For example, Murray and her colleagues (1998) examined funding within states between 1971 and 1998. In their results, simple measures of inequality within states did not decrease at all during this period of intense litigation; however, with a weakly-specified model considering some other influences, they concluded that court-ordered finance reform reduced within-state inequality by 19 to 34%. (They also noted that only one-third of total variation among districts is within-state inequality, with the other two-thirds due to among -state inequality untouched by litigation — suggesting that the state-level litigation fails to address the majority of even revenue inequality.) However, when Hickrod et al. (1997) divided states into six categories, reflecting the relative power of litigation in the different states, only the 8 states in category I in which plaintiffs clearly prevailed saw spending differences decrease, by about 22%; the six states in category II, where plaintiffs won but had to file subsequent litigation for enforcement, saw inequality decrease by only 7.5%. The General Accounting Office (U.S.G.A.O, 1997) shifted to a concept of *income* neutrality, asking whether district spending was correlated with income per pupil; they found that patterns in 37 states favored higher-income districts, only 8 states had fiscal neutrality scores that were insignificantly different from zero, and only two states — Alaska and Nevada — favored lower-income districts, implicitly following “policies of correction”. These results clarify that litigation in many states has

not been especially effective, and relatively few states have had substantial reductions in the variation of spending among districts. Similarly, Thompson and Crampton (2002) examined the burgeoning literature on litigation effects, as well as four specific states in greater detail. Overall, the empirical work did not support any strong hope that litigation would lead to higher levels of funding or a more equitable distribution, though they hedged their bets by acknowledging that litigation might have effects not well-described in spending figures — for example by increasing the visibility of and pressure from the equity cause.

However, my purpose is not to cast doubt on the value of school finance litigation itself, though that's a credible argument. Rather, I argue that stating equity claims and measuring litigation effects in terms of revenues or expenditures is the wrong strategy, since equalized *funding* need not lead to any equalization of the *resources* within schools that might affect *outcomes*. There are many reasons for this, but — as the “improved” school finance stresses (Grubb, Huerta, and Goe, 2006) — there are many ways that revenues may be wasted within schools:<sup>3</sup> (1) funds can be embezzled, or spent to hire incompetent friends and relatives; (2) funds can be spent on inputs that have no effect — incompetent teachers, increases in salaries not tied to greater teacher effort or that do not reduce turnover, or worthless inputs such as textbooks, supplies, or computers unused by teachers who did not want them; (3) resources may not be tied to changes in practices — for example, staff development often fails to change how teachers teach, or reforms may fail to change conventional practice; (4) funds may be spent on purely symbolic practices — a new retention program or a new superintendent to assure parents that everything possible is being done; (5) resources may be spent on well-intentioned but ineffective practices –

adopting simple forms of technology, hiring teachers aides, or following a *reform de jour* that turns out to have no effect on learning; (6) resources may be spent on changes with potential long-run benefits, but then changes occur in local decisions, principals and superintendents, or state mandates so that resources spent earlier are effectively wasted; (7) resources are spent piecemeal and fail to lead to coherent change – money spent without an overall plan such as money spent at the end of the year or staff development funds allocated to individual teachers rather than to school-wide priorities; or (8) resources may be spent on changes that are necessary but not by themselves sufficient – spending on computers without teacher training and computer maintenance or reducing class size without sufficient training of teachers in new techniques. The practices associated with translating revenues into *effective* resources require special forms of planning, and neither schools nor districts are necessarily good at doing this.

Most persuasively, there's evidence that, even in those states where litigation has led to effective legislation, schooling *outcomes* have not been equalized at all. Yinger (2004) has collected case studies of five states with particularly effective lawsuits — Kansas, Kentucky, Michigan, Texas, and Vermont — where there was significant equalization in spending per student in response to legislation. In Kansas, outcomes measured by dropout rates, reading exams, and math exams were *more* unequal in 1999 than in 1992, the year of the litigation. In Kentucky, a state where finance litigation led to a particularly complex set of reforms, inequality in spending went down, but inequality in CTBS scores was essentially unchanged (if anything, it increased). In Michigan, the variation among districts in the percentage passing math exams and the percentage scoring satisfactory went down between 1991 and 2000, but this was not due to the patterns of per-pupil expenditures over this period; this results clarifies that simple statistics on variation in outcomes are inadequate because a state's policies

unrelated to funding — for example, its programs of professional development, teacher qualification, or state standards — may affect outcomes as well. The Vermont study was the only one to provide any evidence on school resources, as distinct from revenues or expenditures; there the variation among districts in students per teacher actually increased slightly in the years after the finance reform act, as did variation in average teacher salaries and students per computer. The variation in various test score measures increased slightly for some and decreased for others, but the largest decrease in inequality — for 4th grade math tests — had started declining three years before the reform act. Overall, then, while inequalities in funding have decreased in a *select* group of states with particularly active litigation efforts, neither school resources nor schooling outcomes have declined as a result.

In essence, the distance between litigation and improved outcomes is too great. The intermediate steps — from litigation to equalizing legislation, from legislation to revenues wisely spent on effective resources, from improved resources to outcomes — are too many, and too susceptible to being undermined by forces ranging from political resistance to legislation, to the structural conditions in districts promoting different forms of waste, to the moving targets of conditions over which schools have no control.<sup>4</sup> To be sure, many of these intermediate steps would still be present if litigation shifts to a different approach (as I advocate in the last section), or if districts and schools adopt more effective practices with the resources available to them, or if this country finally develops economic and social policies supporting the education of disadvantaged children rather than ravaging their families and neighborhoods. But the situation that has prevailed over the past three decades has made it exceedingly difficult for litigation focused on equitable revenues to result in equitable outcomes.

## Understanding Effective School Resources

Another way to understand the problems with litigation or legislative strategies that focus on revenues and expenditures is to consider more carefully the path from revenues to resources to results or outcomes. The dominant policy narrative<sup>5</sup> in this country has been that more funding is always better than less, and that the solution to any educational problem requires increased spending. Then the most common starting point in thinking about the conversion of revenues to results has been a simple input-output model where schooling outcomes are a function of expenditures and other school inputs as well as family background. This equation, in its metaphorical form, has driven the search for effective practices, often considered as discrete programs or curricula – like Success for All or Open Court, or one-on-one tutoring like Reading Recovery, or themed schools like career academies or magnet schools – leading in turn to an enormous evaluation literature, both qualitative and quantitative, assessing the effectiveness of many practices. In its algebraic form, this equation has dominated the efforts to estimate educational production functions, which almost always measure outcomes by test scores, include the simplest school resources that revenues might buy (teachers with certain qualifications, average class sizes, materials and equipment, buildings and other forms of capital outlays), and usually use simple proxies for family background – family income, or school lunch eligibility, or parental education. Most of the educational production functions estimated have therefore been extremely crude representations of the many effects within schools. The results have very often found schooling inputs to have weak and inconsistent effects on test scores (e.g., in Hanushek’s infamous 1989 review), leading to the facile conclusion that “money doesn’t make a difference” — or more precisely that money might make a difference under

certain conditions, but conditions that are not widely understood (Hanushek, 1997). And, in an argument dating back to the Coleman Report of 1966, the power of schooling inputs appears weak compared to the effects of family background, reinforcing a different view that “schools don’t make a difference”, at least compared to family background. The relationship between money and outcomes has been contested in many school finance lawsuits, with varying effects.

However, almost all the efforts to estimate educational production functions have suffered from both conceptual and data limitations. The conceptual framework has been drawn from economists’ approaches to production functions, in which the production process is a black box; and data sets have been limited to simplistic measures of outcomes (test scores), school inputs, and measures of family background. In my own work along these lines, I have used the “improved” school finance as the conceptual basis, and then gone on to estimate a much more complex series of equations using a data set — the National Educational Survey of the Class of 1988, or NELS88 — that includes more varied outcomes (about 30 in all, including four test scores), a much richer set of variables describing practices within schools, much more information about family background (with about ten distinct measures), and a range of variables describing student behavior. From the perspective of the “improved” school finance, I describe school resources in four categories: (1) *Simple* resources are derived from the simple identity between expenditures per students and the components of expenditures, and include the teacher-pupil ratio, teacher salary levels, teacher education and experience, teacher test scores, and various books and materials. (2) *Compound* resources require two or more resources that are jointly necessary – teachers with experience *and* a greater repertoire of teaching methods, class size reduction *and* adequate teacher preparation *and* adequate classroom space *and* staff development so

teachers can teach differently in smaller classrooms, high school teachers with credentials in specific subjects *and* who teach in their fields of education. (3) Complex resources must be constructed or developed through professional development, and include instructional autonomy, constructivist or hybrid pedagogical practices, or teachers who are the same race as their students (Dee, 2004). (4) *Abstract* resources are particularly difficult to discern or measure, and are usually embedded within a web of relationships and practices in a school — like the coherence of the curriculum (Newmann et al., 2001); trust among school personnel (Bryk and Schneider, 2002); an equilibrium among the views of students, the views of instructors, the assumptions of the curriculum, and institutional influences (Lampert, 1991); the stability of students (Rumberger and Larson, 1998) but also of teachers, principals, and district personnel; a school’s culture, measurable through observation and questionnaires but difficult to know how to construct; and organizational structure including internal accountability, where teachers and administrators are accountable to each other and to students, engage in collegial decision-making with widely distributed leadership (Carnoy et al., 2003; Spillane et al., 200x).

In addition to this elaborated conception of *school* resources, there are many *non-school* resources that affect educational outcomes. The most obvious include the many dimensions of family background, including education, income, family structure, occupational influences, immigrant and language status, and aspirations for students — often not clearly delineated, especially when data about family background are limited to a few crude measures. Finally, students are themselves resources to the schooling process, since they come to school with different personal and intellectual resources, with different levels of motivation, engagement, and competition for their attention like employment, television, preferences for fun and games or adolescent mating rituals,

peer groups and gang activities. When we consider this wide range of school and non-school resources, then it becomes clear how limited conventional production functions have been.

For my purposes in this paper, the most important findings from the NELS88 data are those describing which school resources are most effective, and then those related to the influence of funding on effective resources (Grubb, 2006a, 2006b). While the results are difficult to summarize because of their complexity, one immediate result is that a wide variety of school resources are effective in enhancing outcomes — outcomes including not only test scores, but also measures of progress through high school (like credits earned, academic courses taken, and high school completion) as well as attitudinal measures (like educational and occupational aspirations). A few simple resources prove effective, including teacher salaries (probably as a reflection of quality, since districts paying higher salaries can attract a larger pool of applicants from which to choose); the teacher / pupil ratio, which enhances math scores, the likelihood of completing a standard academic program, and continuing to a four-year colleges; and the secondary school experience of teachers. But effective resources are compound, complex, or abstract, including teaching in an instructor's major; teacher's use of time; teachers' sense of their own efficacy; innovative and constructivist teaching, especially in math, while conventional and behaviorist teaching leads to lower test scores. Various measures of the school's climate, an abstract resource, affect outcomes: a positive climate as reported by students increases test scores, while negative events like stealing, drug-dealing, physical threats, and fights depress them and reduce the likelihood of students completing academic programs. The school's overall attendance rate — a measure of general attachment to schooling — enhances learning, and a greater concentration of low-income students depresses learning, aspirations, and completion.

Consistently, being in the general or vocational track<sup>6</sup> tracks depresses outcomes compared to the academic track, and placement in a remedial program has even more powerful negative effects; while these tracks may sometimes be “chosen” by students, they generally provide lower-level content, teachers with lower expectations, and peers with lower aspirations, so they operate in multiple ways to depress performance.

Overall, these results firmly reject the simplistic notions that “schools don’t make a difference”. Many dimensions of teaching practice, especially innovative and constructivist methods, are quite effective; school climate makes a great deal of difference to many outcomes; the complex effects of track placement are quite powerful, even after mechanisms of selection and self-selection are controlled. Collectively, these results confirm that a variety of compound, complex, and abstract resources are effective, not just the simple resources usually included in production functions, and they provide considerable guidance for reforming high schools.

The second stage of the “improved” school finance is to examine what role revenues and expenditure patterns<sup>7</sup> can play in enhancing those resources known to be effective. Here, my results are quite discouraging for those who would like to reform schools simply by enhancing the revenues available to them. The most powerful effects of expenditures per pupil are on simple resources: the pupil/teacher ratio, low and high teacher salaries, and teacher experience in the same school (really a compound resource). Positive effects on teacher planning time and on the use of counseling are much smaller, as is the effect of higher spending in reducing the likelihood of conventional teaching in science. A number of statistically marginal effects — on extra-curricular activities, on teacher control over instruction, and on school climate — are also practically insignificant since the coefficients are all quite small. But higher levels of spending also have some negative effects: higher expenditures increase the likelihood of

a student's being in a vocational track, which is more expensive than the academic track but which has uniformly negative effects on outcomes — so schools with conventional vocational education are spending more to get worse results. This is true for a number of other practices — continuation and alternative schools, and some forms of special education. As long as more money is sometimes necessary for *ineffective* practices, the relationship between funding and outcomes can never be strong.

The other measures of revenue and expenditure patterns are not particularly strong. Parental contributions decrease the prevalence of the general track, widely considered an ineffective curriculum, but they fail to decrease the pupil / teacher ratio, one of the most popular reforms, and they appear to *reduce* certain effective resources (teacher control, innovative math teaching, teacher planning time, and extra-curricular activities) — perhaps reflecting the efforts of parents raising money to support quite conventional images of school. Overall, the effects of parental contributions are weak and uneven.

Devoting a higher proportion of expenditures to instructional purposes does have some positive effects, particularly reducing the likelihood of being in the general track, enhancing teacher control, decreasing negative events in the schools, and improving teacher salaries (almost a tautology, of course). An effect on student use of counseling is also positive, if marginal. These modestly positive results reinforce the preference among parents and policy-makers for spending on instruction, and the general hostility toward “administrative bloat”. But I should caution against a too-facile labeling of administrative expenditures as “bloat” since the category of administrative spending is not precise enough to disentangle administrative waste — ineffective or even counter-productive district personnel, for example — from the use of resources for more effective principals serving as reform and instructional leaders (Lemons et al.,

2003) and for creating alternative approaches to the principalship (Grubb and Flessa, 2006). As with everything in the “improved” school finance, the crucial question is not how much is spent on administration, but rather whether the specific activities supported are effective or not.

Finally, the sources of revenues — state and federal versus local — make relatively little difference to variation in effective resources. Relatively higher state revenues reduce the extent of teacher innovation and collaboration, an indication that states are using their policies to constrain teachers rather than to foster more professional approaches; students report less supportive climates where state revenues are higher, another reflection of more rigid and test-driven approaches; and in marginal ways relatively more state revenues reduce the likelihood of teachers teaching in their own fields, and teacher perceptions of their efficacy. Both state and federal spending reduce teacher salaries, even though increasing salaries is an effective policy in the sense that it enhances outcomes like math, reading, and history scores, occupational aspirations, academic credits, and plans to continue past high school. Finally, a higher proportion of federal spending — which encompasses funding for vocational education, compensatory education, and special education among other smaller programs — does as one might expect increase enrollments in traditional vocational tracks, though this is hardly a benefit to students. Overall, except for a modest effect of federal revenues on school climate as reported by administrators, and marginal effects on teaching in-field and on planning time, increasing the proportion of revenues coming from state or federal sources is largely negative in its effects on effective resources.

Some other dimensions of schools help explain how effective resources are created or constructed, since they cannot be simply bought. Teachers report higher levels of control over their teaching in schools where there are fewer administrative

and district controls, where there is greater teacher participation in decision-making, and particularly where administrators report good principal-teacher relations; these results confirm the value of distributed leadership (Spillane et al., 2001). Staff development increases in schools with capable and strong principals and with more coherent policies as reported by teachers, and not surprisingly efforts to engage in school reforms increase the amount of staff development. External control, for example from the district, reduces the student sense of a supportive environment. A measure of the coherence of the school curriculum significantly affects several teacher resources including pedagogy and the stability of teachers. All these findings indicate the value of enhancing the capacities of schools and their internal alignment, which are abstract resources where money may be necessary for ancillary purposes but is certainly not sufficient, and for which other abstract resources like leadership, teacher commitment, and district support may also be important.

However, the strongest finding is that many effective resources — and particularly compound, complex, and abstract resources — are not enhanced by increasing spending per pupil, or parental contributions, or redirecting resources from non-instructional to instructional uses. Overall, the explanatory power of these results is quite disappointing, despite the rich array of variables available in the NELS88 data. (The only exceptions are the results for two simple resources, the pupil:teacher ratio and teacher salaries, which are powerfully affected by fiscal resources, and for one measure of school climate, which is affected by student backgrounds.) Furthermore, some practices that various advocates have championed have almost no significant impacts on effective resources, including magnet schools and schools of choice, smaller high schools, state and district exit exams and competency tests, and teacher observations, a personal favorite (Grubb, 2000). I conclude from the poor explanatory power of many of

these regressions that, even with much more detailed data, we still don't have very powerful explanations for what shapes the resource decisions of schools and districts, particularly when it comes to effective resources. It's obvious that most effective resources cannot be simply bought, and must instead be constructed at the school level with the cooperation of principals, teachers, parents, and district officials. But we still don't understand very well what causes some schools to create these effective resources while others fail to do so.

The implication for school finance litigation is that continuing to emphasize the equity of revenues or expenditures — the strategies outlined in the second column of Figure 1 — is a lost cause. Expenditures do not systematically enhance effective school resources, aside from some small effects on simple resources, and in this sense Hanushek was right — money doesn't make much of a difference to outcomes, for the specific reason that it usually does not enhance those resources that are most effective in promoting positive educational outcomes. We do know, from these NELS88 results and other reform efforts, what school resources are effective, and we know that certain reform practices are helpful in increasing effective resources — particularly enhancing the capacities of schools, the instructional competence of their teachers, their internal alignment, and the wide distribution of leadership and decision-making responsibilities. The challenge in another round of litigation is to imagine a series of lawsuits and remedies that can promote these effective but often elusive practices.

### **III. "Improved" Approaches to Litigation**

Evidently, then, three decades of school finance litigation and reform have done virtually very little to equalize either school resources or educational outcomes. My

research with NELS88 data indicates why: more money may be necessary to enhance certain effective resources, but it is rarely sufficient except for some simple resources. The obvious implication is that it is almost pointless to continue bringing lawsuits that try to enforce equity — in any of the senses of equity I developed in Section I — of revenues or expenditures. The recent trend toward lawsuits based on conceptions of adequacy is also inadequate, since most adequacy cases (what I have called Adequacy I and II) merely redistribute revenues. And the approach of Adequacy III, which does focus on those revenues that would be necessary to generate desired levels of outcomes, has in the past been flawed by overly simplistic approaches to educational production functions, for example Duncombe and Yinger (1999).

Instead, lawsuits need to promote equity in resources, and moreover in *effective* resources. A recent lawsuit in California, *Williams v. State of California*, focuses not on the inadequacy of dollars, but rather on real resources in schools and classrooms — credentialed teachers, up-to-date textbooks, and physical facilities. These are arguably resources with positive effects on various outcomes; the complaint cites considerable evidence of the effects on learning of these three resources (summarized in Oakes, 2002). Furthermore, the lawsuit focused on *schools* rather than districts as the unit of concern and remedy; that is, teachers, textbooks and facilities must be adequate in all *schools*, rather than simply allocating revenues to districts and hoping that the distribution of funds or resources to schools results in adequate inputs.

The settlement of the case by the state of California allocated an initial sum of money — \$188 million in 2004-05 — that is wholly inadequate to the problems, especially those of finding enough truly competent teachers for all schools. In addition, the settlement has established a procedure following the Uniform Complaint Process, where students, parents, and teachers at the school level can file a complaint if books or

the conditions of school facilities are inadequate, or if they do not have a permanent teacher qualified to teach the subject. (Notices about this procedure must be posted in all classrooms, though there is evidence that many teachers and parents are unaware of these.) Then the principal must investigate and fix the problem within 30 days, or forward the complaint to the district if he or she does not have the ability to fix the problem. The district must then find a solution within 30 days; those initiating these procedure can file an appeal to the state superintendent if their complaint is not resolved. In addition, county superintendents must visit low-performing schools to determine whether textbooks and materials are adequate and facilities are safe and in good repair. Finally, multi-track year-round schools will be phased out, an unambiguous benefit given that they provide only 163 days of instruction (instead of 180) under chaotic conditions.

To be sure, the possibility exists that this procedure could become bureaucratic and cumbersome. At best it applies only to the resources identified in the lawsuit — certainly not to the much broader range of effective resources identified in my NELS88 work, or in other research, or in the growing literature on effective (and ineffective) school reforms. The amount of additional funding is truly pitiful, though given three decades of declining revenues and weak political leadership in California it's difficult to know if a better fiscal settlement could be achieved without a thorough revolution in the state's politics and governance. But in the first year of the *Williams* case, there is at least a clear presumption that districts and the state must provide certain adequate levels of certain basic resources, a clear procedure for identifying problems, and new requirements for districts and county superintendents to follow in order to remedy those problems (Allen, 2005).

A second promising case is *Council for Fiscal Equity (CFE) v. State of New York*, where the decision by the state Supreme Court requires the state to ensure that every school has the resources necessary for providing a "sound basic education", including the capacity for necessary instructional conditions. As Huerta (2006) argues, the CFE case has the potential for revising resources rather than merely funding. The decision mandated an accountability system to measure whether reforms provide a "sound basic education", and commissioned the New York Adequacy Study to accomplish this; the results of this study will ascertain practices within schools and classrooms that enhance learning, and then allocate revenues to those practices (CFE, 2004). One result of the case has been a series of "Making the Money Matter Meetings", to involve all stakeholders in ensuring that new revenues are spent well and result in improved achievement — a positive sign that the case might promote effective resources and not just more spending. Of course, it's still possible that the results will be more like those in Kentucky and Texas, where school finance lawsuits resulted in major educational reforms that still have not equalized resources or outcomes. But linking a judgment to effective practices is much more promising than continuing to create remedies focused on revenues.

Both these cases<sup>8</sup> suggest that lawsuits can be focused on equity in resources rather than revenues — and by focusing on *effective* resources can under the right conditions lead to enhance capacity-building. The challenge is to identify those resources that are effective, search for inequities in these practices, and use these as the focus of litigation. In my NELS88 results, for example, there are some resources that affect virtually all outcomes, including test scores, measures of progress, and certain values and aspirations. Placement in vocational, general tracks, and remedial tracks always has negative effects, so these tracks could be the focus of litigation, and remedies

could replace them with more demanding curricula — for example, either college prep curricula supported by those in favor of College for All, or curricula integrating academic and broadly occupational curricula, or pathways following non-vocational themes (Grubb, 2006c) providing more choice and more obvious relevance to students. The most common and detrimental remedial efforts — emphasizing material that students have already covered, using drills and other ineffective behaviorist techniques — could be challenged and replaced with intervention methods that are more constructivist, more enriched with applications, projects and problems, more like upper-track courses in their techniques and content. Two other uniformly effective resources include school climates conducive to learning, and counseling — hopefully in more powerful forms than is usually the case — to support students through schooling. But whether these practices can be the focus of litigation, rather than informing school and district responses to litigation or legislation, is much less certain.

Many school resources have differentiated rather than common effects — that is, they have effects on some outcomes but not others. The practices that enhance student attachment to schooling — smaller pupil-teacher ratios, more help with academic work, extra-curricular activities, smaller learning communities, enhancing student choice, or improving the interest and relevance of the curriculum — generally increase progress and completion, but they are less likely to improve test scores and, presumably, other measures of learning. Conversely, improving learning and therefore test scores requires increasing the instructional capacities and innovation of teachers. The mechanisms to do this include staff development focused on pedagogical improvement (Little, 2005), higher salaries, but also better working conditions like increased voice in decision-making, better student discipline, and support from administrators (Ingersoll, 2004). Some community colleges have developed centers for teaching and learning that focus

on instructors and their pedagogical abilities rather than on students, and this mechanism could be adapted to K-12 schools. So lawsuits might focus on teaching and learning conditions, and propose remedies that enhance the approaches to teaching that are most effective. Admittedly this seems like a difficult task for lawyers to take, but it would have a better chance of improving learning outcomes for low-performing students than continuing to stress equity in revenues.

Equitable schools must also enhance student motivation and engagement, particularly the dimensions of doing homework, attending school regularly, staying out of trouble, and avoiding television, employment, and pregnancy. A great deal is known about enhancing motivation and engagement (NRC, 2004), and perhaps these conditions could be incorporated into litigation. And equitable schools must look for any possible way to minimize the powerful effects of family background — particularly of parental aspirations for their children, perhaps through carefully designed parent participation programs like Puente.

But for the moment it may be enough simply to focus on what can be done within schools to equalize the opportunities afforded to different students. Such equalization may continue to require litigation, since conventional interest group politics has been so ineffective in equalization efforts. But litigation needs to move into another stage of its trajectory, concerned less with money and more with effective resources that might affect outcomes, and more aware of the complexities of translating revenues into educational outcomes. Only then will it be possible to realize the goals of equal opportunity that have been so insistently stated in this country.

## Footnotes

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<sup>1</sup> Gutmann (1987) presents three persistent philosophical conceptions: maximization of life chances; equalization so that the life chances between the least and the most disadvantaged children are narrowed as much as possible; and a meritocratic conception in which the state distributes resources in proportion to a child's ability and willingness to learn. She then proposes a "democratic standard", a Rawlsian approach in which inequalities can be justified only if no child is deprived of the ability to participate effectively in the democratic process. One can sometimes see these philosophical conceptions embedded in school practices — particularly the meritocratic conception, reflected in many tracking mechanisms, AP classes, and honors programs, though usually justified by efficiency rather than equity — but by and large these philosophical conceptions have been the construction of academics and intellectuals, and have not affected legislative battles or litigation. In particular, the Rawlsian arguments that have been so popular among egalitarians have never, as far as I can determine, been articulated on behalf of specific education policies.

<sup>2</sup> The categorization of ways of operationalizing adequacy is similar to that in Augenblick et al. (2004).

<sup>3</sup> I have benefited in particular from observations in schools, and from exercises in which students in the Principal Leadership Institute at U.C. Berkeley identify waste in their schools.

<sup>4</sup> This argument is similar to that in Wildavsky and Pressman (1979), the original statement of implementation problems: if there are multiple steps in implementing a program, and possibilities for veto at each step, the likelihood of successful implementation is low.

<sup>5</sup> Policy narratives are the easily-understood and widely-accepted "stories" that often govern policy; once they have been created, they are often difficult to change. See Roe (1994).

<sup>6</sup> These vocational programs are likely to be conventional old-style voc ed, rather than the integrated programs that developed over the 1990s, described in Grubb (1995), NRC (2004), Ch. 7, and Grubb (2006c).

<sup>7</sup> Revenue and expenditures are taken from the Common Core of Data, available for school districts (not individual schools). I have tested the effects of five variables: current expenditures per pupil, adjusted by both a cross-section cost index and the CPI; parental contributions per pupil, again adjusted; the proportion of expenditures devoted to instruction; the proportion of revenues from the state; and the proportion of revenues from the federal government.

<sup>8</sup> A third case along these lines may be *Abbott v. Burke* in New Jersey, where the court required the Commissioner of Education to implement a set of specific practices including early childhood programs, technology programs, alternative schools, school-to-work and college transition programs, extended supplemental programs, and correcting infrastructure problems including temporary facilities.

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Figure 1

**Applications of Equity Concepts: “The Landscape of Equity”**

<b>Conceptions of equity:</b>	<b>Applied to access</b>	<b>Applied to funding</b>	<b>Applied to resources</b>	<b>Applied to outcomes</b>
<b>Webster: “no barriers”</b>	1. Policies of inclusion: special education, desegregation by race, gender	2. Neutrality-oriented school finance cases	3. Policies of inclusion applied to special programs (like AP) ; language policies for ELL students.	4. Affirmative action.
<b>Jackson, “No artificial distinctions: equality</b>	5. The common school movement	6. <i>Serrano</i> ; equality of funding; district efforts to eliminate intra-school inequality.	7. Kozol, <i>Savage Inequalities</i> ; equal resources for counselors and specialists.	8. Radical egalitarians??
<b>Jackson, “No artificial distinctions: neutrality</b>	9. No differences (of gender, race, etc. ) in AP or honors courses, in high-status majors	10. Wealth neutrality; income neutrality; racial neutrality in funding.	11. Equity in the allocation of qualified teachers	12. No achievement gaps by race or gender; no ethnic variation in high school dropout rates
<b>Adequacy</b>	13. Minimum school standards; accreditation standards in postsecondary education.	14. Adequacy 1 and 2; foundation formulas	15. <i>Williams</i> ; class size reduction; “qualified teachers” in NCLB; state interventions for low-performing schools	16. Adequacy 3; minimum standards in NCLB; state exit exams.

<p><b>“Policies of correction”</b></p>	<p>17. Affirmative action for entry into elite public high schools and post-secondary education</p>	<p>18. Compensatory education; weighted student pupil formulas</p>	<p>19. Compensatory education; early childhood pro- grams; allocating the best teachers to lowest-performing students</p>	<p>20. Affirmative action for PSE access; Vonnegut, <i>Player Piano</i>*; set-sides for minority- and female-owned businesses</p>
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\* In *Player Piano* Kurt Vonnegut describes a world in which individual gifts are countered by social constraints: for example, especially intelligent individuals have their thoughts interrupted by electrical impulses every 30 seconds; especially graceful dancers are weighted down with sandbags. These egalitarian impulses effectively eliminate the effects of “labor and economy, talent and virtue” noted by Webster.