

PARENTS LEAGUE OF NEW YORK

Review

2014

Essential Articles on Parenting and Education

Education and Money

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The current national conversation about education suggests a longstanding American ambivalence about education which is rooted in a defining myth of egalitarianism. At the core of our allegiance to the ideal of equality in citizenship is a populist belief in the sufficiency of common sense, untouched by learning. This is paradoxical. Never has it been so clear that education is crucial to the future of work and the economy. How many times have economists and social scientists observed that the demand for unskilled labor is on the decline? The unskilled jobs for which there might be a need are either too low-paying to attract most of our fellow citizens or are service jobs, not manufacturing jobs, and therefore not integral to the production of wealth. Robots will gradually displace humans in the making of things, rendering a high proportion of humanity, notably the uneducated, superfluous from the economic standpoint of productivity.

Yet the only subject about education that seems to be of interest today—when education is more vital to the public good than ever before—is the cost of education. One reason standardized high stakes testing has become so popular as a measure of quality in teaching and learning (which it is not) is that it is efficient and simple: teach to the test, thereby streamlining the curriculum, and one obtains a clear single variable for evaluation of teachers and pupils. Anxiety about the cost of education (and an eagerness to reduce it) has sparked the enthusiasm for online learning, particularly in higher education. Under the guise of promoting the democratization of access, the idea of teachers and classrooms (let alone tutorial instruction) seems conveniently out of date, now that online learning has appeared. By sitting at home, and

using modern technology, everyone will learn at his or her own pace, without any overhead and a minimum of labor. Technology is slowly emerging as the dominant feature of the future; it promises to be for education what the robot is to the factory assembly line.

A dose of humility is required. The little that we know about learning tells us that it is contingent on motivation. The primary

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source of motivation is people, individuals from differing generations. Adults (parents and teachers) vie with contemporaries (rivals of the same age cohort) in their role as sources of motivation with respect to learning. The exchange be-

tween individuals in real time and in real space—the response from teachers and fellow pupils—drives the process of learning; it communicates approval, criticism and reward, and provides a crucial source of that elusive attribute we all wish to nurture in ourselves and others: a sense of self worth.

A technologically centered account of history has never been persuasive. Just as technology, progress and a yen for efficiency have not fundamentally altered human behavior in sexuality, education may be equally immune from a commonplace notion of progress. Today's leading mathematicians may be solving different problems, but their models remain Euclid, Gauss, Gödel and Poincaré. Biology has changed radically in the last half century, but Mendel and Pasteur are still exemplars of the field. Our theories in physics are stunningly different than they were a century ago, but Newton, Maxwell and Einstein remain revered and symbols of excellence and originality. Despite changes in substance, the patterns of the transmission of knowledge and discovery and the contexts from which exceptional contributions emerge are, throughout history, more alike than they are different.

When we come to areas in which rules of evidence do not apply and the old is not in any way supplanted by the new—such as for example in literature, the arts and philosophy—this point becomes even more obvious. Homer and Shakespeare have never been displaced. Nor have Montaigne, Rabelais, Austen, Whitman or Eliot. Newcomers to the pantheon of greatness such as Nabokov, Achebe and Celan have merely joined the ranks of their predecessors. Stravinsky did not render Mozart obsolete. But the way these two became composers is remarkably similar.

How did all these individuals actually learn? They learned not so much in a classroom, but rather when they were alone, on their own, by themselves, in solitude. But that solitary experience was in response to the example and prodding of someone else, particularly teachers. Mozart's teacher was his father; without Leopold Mozart, there would be no Wolfgang Amadeus Mozart. Stravinsky developed an ambition to outshine his teacher Rimsky Korsakov and to outdo all of Rimsky's other students, particularly Maximilian Steinberg (who would later become Shostakovich's teacher), whose position as Rimsky's favorite and heir apparent was cemented by his marriage to Rimsky's daughter. Nothing drove his ambition more than to triumph over his fellow students. Others, including Einstein, Berlioz and Nabokov, were driven to prove teachers and institutions wrong. Many were motivated and even inspired by bad teachers, by unexamined assumptions enshrined by institutions and by misplaced authority and certainty about what was right—all forms of conventional wisdom. Without the traditions of schools, conservatories and universities, intellectual and artistic rebellion and change would not have occurred.

The proper conclusion is that education, at its best, requires not only human contact, but also institutions that organize and certify educational achievement. Those institutions have been and will remain immune to efficiency and rationalization. Learning's social context—physical schools, with teachers and pupils—

cannot be removed. We may have the technology to procreate without a sexual encounter, but that somehow would not suffice for the vast majority of humanity, since it would eliminate sexuality. The elimination of a presumed primitive need to mate might be a welcome utopian idea that a very few would argue might insure peace and tranquility, but the political context for actually achieving that goal would make any prior experiment in political tyranny appear like child's play. The process of learning is a form of social action, not dissimilar from sex in its dependence on direct human contact.

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As a consequence, we must face the fact that education, as a process, is not only resistant to change but not in need of it. Learning requires time. It does not proceed along a straight line or at a constant speed. The variations in it are great. Education

does not lend itself to easy predictions or guaranteed outcomes. Therefore a great university is by definition a messy and irrational place. It must encourage impractical thinking, seemingly useless dissent and arcane scholarship. No one can predict with accuracy or even certainty which pupil in elementary school, which high school student or which university graduate will excel, whether in terms of the production of knowledge, artistic originality or material success.

From the activities of schools and universities, all encouraged on an institutional scale, have come the seminal discoveries and advances we so cherish. Computers would be unthinkable without the pursuit of mathematics as a theoretical discipline before anyone dreamed of a personal computer. Vaccines and the diagnostic and therapeutic advances of biotechnology would not exist without the encouragement in preceding generations of the study of nature bereft of any visible practical end; the same holds true

for the advances in engineering and transportation. The undeniable utility of the advancement of knowledge comes from a messy amalgam of activity that lacks a predictive hypothesis regarding from whom and where the breakthroughs we seek will come. And this practical justification of the traditions of teaching and learning we have inherited from the past rightly precedes the legitimate invocation of the non-utilitarian ends of education: the link between education and freedom and democracy and the connection between education and culture, particularly the arts, and a sense of well being through the cultivation of the imagination.

As we contemplate the continuing transformation of the economy through advances plainly contingent on education, primarily computation, we face a recalcitrant human fact: that the invariable human component of learning is a process that can be speeded up and improved only at the margins. The newest advances in technology are therefore most welcome. They are helpful and add to the arsenal of instruments that teachers and learners can use. Nothing could be more positive than the search engines and systems of communication we now have. But they merely add to our tools; they will replace some bad practices (huge lecture courses, and lecturing in general). Their primary virtue rests in their being incorporated in teaching. They will not make learning cheaper. They will not replace the heart of all education—the exchange between teacher and pupil and the dynamics of a classroom filled by pupils.

I am reminded of an anecdote my mother (whom I cite not because she was my mother, but because she was a distinguished clinical academic in the field of pediatrics) loved to tell about one of her first encounters with an American patient shortly after we arrived in the United States. A mother with a newborn came to the clinic in Presbyterian Hospital of the Medical School at Columbia University; she asked, somewhat hesitantly, what my mother, her doctor, thought of breast-feeding. Baffled, my mother

asked why she was asking the question. “Oh,” the mother replied, “I hear it is the newest!”

This happened in the early 1950s, when baby formula, along with plastics, was all the rage, displacing so called “natural” and “traditional” substances and practices. But the reaction that came of age in the 1960s was already visible. We now happily live in a

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world in which a balance, however delicate, between the old and the new remains intact. Formula did not replace breast milk, anymore than the Internet will replace books, schools and colleges. Distance learning, after all, is not new; Anton

Bruckner, the composer, studied counterpoint living in Linz with the great Viennese teacher Simon Sechter in Vienna by sending his completed lesson assignments by mail and visiting his teacher once a month. That occurred more than 150 years ago.

This brings us back to the issue of cost and finances. Given the evident necessity of education to the well being of the nation and its inhabitants, why do we complain about its cost? To begin with, we all realize that education could be better than it is. Given our general and justified dissatisfaction, we are critical of present practice, and rightly so. We reason by analogy and expect that somehow education can benefit from the kind of progress, in the economic sense, we have seen in other areas, notably commerce. The manufacturing of goods and the production of food have become more efficient and effective. At the same time computers and smartphones have become less expensive—just as have many goods now produced overseas with cheap labor. Understandable as this line of thought may be, education, much like most of the traditional performing arts, is by definition immune from this progressive process. Their invariable needs—mostly their dependence

on a large number of professionals—make them seem increasingly expensive, on a relative basis, in our conduct of daily life.

The truth is that education in America is a bargain and if it is substandard (which it is all too often) it is because we starve it, or misuse the inadequate resources we put into it. For example, we should invest in teacher recruitment and training, not in assessment and testing. We should streamline the regulatory apparatus that stifles excellence and legitimate innovation. We spend too much on administration and too little in the classroom. We should reconsider the length of schooling and encourage reducing the years of compulsory schooling by making better use of the school day and year. We can, for example, bring high school to a close at age 16 with better results.

But all the needed changes will not alter the fundamental economic structure of teaching and learning. It will and should remain labor intensive. Successful learning by students requires as intimate a teacher-pupil ratio as possible, with as many small classes as possible, and with as much one-to-one contact between teacher and pupil as possible. In this regard technology will be of great help. But improving electronically based contact will not make schools and colleges less dependent on highly-trained and well-paid classroom professionals.

If we really want the public school system and the state university systems to be first rate, far more tax-based investment will be required. At the moment we are moving as a nation in the opposite direction. The privatization of public schooling is a dangerous illusion, as dangerous for schools and the body politic as privatization is in our prison system. Charter schools have their place, but they are not the answer. In our immigrant and increasingly socially diverse society, the positive

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potential of a common public school system, with respect to the education of a citizenry capable of participating in democracy, has been unfairly neglected. This criticism holds true for politicians from both leading political parties.

In the world of private schools and colleges, today's tuition cost is a bargain. Compared to other goods in society—all admittedly luxury goods—tuition costs are startlingly low. The staggering inequality in wealth, and the failure of public policy to subsidize the cost have made the price of education prohibitive for too many of our citizens. The per capita cost of higher education cannot be merely passed on to each consumer equally. A different system, similar to what exists in Australia, is needed. In a just system, families would pay what they can afford on a progressive scale, beginning with the total cost of educating a pupil (for the financially able) and going down to zero (for the poor). In most private colleges, part of the tuition already contains this element of distributive justice; part of the tuition is given over to financial aid. The more fortunate make it possible for the deserving student from a less affluent home to attend.

When one thinks of the cost per student—including room and board—at a residential private college or university, which now has reached well over \$50,000 a year, consider what it pays for. There is unlimited face-to-face access to learning from a cadre of highly trained experts (from graduate students to full professors) for 30 weeks. One gets room and three meals a day in addition to access to a health club (i.e. the gymnasium), and entertainments of a dizzying variety (choral groups, sports teams, social clubs, organizations of all sorts, religious communities, radio stations, publications from newspapers to literary journals). Counseling services of all kinds are included. All these activities take place in state-of-the-art facilities in the sciences, the social sciences, the humanities and the arts. For this one pays, at a maximum, \$1,000 a week. Try to book a hotel, have meals prepared

and served and aggregate all the services and access to facilities. The cost will exceed \$1,000 a week.

The issue is therefore not cost, but financing. We should have a system of loans that are interest free and whose repayment is tied to future income. For public service careers, loans should be forgiven. Tuition at state institutions should also be charged on the ability to pay. And they should be heavily subsidized before any portion of the cost is passed on to the consumer.

The sad truth is that our current value system has become wildly distorted. Even parents with considerable resources are reluctant to sacrifice their own comfort and sense of well being to pay for the schooling of their offspring, before and during higher education. For too many the second home, the access to luxuries and the expensive vacation are just more important than the education of their children. Every financial aid officer at a college and university will testify to the alarming frequency with which those able to pay try to evade the responsibility of paying for their children's education, hiding behind divorce agreements, failing to declare income, refusing to consider real assets that are not liquid.

If we want first-rate institutions of learning we must be willing to pay for them. Tuition and fees are just part of the puzzle. Private philanthropy must continue to play a major part. But at the heart of the issue is the perception that the problem of cost can be solved on the expense side. Efficiencies in management must always happen, but their gains will be eaten up by new demands on the spending side. This is why, especially in a fast moving world of technology, the inflation index for education has always been higher than the CPI.

The issue of cost must be solved first by political change in

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which more of our tax-based revenue is invested in education, primarily through the subsidy of the per capita cost. The second route is private investment, through the sliding scale of fees charged and paid by those who can afford them, and through the generosity of philanthropy, encouraged by the tax code.

Parents should remind themselves that of all the money they will spend in their lifetimes, the best spent and most redeeming outlay of money is what they pay for the education of their children. If readers wish confirmation that the cost of tuition is not too high, they should consult the salary scales of teachers, whether primary school teachers or university professors. They should compare those salaries with other professions that require comparable training, or even less—lawyers, doctors and bankers for example—and then consider that salaries define the budget of a university. With few egregious exceptions, no one gets rich teaching at a college or university. Excellence in education demands the time of teachers and learners, and that alone requires a serious investment.

There are few sectors in the American economy that dominate, in terms of quality, the global market. Higher education is one of them. By concentrating on cutting costs, especially through the allure of replacing teachers with machines, we are placing one of the few things of which we can be proud in jeopardy. We should instead invest more and stop complaining about how expensive education is. Excellence in education was never cheap. It will never be.

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