Making the Grade: The Economic Evolution of American School Districts

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To my Dad, who was on the school board, and to my Mom, who ran the PTA.

Preface

Sometimes you can see something new in a familiar object by looking at it from a different angle. Public education is the object, and my different angle is the humble school district. Among education scholars and reformers, school districts are the Rodney Dangerfields of municipal corporations: They "can't get no respect." Almost all social scientists who analyze education issues disdain districts as "creatures of the state" that have no legal ability to obstruct or alter a directive that comes from on high. Education reform, on this view, has to come from the state and federal governments or from the courts.

The theme of this book takes issue with this viewpoint. I submit that ordinary residents of American school districts created a national system of public education that is in many respects an efficient response to the diversity and mobility of the nation. This idea is heretical in at least two ways. The first is that local voters, not state authorities, are responsible for the creation of the system. Educational leaders such as Horace Mann headed parades that proceeded on routes selected by the marchers, not the grand marshal.

The other unconventional idea is that important aspects of the present system of public education that are derided as failures actually have efficiency advantages. A decentralized system of governance not only offers more choices to "vote with your feet" among school

districts, it is actually more flexible. The United States is physically large and its population is diverse and spread out, which would make centralized administration problematical. The American population is also mobile, more so than that of any other country, and mobility is an important economic advantage. I offer evidence that a locally-controlled system can facilitate mobility and systemic reform without sacrificing self-governance.

The foundational ideas of the present work did not spring from a vacuum. My previous book, *The Homevoter Hypothesis,* was based on the idea that concern for the value of owner-occupied housing causes homeowners to become the dominant faction in American local government. I was so impressed by homeowners' local political influence that a neologism, "homevoters," seemed appropriate to characterize their role in municipal affairs.

The units of local government that *The Homevoter Hypothesis* focused on were municipalities, the 25,000 cities, towns, boroughs, and townships through which voters govern themselves. School districts were, in my mind, simply adjuncts of local governments. I knew, of course, that "dependent" school districts—those that are actually a department of city or county governments—are rare nowadays. I also knew that school district boundaries only sometimes coincide with municipal boundaries. But I did not regard these as important distinctions. My thesis was that homevoters were in charge and did not care much about the difference between school boards and city councils when buying their homes and then participating in local affairs. After a brief discussion of the differences between cities and school districts, I glossed over the distinction with a sweep of the hand: "A municipality that is touting its charms usually mentions that it has 'good schools'" (Fischel 2001, 22).

The present book is a corrective for my overgeneralization about school districts. The correction was inspired by two musings. One was profound: Why do Americans govern public schools at the local level at all? Almost everyone agrees that an educated populace is a national, not a local public asset. Yet Americans insist on a large degree of local governance and funding for public schools. How did the local school district come about and why does it persist? My preliminary answer to this question was published in *Economics of Governance* as "Why Voters Veto Vouchers: Public Schools and Community-Specific Social Capital." I thank the editor, Amihai Glazer, for his special encouragement and the publisher of the journal for permission to reprint parts of that article in chapter 6.

My second musing about schooling was puckish: Why do schools start their academic year in the waning days of summer and end their academic year at the dawn of a new summer? Like most people, I had thought that that the long summer vacation was a holdover from farming days. It is not. American farm children in the nineteenth century usually attended school in summer and winter. What caused the change, and why does it persist long after air-conditioning has made it as easy to hold school in summer as in winter? My answer to that was first published as "Will I See You in September? An Economic Explanation for the Standard School Calendar" in the *Journal of Urban Economics,* whose publisher also granted permission to reprint parts of that article in chapter 4.

Obtaining answers to additional questions and weaving them into this book required much time and the assistance of many other scholars and friends. It has taken me sufficiently long that I cannot recall all of those who helped. I hope not to offend those omitted—or improperly implicate those included—by thanking Sarah Battersby, Kelly Bedard, Jan Brueckner, Eric Brunner, Colin Campbell, Tom Downes, Bob Ellickson, Maria Ferreyra, Daphne Kenyon, Larry Kenny, Doug Harp, Michael Heise, Toru Kitahara, Ken Kriss, Robert Leight, Maureen McDonough, Robert Putnam, Bruce Sacerdote, Cassandra Schug, Jon Skinner, Lisa Snell, Jon Sonstelie, Doug Staiger, Nate Wiewora, Tony Wolk, and Joan Youngman.

I am also indebted to some institutions. Dartmouth College gave me a leave and a grant from its Nelson Rockefeller fund to spend time at a sabbatical at the University of California at Santa Barbara, whose economics department was an especially generous host as I was researching the book. The Lincoln Institute of Land Policy also sponsored part of my leave and several seminars at which I presented parts of this book. Cornell Law School, the Martin School at the University of Kentucky, and the Economics Department of West Virginia University also hosted seminars for my musings. The American Education Finance Association meetings were an especially productive venue for trying out ideas. My largest debt is, as ever, to my wife, Janice Fischel, who has always been willing to listen to my ideas as well as be my partner for more than a third of a century.

Chapter 1

Introduction: Mobility, Property, and Community

"Making the grade" has two connotations for school districts. The more obvious and contemporary is the demand for public schools to conform to high standards of accomplishment. This is not just for educational reasons. Homebuyers are more interested in the quality of schools than in almost any other public service, and prospective home sellers are anxious to have schools perform well. Districts that are not making the grade are penalized in the property market.

The less obvious connotation of this book's title is the historical transformation of school districts. School districts once numbered in the hundreds of thousands, most of them governing a single, one-room rural school. Such schools had a pedagogical method that was much different than that used today. Children were not divided into age-specific cohorts, each of which was taught the same lessons each day. In one-room schools, children were divided into "tutorial-recitation" groups, not grades. Recitation group membership was not by age but by previous accomplishment, typically how far a child had progressed in a reader or speller or arithmetic textbook. Groups were thus composed of students of different ages, and individual students could be in different recitation groups for each subject.

One of my tasks in this book is to explain how the tutorial-recitation method was supplanted by the age-graded method that we now take to be the mark of "real school," to use the telling expression of David Tyack and Larry Cuban (1995). My main interest is in the process by which this transformation took place. Unlike most historians of education, I do not focus on the education leaders who were eager suppliers of education reform. I focus in this book on the demand side, the resident voters who reluctantly gave up their one-room schools. They agreed to consolidated, age-graded schools, I submit, because the one-room school did not prepare their children for a high school education. Farmers and other rural property owners were penalized if their schools were not "making the grade" and educating resident children in a more systematic way.

§1.1 The Mundane Miracles of Mobility, Property, and Community

The themes that cut across the chapters of this book can be summarized as mobility, property, and community. To illustrate their relationship, I would like the reader to contemplate a miracle of the mundane. You have school-age children, and you and your spouse obtain new jobs

in a different part of the country. In August, you arrive at a new home and enroll your children in the local public schools. The youngest just completed fourth grade, and the twins are entering high school. After you proffer proof of residence to your new school district, records will be transferred from your children's former school. Your daughter will enter fifth grade and the boys will start ninth grade, and they will almost surely be taught skills and material whose foundation was established in the schools of their previous home, even if it was in a different state.

As parents, you will find that within a month or two you will have numerous new acquaintances and friends in the community. You meet them through some school event or a birthday party or other child-oriented social event. Within six months you will be full-fledged members of a community whose name you may not have known a year earlier, and your kids, once they have gotten over the trauma of change, will be doing as well in their new school as they would have in the old.

These are mundane miracles. The K-12 sequence that makes your kids' new school interchangeable with their former school did not come about from any centralized direction. (Schools are "interchangeable" in the sense that rental-car automobiles are interchangeable for most drivers, who can operate the Lexus about as well as the Chevy.) Indeed, there is still no central direction for curriculum at the national level, and even uniform statewide standards are a relatively recent and controversial phenomenon. The whole system of free public education was developed state by state, and within most states centralized direction arrived only after the general contours of the system had been established by local residents.

The other mundane miracle is the public's financial affection for their local school district. Schools matter for property values. A house built on the favorable side of a school district line may have its value enhanced by ten or twenty percent, a boundary-line premium that is seldom matched by any municipal boundary unless the city and school district boundaries are the same. Yet almost all social scientists who analyze education issues look upon school districts in the same way that the formal legal system does: Districts are "creatures of the state" and have no constitutional ability to obstruct or alter a directive that comes from on high.

If school districts are so irrelevant in a constitutional sense, though, why do homebuyers put so much stock in them? It cannot be just naiveté or inattention on the part of homebuyers; most of them are putting down a good fraction of their life savings to buy a house. Nor is it just low taxes that makes a district attractive. The local school's test scores get the same sort of scrutiny

from prospective home buyers that earnings reports get from stock market analysts. Yet the mystery of school districts is compounded by the fact that most homeowners do not have children in schools. True, they know that some of the prospective buyers will have children, but that fraction of the market is going down, not up. Yet school district quality remains probably the most important single indicator of housing prices. Something beyond just schools is involved.

The "something beyond" is, I will argue, the sense of community that local schools provide for residents of their district. Schools are an important source of localized social capital for adults. This is hardly a new insight. What appears to be different is my contention that the communitarian virtues of schools have a spillover effect on the rest of the community. Adults without children in school benefit from the network of social capital that is fostered by public schools.

§1.2 Early American Land Policies and the Marvelously Efficient One-Room School

The evolution of modern schools was something akin to a spontaneous order. School districts were so generic and numerous that they can be analyzed as markets rather than governments. I open chapter 2 with an historical argument. Concern about property values drove the establishment of schools and school districts in the nineteenth century. My focus is on the Land Act of 1785, which provided for the measurement and sale of land in most of the nation, and the Northwest Ordinance of 1787, which established a method of governance and progression to statehood. The most notable feature of the Land Act was its provision that a square mile of land—the "school section"— in each township was to be set aside as an endowment for schools for residents of the township.

The school-establishing features of these far-reaching Congressional acts can be best understood as attempting to maximize the value of the government's vast land holdings. The school sections were bait for settlers. The subsequent state constitutional provisions that encouraged education were responses to this same land-value concern. The demand for schools by settlers and subsequent purchasers is what induced the government to set up their education system. It was not something that wise, disinterested public officials tried to impose on an unwilling or indifferent population.

Chapter 2 then goes on to explain the technology of education in nineteenth-century, one-room schools and contrasts it to modern, age-graded education. (I sometimes refer to a general

educational technology as a "pedagogy," but the reader should not anticipate discussions of the philosophy or psychology of education along the lines of Pestalozzi, Montessori, and John Dewey.) I argue that each system was appropriate to the geographic, economic, and technological circumstances of its times. Many of the features of the one-room rural school that are criticized as backward were actually efficient responses to their circumstances. For example, the tutorial-recitation method allowed children to attend school at irregular intervals. If they missed half of a term because a family crisis required additional assistance on the farm, they could still make some progress in their texts when they got back. They were not held back a grade, since there were no grades to be held back in.

An understanding the one-room school's unique pedagogy can shed light on some practices that seem peculiar to people used to a modern age-graded system. Tuition payments, called "rate bills," were often charged to cover part of the expenses in one-room schools. Modern critics of this system often overlook that most rate bills were used mainly to *extend* the term of ungraded schools for a few weeks. Low-income children who were deterred from attending during this period were not held back in a grade. They simply had to wait until the tuition-free term began a few months later and continued to progress as before. The only advantage of paying the rate bill was that it enabled children to go through school faster. This explains why the "free school" movement, which abolished the rate bills in most states, appears to have had such a modest impact on educational attainments.

A modern, age-graded system might actually have resulted in less education for the vast majority of nineteenth-century Americans, who lived in low-density rural areas. Grades would have been too small, since rural children could not be transported to a large-enough school. Most farm families' irregular need for their children's labor would have interfered with the continuous and sequential attendance demanded by an age-graded pedagogy. As a result, farm children would have been stuck in an endless loop of grade repetition. By the same token, the nineteenth-century's one-room pedagogy could not produce enough specialized education in the twentieth century, when there was a increase in the demand for workers with skills taught in high school. The drawback of the tutorial-recitation method was that school children spent most of the day in what we would now call study hall, preparing for their brief recitation periods.

Family mobility shaped both systems. One-room schools of the nineteenth century had a generic, standard pedagogy that allowed for each period of attendance, however brief, to advance

a child's education. Children could duck in and out of school without fear of failing to be promoted. Twentieth-century schools have a loosely standardized curriculum—the annual progression from kindergarten to 12th grade. Age-grading allows for more specialization by teachers and more attention to children in each grade, but it also demands that schools not be too much different from one another.

§1.3 Local Voters and the School District Consolidation Movement

Chapter 3 uses land-value concerns and economic and technical change to explain the dramatic decline in the number of school districts between 1910 and 1970. At the beginning of the twentieth century, there were probably more than 200,000 school districts. By 1970, the number fell below 20,000, and it has drifted down much more slowly since then. Almost all of the decline in district numbers to 1970 can be accounted for by the consolidation of rural, one-room school districts into larger districts that had multi-room buildings in which children were put on an age-graded track that led to high school.

The process by which rural consolidation and age-grading became the norm is widely regarded as the triumph of centralized administrators. Some historians regard this triumph as unfortunate, and most others think of it as admirable. But the consensus is that it was accomplished by top-down pressure. For example, Terry Moe (2002, 184) writes (and later qualifies), "From its modern origins in the early decades of the 1900s, America's public education system was designed to be a purely governmental system in which markets play no role at all."

In chapter 3, I beg to disagree. I point out that many of the standard features of age-graded education that are thought to have been created by national commissions can be seen as generic responses to the need to accommodate mobile families. We would have something like "Carnegie units" for high school credits even if there had been no Carnegie Commission to establish them. I also argue at length that most "top down" proposals to consolidate school districts along pre-existing political boundaries failed. The district boundaries we see today reflect what were then called "organic communities" rather than arbitrary boundaries.

The political success of the age-graded model was due, I believe, to the recognition by rural voters that their property values would be lowered if they did not get with the age-graded program. One-room, rural schools by 1900 attempted to adopt an age-graded system. This

system did not work well in the one-room setting. Whereas students could be sorted broadly by ability and knowledge in the ungraded tutorial-recitation method, they had to be sorted narrowly by age in the new age-graded method. This made for many more recitations for the one-room teacher, and most of them adopted a compromise that nominally conformed to age-stratifications but in practice continued to group children by ability and knowledge.

This compromise would have been tolerable—even admirable—if the only aspiration of public education was literacy and numeracy. The *coup de grace* for the rural method was the rapid development of high schools and the growing demand for their graduates in the labor market. Now one-room school teachers had to be able to teach not just a larger number of grades, but also a wider and deeper range of knowledge to prepare students for high school. The teachers in the age-graded schools of the city could deal with both of these more easily because they could specialize in subjects and grade levels. One-room schools thus became obsolete. Attendance began to shrink because of declining rural population and because parents of ambitious students moved to age-graded districts. The decline in rural property values that this occasioned in the more backward districts was the prod to do what bureaucratic educators had been urging for decades, which was to consolidate one-room schools into rural graded schools. It was this consolidation that accounted for almost all of the decline in school district numbers from 1910 to 1970.

§1.4 "Will I See You in September?" Labor Mobility and the Standard School Calendar

Chapter 4 offers indirect evidence that school districts were able to evolve from one-room pedagogy to an age-graded system without a conscious, top-down organizer. My specific example of nearly-spontaneous order is the coordination of school calendars, which I take as a marker for coordination of other aspects of school curriculums. In reading the history of American education, I found that most rural schools held classes in the winter and in the summer. I had always thought that modern-day summer vacation had emanated from the need for farm children to work during the summer. But just a little more thought about farming would have persuaded me that this wasn't a good explanation, since summer was actually not the time when the unskilled labor of children would be most useful. So summer was indeed a time during which farm children attended school regularly in the nineteenth century. A separate winter term was also taught in most rural districts. School was generally not held in the spring and autumn in order to have all hands available for the urgencies of planting and harvesting.

So what does explain the existence of the standard school calendar? In a paper published in the *Journal of Urban Economics,* I argued that it is best explained as a coordinating device. It allows children and teachers to finish school at one place and move to another school district far away and begin the new school year with everyone else. The now-standard calendar facilitates labor mobility. One bit of evidence in support of coordination is that the standard calendar emerged around 1900, just as the majority of the nation was becoming urban. One-room schools did not require a standard calendar because they had a teaching technology that did not require continuous attendance in schools. But cities were adopting age-graded methods of instruction, and this pedagogy required continuous attendance. When the urban, graded schooling became the national standard, a common beginning and ending period had to be adopted to coordinate the comings and goings of families and teachers from various districts.

There was almost no discussion in the historical record that directly supports the foregoing account. I instead offer international evidence based on the different seasons in the Northern and Southern Hemispheres. It turns out that the modern school year, which starts near the end of summer and ends at the beginning of the next summer, is a worldwide standard. (Japan is the most interesting exception.) Australian, South American, and sub-Saharan African children usually start school around February and end in November or December. But international schools in those areas that cater to families who must return to Northern Hemisphere countries adopt a Northern Hemisphere calendar, starting in August and ending in June, so that the return to London or New York in July allows their children to enroll in school at the regular time.

In contrast to America's early adoption of the now-standard school calendar (around 1900), several other nations, most notably Germany, did not adopt the mobility-facilitating calendar until the second half of the twentieth century. I use this and some domestic examples as evidence in support of the adaptability of a decentralized system of education. As Claudia Goldin and Lawrence Katz (2008) have emphasized, America adopted mass high school education many decades before Europe precisely because high school could be adopted one district at a time. I supplement their insight in this chapter by offering a motive, concern about local property values, that goaded local voters to engage in a beneficial "race to the top" in education.

A standardized system has its drawbacks, however. I demonstrate that the standard calendar and curriculum can act as a ceiling on educational quality, making it difficult to implement desirable reforms. For example, a longer school year adopted by a single state would make its

schools less interchangeable with those of other states, thus hindering labor mobility by teachers and parents. I argue that geographical mobility is economically desirable and should not be discouraged by overly specialized education systems. This commends education reforms that extend the period of education both before first grade (to give the disadvantaged a head start) and after high school.

§1.5 The Economic Geography of School Districts

In my "bottom-up" interpretation of district consolidation in chapter 3, I argued that voters would agree to consolidations that formed the smallest district that could support a high school. Voters were concerned with governance as much as scale economies. Chapter 5 raises the question of why some school districts are now much larger than would seem warranted by voter concerns. Why do we have the huge city districts of New York, Los Angeles, and Chicago? Why do some Western metropolitan areas have large districts in some places but small districts elsewhere? Most puzzling of all, why are Southern school districts so much larger than those of the North?

The South was different, I argue, because racial segregation made the population density of whites and blacks taken separately too low to form efficient school districts. When age grading and high school became desirable, the South herded its white children into consolidated schools and let rural blacks stay in the one-room schools. Whites in remote rural areas had to choose between full-time schooling with long bus rides and no school at all. Blacks were not presented with this choice, since the Southern strategy of 1900 was to disfranchise them to keep them from demanding graded schools. When it became evident in the late 1930s that blacks would have to be provided with graded education and high school, most Southern states reverted to the county as the unit of school administration, since separate age-graded school systems required twice the student catchment area to run parallel K-12 schools. As urban populations sprawled outside of the city, the county became the school district for the suburban South.

The size of urban school districts in the rest of the nation was also dictated largely by rural population density. In the first half of the twentieth century, rural districts everywhere consolidated in order to be able to send their children to more standardized grade schools, which gave them access to high school. The minimum size necessary for a rural consolidated district varied regionally. In areas where there was dense rural settlement (chiefly in high-rainfall areas), the land-area of the minimum-size school district could be small. In areas that were arid,

mountainous, or otherwise uncongenial to intensive agriculture and a multitude of towns, the resulting district would have to be large in area in order to get enough children to form consolidated schools.

As cities grew and spread out later in the twentieth century, suburbanites took over pre-existing rural school districts. School districts hardly ever break up once they have consolidated, so previous rural consolidation patterns were imprinted on modern suburban districts. In arid and mountainous areas of the country, rural districts were large. In areas with higher farm density, the rural districts adjacent to cities were small. In the South, rural districts became large because of the diseconomies of running separate schools for whites and blacks. Thus two variables, early population density (which I statistically approximate by annual rainfall) and a history of racial segregation, account for most of the national variation in *urban* school-district size.

This regional variation affects the competitiveness of school districts in metropolitan areas. A metropolitan area with greater numbers of school districts allows potential residents to "vote with their feet" for the school district they want and also induces school authorities to pay closer attention to effective education. I present statistical evidence that geographic competition is greatest in areas outside of the South that had rural climates that were conducive to high population density.

The other original finding in chapter 3 is the result of my discovery that the mapping program GoogleEarth can be used to compare municipal and school district boundaries. I found that most cities do overlap with a single school district, even though the degree of congruence is imperfect. This overlap is important because, as I argue in chapter 6, the social capital that is accumulated in the city's school district is also useful in municipal affairs.

§1.6 Education Reforms and the Communitarian Virtues of School Districts

Chapter 6 starts with a modern question: Why don't voters like school vouchers? I motivate this question by first examining the broad trends in school-finance equalization, focusing on the experience of California. Like most other states, California used state-generated funds to offset at least some of the inequalities in education spending that result from school-district financing of education. But the Serrano v. Priest decisions in the 1970s found that this equalization was not enough, and the California Supreme Court required that local property-tax bases could no longer be the basis for any spending inequalities among school districts.

I argue that this decision and the legislature's implementation of it should have made vouchers much more attractive. Yet statewide voucher initiatives were rejected by large margins in the 1990s in California and in other states. The public seems to embrace other competition-enhancing ideas. Economists' proposals to deregulate airlines, trade pollution standards, and auction radio and TV broadcasting rights have been political successes. Why are schools different?

Education itself is not a public good in the classic sense of the word. Schools can be provided on the private market. There are few technical reasons for them to be run by local public agencies, but voters do not want to give up their public schools. My answer to this conundrum is that local public schools provide localized social capital—the list of people you know locally—for the *parents* of school children. This Rolodex-enhancement makes provision of other, nonschool public goods easier to accomplish. If you know more people in your neighborhood, it is easier to get them to help you to lobby city hall for a pocket park or better police patrols. Localized social capital improves the bottom-up provision of true local public goods.

Chapter 6 presents broad empirical evidence in support of the social-capital theory of public schools. (a) States with smaller (and thus more parent-friendly) school districts appear to have more social capital. (b) Demographic data show that the long-term trends in social capital are closely tracked by the average number of school-age children per family. Social capital measures hit their peak just after the peak of the baby boom, and they have glided downward as family size has shrunk since 1960. (c) Contemporary surveys show that parents with more children seem to have more social capital.

It appears that voters do not want to give up their school districts, but overly large school districts are detrimental to both social capital and educational accomplishment. The most obvious reform that this analysis points to is to reduce the size of school districts. Since virtually every square mile of the country is already within some school district, this would require some secessions. Creation of larger districts can be done, but making smaller districts from larger units is quite difficult. I illustrate the difficulty by recounting the ongoing saga of Lakewood, California, which sought to form its own school district from the several larger ones into which it had been divided long ago. Lakewood residents appear to have been eager to get a chance to vote on this issue, but the proposed district was blocked by the county and state bureaucracy, apparently abetted by teacher unions. Consolidation of small districts is still undertaken only by

mutual consent of the voters of each small district. But they have to think hard about it, since consolidation seems to be a lobster trap: Easy to get into, but very difficult to get out of.

One response to the inflexibility boundaries is vouchers. Most of the ongoing voucher programs focus on students in big cities. The larger trend, however, is the formation of charter schools in large cities. These are publicly-funded but governed usually by neighborhood parent groups. While it is not obvious that charter school perform better than public schools, it is clear to most observers that parents are more satisfied with their schools. I submit that this satisfaction is an indicator that charter schools promote social capital, which in large cities is more difficult to do than in suburban schools. I thus see the charter school movement as another example of how "bottom up" governance can emerge even in the most bureaucratized settings.

I close the chapter and the book with the suggestion that a robust system of locally governed—and at least partly locally financed—school districts may be essential for the future of education. The challenge is the decline in the proportion of the population that has children in schools. I review evidence that "elder voters," who are the most numerous childless group, are more supportive of education at the local level than at the state level. The education challenges of the future may best be met with a school system that has strong elements of what most reformers deride as local control.