

Journal of Rural Social Sciences

Volume 22

Issue 1 *Southern Rural Sociology Special Issue:
Education, The Power of Ideas, and the
Tensions of Rural Life*

Article 8

6-30-2007

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Recommended Citation

Miller, Stephen. 2007. "John Deere Tractors and School Reform: Balancing Economies of Scale and Quality of Life." *Journal of Rural Social Sciences*, 22(1): Article 8. Available At: <https://egrove.olemiss.edu/jrss/vol22/iss1/8>

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JOHN DEERE TRACTORS AND SCHOOL REFORM: BALANCING ECONOMIES OF SCALE AND QUALITY OF LIFE

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ABSTRACT

Many school reform reports, many politicians, and typical media coverage attribute today's reform efforts to the failure of the schools. We need, say critics, to return to the good old days when schools were tough and everybody learned! This essay debunks the Golden Age myth by comparing John Deere tractors to school reform. In the analogy, repeated upgrades of the old two-cylinder motor during the decade of the fifties were associated with the demise of the family farm. The new models were more powerful than the tractors they replaced, but *not enough*.

Eventually, John Deere evolved to the new 4010 series of four and six cylinder power plants. Similarly, schools are getting "bigger" (figuratively, based on higher expectations) in response to the information age economy. Unlike the alleged Golden years, we now expect *everyone* to graduate and emerge well educated. Like the two-cylinder upgrades, today's schools are improved over their predecessors, but not enough. The current reform era will likely continue until goals for both high quality and equity for all groups are reached. Meanwhile, economies of scale can have negative effects. For both farms and schools, the bigger is better aspect of economic efficiency must be balanced against quality of life considerations.

"Down on the Farm"

Back in 1976, during my first semester of doctoral studies at Michigan State University, I took Professor Brookover's famed Sociology of Education course. The first night, he started class with a test. The initial question, "What is a Berkshire?" was followed by similar queries, with my classmates growing increasingly puzzled as I smiled more broadly. We had taken Brookover's "Down on the Farm IQ Test." I was the only "genius" in the group, being the one farmer in the room besides our illustrious professor. Completely citized, the other students were clueless. (By the way, a Berkshire is a breed of purebred swine, which we just happened to raise and show on our family farm.)

Brookover's purpose was to illustrate the influence where and how we are raised has on what we know. The analogy forced us to think about the bias inherent in IQ tests for anyone who does not grow up in an upper middle class, white, mainstream home. Put another way, individuals from a lower social class, a minority racial/ethnic group, a language other than standard English, or even a farm are likely to know content that is different from that on traditional IQ tests. Yet they are judged as genetically inferior for this accident of being born into the wrong (i.e., different) cultural background.

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Brookover represented a unique blend of university and farm. Distinguished in his career, he defined the field of sociology of education, testified at *Brown v. Board of Education* (1954), and helped launch the school effectiveness research. Yet he remained a farmer at heart. Only recently deceased in his early 90s, he was buried in Indiana near his family farm. There is little wonder that I asked him to be my advisor.

Like Brookover, I remain fascinated with the rural life. Although my commute to the University of Louisville from where I live in southern Indiana covers suburban expressways, the rolling hills of mixed forest and small farms, along with the flat and much larger corn and bean fields just to the north, are daily reminders of my own background. Based on ecological and technological factors, the land is inextricably linked to economic productivity, which drives political systems and ultimately cultural values (Harris 1979). I regularly integrate this theoretical viewpoint into my university classes and I still refer to the “Down on the Farm” test in my classes when the opportunity arises.

Change, Farms, and Schools

The issue of school reform vividly illustrates the connection between farm and schooling. The materialistic world view described above frames the thesis of the extended analogy that follows: change is driven by economic forces marked by efficiencies of production and economies of scale. This does not imply that bigger is necessarily better; bigger is likely to be selected because it is more efficient, particularly in the short term.

Americans tend to have fleeting attention spans. In my sociology of education classes, I address school reform and explain that specific periods of change are typically brief, pendular-like, and thus recurring, not unlike the media attention cycle, which is short, episodic, and sensationalist rather than long-term and analytic. As Madison Avenue well knows, sex sells. So do murder, crime, and scandal, the staples of media ratings. Remember the O.J. glove? The dress in the Clinton impeachment?

School reform, while not as spectacular as the media, has its own version of brief, oscillating swings (Kliebard 1988). Relevant examples include the efforts to improve math, science, and foreign language after Sputnik; the War on Poverty focus on minorities and the poor (the inspiration for me to become a VISTA Volunteer in Appalachia for a year, a good match for my rural upbringing); the student-centered curriculum of the late sixties and early seventies, a response to student protests amid the anti-Vietnam War movement; and the back-to-basics of

the mid seventies, a correction to the “anything goes” mentality of the previous reform. These shifts in the curriculum were implemented to varying degrees at both the university and K-12 levels.

Still, all these reforms were also resisted by many educators. The educational establishment constitutes one of the broad institutional sectors of the larger society, and new behavioral patterns that are at odds with extant macro level structures and regularities are not quickly nor easily accepted (Sarason 1982). That successive waves of change undid the previous efforts simply helped reinforce the status quo: the more things change

So why is there an occasional reform period that is sustained, focused on a common goal (albeit with mini-waves of reform that embody different approaches), and ultimately transformational for the system? Two primary examples are the wide ranging institutional reforms that occurred during the Progressive Era at the turn of the last century and the current era, starting symbolically with the publication of *A Nation at Risk* (National Commission on Excellence in Education 1983) and continuing today. The former transformed the schools to meet the needs of a society changing from a rural agricultural economy to an urban industrialized power. Today’s enduring school reforms confront a society in flux, from industrialism to the service-based global world of the electronic information age. While the final chapter on the schools for the twenty-first century has not been written, it is safe to say the resulting model will be shaped by international economic markets and the need to prepare students for employment in this computerized, service-oriented world.

These underlying economic forces drive the larger transformation, but what drives the changes in the schools themselves? Many school reform reports, many politicians, and typical media coverage attribute today’s reform efforts to the failure of the schools. Too many students are not fully literate, drop out of school, and are not prepared for the work place. This failure is said to be current. In the good old days, schools were tough, the curriculum was rigorous, and students really learned! We need, argue these critics, to get back to basics and simply revive the discipline and rigor of those golden years.

John Deere Tractors

The Golden Age of schooling is a myth: it is widespread, it is popular, and it is wrong. In my classes I attempt to dispel this myth with a farm analogy¹: the puzzle of the John Deere tractors. The name John Deere has always been synonymous with quality and has remained a prominent company in farm equipment manufacturing.

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However, today's behemoths bear little resemblance to the tractors that dotted the farms in the first half of the twentieth century. Throughout the thirties, forties, and into the fifties, John Deere tractors evoked a brand loyalty that went beyond their quality: the two-cylinder motor, manufactured from 1923-1960, was unique among the major companies. They sounded different ("Johnny Poppers") and had a different type of power (low RPM, high torque, aided by the angular momentum of a big cast iron flywheel on the side). Before batteries, starting them was different too. Instead of a crank at the front of other tractors (similar to Model T Ford cars), the operator had to turn the flywheel to start a John Deere.

The fealty to John Deere is legendary. John Deere memorabilia are commonplace in rural America. A friend's father would not buy a riding mower until John Deere came out with one, despite a sizable yard and advancing age. Tractor pulls with both stock and souped-up models generated enthusiasm like sporting events, and the old two-cylinder motors were always a huge favorite. A derogatory term for any tractor not a John Deere was a not so polite rhyme based on the old Massey Ferguson tractor, a Massey Assey.

It is no secret that many farm families were far from rich. Birthdays were not occasions for lavish presents. Because my father had Multiple Sclerosis, this was especially true for us. My most cherished memory is the year that I received a "new" bicycle, a gift that illustrates the old saw, "Imitation is the greatest form of flattery." The "John Deere bike" was completely rebuilt from old parts and freshly painted green and yellow. Lest the reader think this is the stuff of childhood dreams, it is common even today to find old pickups refurbished and painted John Deere green. There is even a current popular country song titled "John Deere Green" by Joe Diffie.

The impassioned love affair with the old two-cylinder motor is both deep-seated and irrational. Even today, I find myself "loyal" to John Deere, although I do not farm and have no John Deere lawn equipment. My wife tells me I have become an uncompromising ascetic in my old age. Now I openly admit to this, being a "tough buy" at gift occasions since most presents in my estimation are frivolous and unnecessary. Still, my tough exterior can be broken. A couple of years ago for my birthday, I received a "Nothing runs like a Deere" T-shirt that brought a smile of delight. I now proudly wear this out in the community, much to the chagrin of my son and daughter, now in college, who think it should be retired to yard work.

Enter the 4010

There is no doubt that John Deere generated loyalty, with the two-cylinder motor being the primary factor underlying this love affair. So why, in 1961, did John Deere dump the two-cylinder motor and come out with the new generation of variable speed four and six cylinder motors? For most John Deere owners, consternation was an understatement. Feelings of betrayal, hurt, and abandonment were widespread. Vows never to buy another John Deere were common. This highly emotional reaction turned out to be short-lived. It lasted as long as it took for John Deere to get the farmer to try a free loaner to demonstrate the new 4010 series. The new tractors were more powerful, more flexible, and had superior hydraulic systems; simply put, 24 hours were more than enough to convince the wounded two-cylinder loyalists that the old motor's time had passed.

To say that the new models were superior is an understatement. I can still remember vividly the day that a 4010 demonstrator (a tractor lent at no cost beyond the fuel it consumes) came to our farm. It was late spring and the plowing was not done yet. Rainy weather had left the ground too wet to work, a common malady for farmers racing the clock to get crops in early enough to have a full growing season. By this time my oldest brother had taken over the farming, and my parents had moved to town. The days when my father could come out and work were long since gone. My sister-in-law was a nurse, my older sister was married and teaching, and my other brother was off to college to become a teacher. Our family illustrated perfectly the tradition of the farm passing to the oldest brother with the remaining siblings becoming educators. I was still in high school then, on the track team, that being my spring sport.

No matter. My brother, who never missed one of my high school basketball games, needed help. The 4010 demonstrator came attached to a 4-bottom plow. Our old John Deere A pulled three bottoms, each 14 inches, but at a snail's pace and only about 6-7 inches deep. The 4010's plow cut four 16 inch furrows, at close to double the speed, and at a depth of 9-12 inches. The extra depth broke up the heavy Illinois loam and provided improved drainage in fields that tended to become impacted, especially in low lying areas. The deeper tillage increased yield. Simply put, 24 hours with the 4010 covered almost as much acreage as 4-5 normal days with the A, at a superior level of seedbed preparation.

However, the productivity of the demonstrator was dependent on keeping it going for the entire 24 hours. While the brunt of the burden fell to my brother, everyone pitched in. He still had to care for livestock, the purebred Berkshires, and swine operations in those days were labor intensive. My sister-in-law took her turn

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in the field, but come midnight, it was my turn. However, the excitement of operating the new tractor with its advanced hydraulics and what seemed like supersonic speed soon dulled. By 4 A.M., when my brother relieved me, I was dead. Skipping school in those days was out of the question, but the sleep deprivation was well worth the sacrifice, as the crops were planted in timely fashion and the yield that year was excellent. And, yes, my brother bought a 4010.

Demise of the Two-cylinder Motor

Here is the crux of the puzzle, for it is not that the new 4010 series was better. That was incontrovertible. Rather, understanding the analogy, and school reform, requires examining what happened to the two-cylinder motor over its last decade of life. A brief recounting of the A series tractors is instructive. In 1934, John Deere came out with its first modernized tractor. The A was the signature model, and, although both smaller and larger tractors were available, it was the most popular and fitted the needs of most family farmers. The original A could pull a two-bottom plow, which incidentally marked the beginning of the John Deere Company. A blacksmith, Deere got his start in 1837 when he fashioned the first polished steel plow from a broken sawmill blade. This innovation caught on immediately because it enabled the horse drawn plows of the day to cut a clean furrow, turning over the prairie sod, whereas previous models gummed up in the sticky Midwest soil. (*Genuine Value: The John Deere Story*, Deere & Company 2000, was helpful for background and precise dates.)

In 1938, the A had been redesigned, the most significant change being its first stylized sheet metal look. The model A was produced through 1952 when it was replaced by the 60 series. This was not a lasting change. The 60 was soon upgraded again, first to the 620 in 1956 and finally to the 630 in 1958. By this time the 630 could pull three bottoms, but these increasingly frequent model updates were insufficient, and in 1961 the 4010 series was born.

The key question here is insufficient *for what?* Why the sudden surge of replacement series when the A had lasted for 18 years? Beyond the usual competition among makes for new and improved models, there was a fundamental causal mechanism: the need for power! The driving force was the size of the farms. The family homestead was already under siege, with fewer farmers equating to more acreage for those who remained. Bigger farms meant bigger plows and equipment. Starting in the late forties, the consolidation of the family farm accelerated during the fifties. The John Deere model changes were a response to this movement.

Thus, the key to the analogy is this: each of the new two-cylinder models was a *better* tractor. The model redesigns increased the efficiency of the old two-cylinder motor, as well as introducing associated technology such as hydraulics, power steering, etc. Improvements often associated with automobile racing were also seen in the farm equipment industry. For example, the 630 series had a hemi-head design. Yet these changes, positive though they were, could not keep pace with the need for more power on the larger farms, where 4-, 5-, and even 6-bottom plows were being introduced. The limiting factor was the size of the cylinder. More powerful motors required bigger cylinders, but at some point the cylinder becomes too large to burn all the fuel efficiently. That point had been reached, but the John Deere engineers realized this long before the consumer. The new 4010 series marked the culmination of this evolution in engine design.

Reforming Schools

So how do bigger farms and redesigned tractors relate to school reform? Above I indicated that the current era of sustained school reform is driven by the transition from an industrial to a postindustrial economy. The widespread belief is that schools are failing and reform is needed to repair them, i.e., to restore our schools to their former glory and rigor.

Yet this belief belies the facts. Think of schools as farms. While the family farm remained stable, the A series worked remarkably well, an 18-year run. However, as the farms increased in size, more powerful motors were needed, eventually culminating in a transformational design: the death of the two-cylinder motor.

The industrial era schools of the twentieth century also had a remarkable run. As Lawrence Cremin (1961) notes in *The Transformation of the School*, the reforms of the Progressive Era, approximately 1890-1920, shaped the basic model of schooling for the coming century: the comprehensive high school, in which all students came together for common civic learning, yet experienced a curriculum track tailored to their specific talents and future vocational prospects. Students in the different tracks—college preparatory, general, vocational—were sorted and selected according to their supposed genetic potential based on the “educational science” of standardized achievement and IQ tests. Students who emerged from these comprehensive schools were absorbed by the voracious U.S. labor market. These were the “great” schools of the stable economy. During the heydays of the forties and fifties, America became the primary world power, fueled by its industrial output. The college prep classes provided the scientists, the engineers, and the

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leaders, while the general and vocational tracks furnished the skilled and common laborers.

While all was not perfect with the schools, the recurring waves of reform noted earlier (post-Sputnik, War on Poverty, student protests, back-to-basics) were minor adjustments to the system of ability grouping and tracking, perhaps best seen as changing the emphasis on which track should receive more attention: elite future leaders or the workers from the middle and bottom of the normal curve.

Stability, however, is a fleeting phenomenon. With the late 1970s/early 1980s came economic malaise and the threat from the Japanese juggernaut. Our industrial preeminence was challenged and our “failing” schools were blamed as a primary underlying factor. We had become “A Nation at Risk” trumpeted the most consequential of the many reform reports to follow (National Commission on Excellence in Education 1983). Suddenly the schools, like the farms of mid-century, were getting bigger.

This is a figurative statement! Although schools have increased in size because of consolidation of one-room schools and smaller districts, the “bigger” schools here refer to expectations for results. America now expects that *all* students will be well-educated. We want 100% high school graduation. Functional illiteracy for some students is no longer acceptable. Excellence in education now includes minorities as well as whites, the impoverished and the affluent, immigrants and the native born. Even those for whom English is a second language and special education students are expected to graduate from high school with skills that will make them employable. In the terminology of William Chance (1986), we formerly “schooled” the masses, an emphasis on basic skills, complaisant acceptance of control, and the ability to follow directions. Meanwhile we “educated” elites, the classic liberal arts focus on content disciplines, critical thinking, independence, and leadership. Today the primary thrust of school reform is to educate everyone: a fundamental change in the underlying paradigm of schooling.

Better Schools

The need for ever better schools brings us to the educational side of the analogy. The current schools, so defiled by critics’ charges of failure are in fact *better* than the schools of our golden age in the forties and fifties, and they are also better than the schools of the recent past, from the 1960s into the 1980s. Drop out rates are down. The achievement gap between whites and minorities and between rich and poor has been reduced. The number of students enrolling in a rigorous curriculum has risen dramatically; concomitantly the number of students taking college entrance exams

has soared, while the test scores have remained virtually the same. This cannot be underestimated: as the students taking college entrance exams come from further down in the talent pool—those who in the past would never have considered college—everyone must do better to keep overall scores the same. Performance on the National Assessment of Educational Progress (NAEP) has also increased. Meanwhile, the quality of schooling provided for special needs students has improved dramatically; children who as recently as the 1970s were institutionalized are now receiving a full education. For an accounting of these and other improvements in the quality of schooling, see Berliner and Biddle (1996), *The Manufactured Crisis*, and Bracey (2004), *Setting the Record Straight: Responses to Misconceptions about Public Education in the U.S.*

Yet it would be a mistake to give the impression that these school reforms are a finished product. They should be seen as a work in progress. The *goal* for high quality education for all has been accepted, and schools are better than before. However, educators are far from achieving these lofty expectations. Progress on closing the achievement gap between whites and minorities, between haves and have-nots, has stalled. Further improvement on closing these gaps (the equity dimension) may be more difficult than raising test scores overall (the excellence dimension).

For example, as Miller and Moore (2006) note, the overall impact of the Kentucky Education Reform Act of 1990, arguably the most comprehensive among all the states, has been spectacular: a rise in ranking from near last (45-50 among the states on a variety of outcomes) to near the middle on those same criteria. Several scholars have stated that “scaling up” improvements and success stories from individual schools to the state or national level is the most challenging aspect of school reform (Stringfield and Datnow 1998, 2002). Thus, Kentucky’s gains constitute a remarkable accomplishment. Yet during this period, there has been little improvement in reducing achievement gaps. If the equity issues concerning class and race had been eliminated (or at least reduced), their influence on achievement would be substantially lower. Yet the effects of family background on school-level accountability scores are just as strong as ever. We are still far from the point that we can say socioeconomic status makes no difference.

Continuing School Reform

Just as the final model changes of the two-cylinder John Deere were better tractors, so the schools of today represent better education. However, the improvements on the two-cylinder motor could not keep pace with the growth in

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the size of the farm. Nor are the better schools of today good enough. As just noted, the achievement gaps between disadvantaged and advantaged groups, though reduced, have not been eliminated. Some students still drop out. Functional illiteracy is still problematic. For the students affected by these stubborn challenges, the consequences are more pronounced. During the so-called golden years of schooling, students who dropped out or were functionally illiterate could easily find good paying jobs in the manufacturing sector. Today's economy is not so forgiving of young men and women who do not attain full educational competence.

The schools of the twenty-first century, a reform still unfolding, face a daunting task: high-quality education for everyone. These schools must resolve the toughest challenge of all—how to overcome the effects of poverty, child abuse, parents with limited or nonfunctional educational skills of their own, and even parents who do not or cannot care. The schools that finally emerge from the current extended reform era will offer a qualitatively different, better education than the schools of our golden age and better than today's improved schools: a transformation of schools analogous to the demise of John Deere's two-cylinder models and the introduction of the new generation 4010 motor.

Size and Quality of Life

It would be easy to mistake the text of this analogy, that increasing size yields better results. However, that is *not* the lesson here. As the farms got bigger, more power was needed and bigger, better tractors followed. As the expectations for quality of education rise, better schools are needed, here a figurative denotation: many students (all) educated well, not just elites. While economic efficiencies are clearly influencing these changes, for both farms and schooling, the "bigger is better" mentality requires a closer look (see McKibben 2007).

Consider farming. There is no doubt that efficiency and economies of scale drove the demise of the family farm, with those remaining having larger acreage and requiring more powerful engines to pull more massive equipment. One result of this drive to become bigger is today's corporate farms. Vast conglomerations of chickens, cattle, and hogs are certainly efficient. But are they better? At some point, size produces concentration, which has negative effects. These immense livestock operations yield enormous amounts of manure, a severe environmental waste problem (Weeks 2007). Yet these same wastes, distributed across many smaller farms, were a source of fertilizer, replenishing the soil when spread on the very fields that produced the grain consumed by the livestock.

Nor are the products of the corporate farm necessarily better. Fruits and vegetables bred to withstand the rigors of large scale mechanical pickers have tougher skins and are engineered to ripen at the same time so that one pass with the equipment harvests most of the crop. However, to say that taste has suffered is an understatement. For someone who grew up eating tomatoes straight out of the family garden, today's off the shelf, mass-harvested products seem hardly to be the same species. I am obviously not alone in my feelings on this. "Heirloom" vegetables are becoming increasingly popular because of their "old fashioned" taste and texture (Gordon 2006; Jordan 2007). At what point does a sufficient portion of the population decide that the lower cost and convenience of the mass-produced varieties are not worth the sacrifice of taste and quality?

The quality of livestock produced on these large-scale factory farms is similarly problematic. There is a growing niche market for meat advertised as "free range" or raised without confinement, targeting dissatisfaction with the products of corporate practices (see Hermansen 2004). Taste and texture are decried. Premium brands of beef and chicken claim the superiority of the flesh of animals raised in traditional environments, with room for exercise trumpeted for its contribution to the quality of the meat. However, the arguments against confinement go far beyond the aesthetic. Cattle, sheep, and other ungulates convert grass to proteins as they graze. Large tracts of pastureland that are otherwise unproductive for human foodstuffs can be utilized efficiently. Simultaneously, this reduces the need for corn and grains to fatten these cattle in the feedlots. With ballooning populations, the notoriously inefficient use of grains to feed livestock instead of directly as a primary food source for humans is increasingly untenable (Schedler 2005). Furthermore, animal rights activists lobby against the cruel and unusual practices of crowding and immobility, in effect forced feeding under conditions of severely restricted movement (Henry 1996). Again, the case against confinement is more complex than simple cruelty, turning as well on philosophical arguments about common bonds between humans and animals (see Fuentes 2006).

Today's schools face similar problems on two levels. First, schools have literally become bigger as consolidation of one room schools and small districts led to more efficient use of buildings and faculty expertise. Many consolidations provided better opportunities for students: more advanced classes, teachers with disciplinary specializations, and better utilization of tax resources. Nevertheless, schools can also be too big, becoming impersonalized rather than treating individuals as unique identities. Students are more likely to become involved in smaller schools (Faunce 1984) and increased engagement is crucial for motivation and learning (Newmann

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1992). Ironically, two of the current reform initiatives are the “schools within a school model” and “middle school teams” where sub-groupings of students and faculty form separate enclaves within the larger school structure, thus facilitating more personalized attention. Here the negative effects of the economies of scale are to be tempered by a return to the very characteristics of the smaller “inefficient” schools displaced by today’s larger complexes.

Second, the rising expectations trend (figuratively bigger schools) creates its own set of problems. The nature of schooling that will effectively educate everyone is still in developmental stages. To say that this will require paradigmatic shifts in current practice is no exaggeration. When and if our educational institutions accomplish this goal remains unknown. Better schools are necessary, but the belief that poverty and its associated problems can be overcome without addressing these societal inequalities is essentially unrealistic. Both more resources and better education will be needed (cf. Portes 2005; Rothstein 2004). Yet despite abundant evidence that proactive investment in high quality education and child services significantly reduces societal costs for teen pregnancies, trouble with the law, unemployment, and the like, politicians and taxpayers have historically been hesitant to provide the support necessary to achieve this ambitious vision. Given this reluctance, it can be asked whether Americans really want an education that is both excellent and equitable for *all* children.

Meanwhile, what will become of the victims of these unfulfilled expectations, particularly the students who are not achieving well (inevitably the poor and minorities) and the teachers who are deemed responsible? In today’s political climate, a return to “blaming the victim” (McDermott 2007; Ryan 1976) is the likely result. Given the change in job markets noted earlier (the decline in the need for unskilled and semiskilled labor), those students who drop out or do not possess higher educational skills and credentials face a double whammy: (a) they will almost inevitably be destined to a life of low wages and un- or under-employment, and (b) they will be labeled as deserving of their fate because they are “not the sharpest tool in the shed” or have a “bad attitude” or both.

A Need for Balance

I do not read the future and cannot be certain about how these problems of size and scale will play out over the next decades. Still, I can say that our society needs to balance the drive for economic efficiency with concern for human values. Economies of scale are driven by short-term efficiencies. Quality of life requires us to take account of long-term human interests. Are bigger, corporate farms more

efficient than smaller family farms? As attested to eloquently by many essayists (Berry 1972; Hanson 2000; Jackson, Berry, and Colman 1984; Logsdon 1994), that has a different answer than the parallel question, Are these same corporate farms *better and ecologically sustainable* over time as compared to the family farm?

School reform, similarly, must balance the benefits of economic efficiency with quality of life. Today's conservative reform movement equates better schooling with higher test scores, a narrow academic interpretation of "good schools" that is based on the questionable assumption that higher achievement scores will bolster the economy by improving productivity (see Labaree 1997). Still, there is extensive evidence that the American public wants a much more rounded education, representing both higher order cognitive skills such as problem solving, critical analysis, and creativity (which current accountability tests do not measure well, if at all) as well as noncognitive outcomes like being a responsible citizen and family member, participating in and being knowledgeable about the institutions of democracy, being able to relate to and work with others (including those who come from diverse backgrounds), and developing a healthy socio-emotional personality (Rothstein 2004).

If the past is prelude to the future, arguments in favor of such "nonessential" or "frivolous" human concerns are likely to be brushed aside with reference to the imperative of the "marketplace." It is incontrovertible, yet rarely remarked, that the "market" is a reification that obfuscates the role of human actors (read elites who set the parameters of how competition plays out in the marketplace—tax codes, antitrust laws, financial and corporate regulations, etc.). Yet the market is a powerful and persuasive argument that has hegemonic sway in the United States. No matter that the "the invisible hand of competition" takes significantly different form from one country to the next, or even from one era to another in the U.S. The inevitability of the market is a fundamental belief in America, thought to be beyond the control of policy formulations. If the public continues to accept this shibboleth as reality, neither questioned nor debated, activists arguing for change will have a tough sell.

For both farms and schools, "better" must be defined as a combination of greater efficiency and higher quality of life. Nevertheless, proponents of quality of life as a counterweight to economic efficiency must be vigilant and proactive. The marketplace and the economic elites who shape it are relentless in selection for greater concentration and power. As Paul Loeb (2004) has so passionately championed, farmers, educators, activists, and ordinary citizens will be called upon if we are to protect such "quaint" values as sustainability, equity, the value of human

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life, animal rights, and educational outcomes that go beyond narrow, fact-based achievement scores.

Noble are the ideals of a sustainable quality of agriculture and a liberal education that is at once equitable, broadly defined, and excellent. Nevertheless, those who would champion such ends would do well to understand the difficulty of their task. The concerns for quality of life inherent in these long-term human values lie counter to the ever increasing size and concentration of resources driven by the economics of scale. The “market” that selects for these short term interests is shaped by the very elites who benefit from its alleged neutrality. Unchecked, the further evolution of “bigger” farms and schools (the next generation of corporate farming and narrowly tailored schools) will continue, with human values and quality of life left in abeyance. The stakes of the debate are high. The future of rural life and the education of all our children depend on how this tension is resolved.

Note

¹Analogy does not constitute a formal proof. The extended metaphor presented here addresses the fallacy inherent in the claims of critics that a return to the Golden Age would be a panacea. However, this work is not intended to provide the argumentation that would link the terms of the analogy nor the extensive empirical analyses necessary to demonstrate the shortcomings of the alleged Golden Age. That work is beyond the scope of this article. My thanks to colleagues Il Barrow and Francis Danquah for discussion on this point.

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