

Collisions in Education: A View from the Trenches

Lynne Rudder Baker

In his neglected treatise on education, the great eighteenth-century German philosopher, Immanuel Kant, mentions that Benjamin Franklin “wondered why everyone didn’t learn to swim, since swimming is so pleasant and so useful.” Franklin

also suggested an easy way by which to teach oneself to swim: Standing in a brook with the water up to your neck, you drop an egg into the water, and then try to reach it. In bending forward to do this, you will be carried off your feet, and, in order to prevent the water getting into your mouth, you will throw your head back. You are now in the proper position for swimming, and have only to strike out with the arms to find yourself actually swimming. [Kant, *Education* (University of Michigan Press, 1971): 59].

Well, I suppose that one could learn to swim by this method, but it seems to me somewhat unlikely. Similarly, some of the things that one was taught in school and college, one could have learned on one’s own; but again it seems to me somewhat unlikely. And much of what was taught to us in the early years of schooling—especially the character-formation that Kant cared so much about—simply could not have been learned in isolation. So, we organize learning in various kinds of institutions.

In the years since Ronald Reagan promised to eliminate the U.S. Department of Education, education has changed from being off-limits to Federal policy to being an important item on the national agenda. There is a general agreement that the U.S. school system has failed in important ways. The alarm was first sounded in *A Nation at Risk*, published by the National Commission on Excellence in Education in 1983. Here is how it characterized the educational system as a whole:

We have, in effect, been committing an act of unthinking, unilateral educational disarmament. Our society and its educational institutions seem to have lost sight

of the basic purposes of schooling, and of the high expectations and disciplined effort needed to attain them. [quoted in “Conclusions and Recommendations: High Expectations and Disciplined Effort” by Chester E. Finn, Jr. and Diane Ravitch in *Against Mediocrity*, Chester E. Finn, Jr., Diane Ravitch, Robert T. Fancher, eds. (NY: Holmes and Meier Publishers, 1984): 238.]

The newspapers frequently report that American students do poorly on tests when compared to Japanese and other nonAmerican students. And employers complain that students with high school diplomas, or even college degrees, cannot fill out application forms for employment.

In the face of the perceived failures of the schools, many dedicated and intelligent people have put untold hours, and untold millions of dollars, into reforming the public schools. There have been studies galore, with inconclusive results. (We still do not know the best way to integrate students who do not speak English into the English-speaking society.) The multitudes of critiques are coupled with multitudes of proposals for change.

What I want to talk about are collisions in education—collisions of the models that we use to think about education and collisions of proposals about what should and should not be taught. In the first section, “Collisions in Practice,” I draw on my own observations and the existential dilemmas of teaching in a public university that I still feel after decades of teaching. In the second section, “Collisions in Theory,” I reflect on two areas of controversy—one concerning the role of Darwinism in the curriculum, the other concerning the role of the humanities in the curriculum.

Collision in Practice

First, we need to recognize the collisions for what they are: collisions. I am convinced that part of the problem of improving education is that we are not careful enough when we reflect on education. And this is especially so when we apply two incompatible popular models of education simultaneously.

One model is the ‘market’ model; the other model is what we may call the “standards” model. The “standards” model is easy to describe: schools or teachers ought to set certain standards and hold students to them. Teachers should not succumb to grade inflation, but maintain at least a modicum of rigor. The market model is more difficult to describe, because it itself is not clear. On the market model, there’s a producer, a product and a consumer. The producer sells the product to the consumer. The producer is the teacher, or perhaps the institution; but what is the product, and who is the consumer? Let us suppose for the moment that the student is the consumer and that the product to be “sold” to the student is the education—knowledge, skills, whatever the student is supposed to acquire.

Although both the “standards” model and the market model have been touted by political conservatives, the two models are at odds with each other. The clash is obvious when we think about the public outcry over ‘accountability’ in the schools.

On the market model, with the student as consumer, the teacher must provide something that the student wants. And the teacher’s success is determined by the student’s “buying” what the teacher has to sell. The teacher’s success is wholly in the student’s hands. For a teacher to be held accountable on the market model is to be judged by students to have provided what the students want. The main, often the exclusive, vehicle for accountability is the teaching evaluation. If the teacher who is being held accountable on the market model wants to keep her job, she will do what she can to satisfy the consumer—i.e., to elicit from the students good scores on teaching evaluations. The scores on teaching evaluations are often comparative: How was your score, Ms. Jones, compared to others in your department, in your school? So, the teachers are in competition for student satisfaction. And as rational economic agents, they will cut the price of their product as much as possible in order to undercut the competitors. The aim will be to satisfy the students.

The “standards” model has a different logic. The “standards” model also will hold the teacher accountable. For a teacher to be held accountable on the “standards” model is to have students’ performance improve. The main, often the exclusive, vehicle for

accountability is the standardized test. If a teacher who is being held accountable on the “standards” model wants to keep her job, she will do what she can to have her students improve their scores on standardized tests. So the “standards” model judges the teacher not by student satisfaction, but by student performance. It is obvious that the logic of the market model is totally at odds with the logic of the “standards” model.

Not only do the different models return different verdicts on accountability, but also the instruments of accountability—teaching evaluations and standardized tests—are themselves tainted. Teaching evaluations are certainly implicated in grade inflation. As a recent letter (Dec. 7, 2001) to the NY Times pointed out, “At a time when students’ opinions of their instructors play an increasingly important role in faculty reviews and tenure, how can any professor afford to maintain the academic standards of a generation ago?” And standardized tests are under continued assault. The President of the University of California, Richard C. Atkinson, proposes that the University of California system simply drop the SAT test. However, he also proposes that students be tested on material related to what they study in their classes; so his opposition to the SAT tests is not based on a blanket opposition to standardized tests. But other writers on education do oppose standardized tests per se. Lani Guinier, a professor of law at Harvard, argues that colleges should train future leaders in a multiracial democracy by encouraging students “to ask questions, to seek knowledge from those with whom they disagree, and to participate in open and honest debate.”

Sadly, [she says] standardized tests appear to have the opposite effect. SAT’s and other standardized aptitude tests socialize students who do well to believe they ‘deserve’ [in scare quotes] opportunities to succeed; the tests don’t encourage a commitment among those students to give back in any way to the taxpayers who subsidize such opportunities. [“College Should Take ‘Confirmative Action’ in Admissions” in The Chronicle Review section of *The Chronicle of Higher Education*, Dec. 14, 2001.]

So, teaching evaluations are flawed, and standardized tests are attacked as vehicles of accountability for teachers and institutions. Of course, teachers and

institutions should be held “accountable,” but it is less than clear how to to achieve the desired accountability. Moreover, it is noteworthy that discussions of accountability always concerns the teachers and the schools, never the students. But the students are not just clay to be modeled; they have a role in their own development. We can admit students to schools and colleges, but only they—by their own efforts—can get an education. Teachers and professors can offer an opportunity for education, but the offer is futile if not taken up by the student. And without self-discipline, students lack the ability to take up the offer. Kant pointed out that undisciplined people [he said ‘men’] “are apt to follow every caprice.” (p. 4) And people apt to follow every caprice are not apt to get an education. I would advocate emphasis on self-discipline right from the start. As children pass through the grades, they should be held increasingly responsible for their own behavior, so that, by the time that they got to college, they can sit still for 50 minutes. I see no hope for improving education without extending the notion of accountability to students.

Perhaps some of you will say that I have painted too bleak a picture. Really there’s no conflict between the market and “standards” models: Students whose performance improves, and who thereby do well according to the “standards” model, will also be satisfied, and thereby do well according to the market model. So, there is no real conflict. All I can say is that the way things look to me in the classroom is a far cry from the way that they look in education journals, or even from the way that they look in publications like those from our Center for Teaching. (Budgets for actual teaching are continually being cut; budgets for studying teaching, and printing fancy brochures correspondingly go up.) But I don’t want to quibble. I mainly want to raise questions.

Perhaps some of you will say that there really is no conflict between the two models because they are applied to different kinds of educational situations. Standardized tests are characteristic of primary and secondary schools; teaching evaluations are characteristic of colleges and universities. I agree. But the market model and the “standards” model still come into conflict in colleges and universities. The two models give different answers to the following question: Where does the teacher’s primary obligation lie? Suppose that you are teaching a general education class—say

Philosophy 100—and that you have a student (this is an actual case) who has taken Philosophy 100 under other instructors twice before, and failed it both times. Now the student is a senior and is taking it again. Since there is general-education component in the graduation requirements, the student will not graduate if he does not pass the course this time. After badly failing the first test, and only haphazardly attending classes, the student tells the teaching assistant of his plight. What is our obligation?

On the “standards” model, our obligation is obvious: If a student hasn’t met the minimal standards, he should not graduate. We owe it to society to award degrees only to those who actually earned them. It debases the degree, and cheats society and the taxpayers and the other students who managed to pass the courses, to give degrees to people who may not even be able to fill out an application form for employment.

On the market model—or rather on a compassionate version of one—our obligation is different. The university admitted this student and kept accepting his tuition for four or more years. Is it fair to turn him out now? If he works reasonably hard, and we are satisfied that in Philosophy 100 he has “learned something,” we should let him graduate.

So, whereas the “standards” model would insist that the student meet antecedently specified standards, the compassionate version of the market model would require only that he work reasonably hard and show that he has “learned something” relevant to the course. In the latter case, he would graduate, and in the former case he would not. This is a significant difference between the models.

Actually, this case had a happy outcome. The teaching assistant devised a plan. If the student would write a paper, and rewrite it over and over until the teaching assistant was satisfied with it, and if the student would not miss any more classes and come the teaching assistant for extra help, we would not count the first test against him. The student did those things, and on the next test received almost an A. He will graduate.

As happy as this outcome is, it does not change the basic point—namely, that we often use conflicting models to think about education—models that render incompatible

verdicts about how a given case should be judged. (Also, not all teaching assistants are as generous with their time as the one in question; they simply cannot be so generous if they have many students who need a lot of extra help. And what would we have done if the student did put in effort, but really could not do the work at all?)

Here, then, is the first collision: Without realizing it, we use conflicting models in thinking about education. Indeed, it's not only that we use both a "standards" model and a consumer model in thinking about education without distinguishing between them. It's even worse. The label 'market model' itself is applicable to two different models. One version of a market model—the one that we have been talking about—considers the student to be the consumer, the teacher (or institution) the producer, and the knowledge, or skills, or whatever the student is supposed to "get" the product. But another version of a market model would consider the student not to be the consumer; on the other version of a market model, the student is the product, to be "sold" to the consumer, who becomes the employer (or perhaps society as a whole). So, to complicate the picture of the "standards" model vs. the "market" model still further, we find that there are two versions of the market model: one with the student-as-consumer, the other with the employer-as-consumer (or society-as-consumer).

It's not surprising, then, that the public discussion of education is such a muddle. But even if our thinking about the models of education were less confused, there would still be disagreements about the goals and purposes of the enterprise. After giving reasons for the tenacity of the disagreements, I want to examine two collisions that arise from different conceptions of the goals and purposes of education.

Collisions in Theory: Reasons for Intractable Disagreements

I think that there are at least three reasons that the disagreements about education are so intractable. One is that we disagree about what the facts are. A factual disagreement should be definitively resolvable by empirical investigation. But the studies do not point in the same direction: Do minority students improve their test scores in a voucher system? No matter whether what is actually tested is important, there ought to be a fact of the matter about whether students score better in one system or another.

Are nonnative speakers of English more likely to master standard English if they are taught certain subjects in their native languages? Again, there ought to be a clear answer, but the studies do not yield one. [This suggests another important matter to think about: Why can't we get clear and replicable answers to apparently factual questions? But put that question aside.] So—as continued controversies about voucher systems and bilingual education attest—disagreements remain even about empirical matters.

A second reason for intractable disagreements stems from questions that we might call 'semantically slippery.' Does study of foreign languages in college make students more open to people from different cultures? Presumably, part of the answer to this question will have to do with what 'open' means and whether openness in that sense is considered desirable. Do students benefit from going to colleges and universities that prize diversity? What does 'benefit' mean? What is diversity? 'Diversity' has become a code word for people of color. Similarly, 'individual merit' has become a code term for opposition to affirmative action in college admissions, where many who profess to believe in individual merit have no complaints about admitting George W. Bush to Yale, not on the basis of individual merit, but on the basis of his prominent father's being a prominent alumnus. In any case, semantic slipperiness is a source of apparent intractable disagreement.

The third and most difficult reason for intractable disagreement is fundamentally normative—differences in what are popularly called "values." What kinds of person do we want to turn out? Some people appreciate men who remind them of John Wayne; other people appreciate men who remind them of Mr. Rogers. Some people are eager to channel girls toward home and hearth; others to encourage girls to be competitive in public ways—e.g., to aspire to be President. Some people want their own children to excel at something; others prefer their children to be well-rounded, with no particular emphasis on being outstanding in anything. Differences in conception of what is good for individuals and for society often result in intractable differences in how to shape public education. I'll discuss two such differences that are fundamentally normative.

Collisions in Theory: Darwinism

This first conflict is broadly religious. According to a front page report of a new survey in the New York Times on March 11, 2000, “An overwhelming majority of Americans think that creationism should be taught along with Darwin’s theory of evolution in the public schools.” The survey itself seemed unclear in its definitions of ‘creationism’ and ‘evolution.’ However, 83% of Americans supported teaching creationism in the public schools as either a scientific theory or as a religious belief. And 30% believed that “creationism should be taught as a scientific theory, with or without evolution in the curriculum.”

On the other side is the overwhelming scientific consensus on Darwinism. When the Kansas State Board of Education banned any mention of “macroevolution” from its recommended science curriculum and from its standardized tests in August, 1999, the President of the National Academy of Sciences issued a statement that began:

We view the recent actions of the Kansas State Board of Education as an unfortunate setback for all those attempting to prepare our young people for a century in which science and technology will play an ever-increasing role. Evolution is not only universally accepted by scientists; it has also been accepted by the leaders of most of the world’s religions. [From the website of the National Academy of Sciences, <http://national-academies.org/evolution>.]

There are important disagreements about evolution in the scientific community, but all of the disagreements take place in the context of agreement on the outlines of natural selection. Admittedly, there are theories of “Intelligent Design,” which, have not been accepted by mainstream scientists. Insofar as Intelligent Design is a scientific theory, it is up to the scientific community—and not to the public—to adjudicate between it and natural selection. All the signs are in favor of natural selection.

The conflict between Darwinists and Creationists is not really between atheists and theists. Although all creationists are theists, not all theists are creationists. As the President of the National Academy of Sciences mentioned, leaders of most of the world’s

religions accept evolution. Nevertheless, the controversy about what to teach in the public schools has been heated. There are a number of important court decisions upholding the teaching of evolution. One is *McLean v. Arkansas Board of Education* in 1981, in which a federal court ruled that so-called ‘creation-science’ is not a science, and struck down a “balanced treatment” statute that required the public schools to give balanced treatment to “creation-science” and “evolution-science.” Another is *Webster v. New Lennox School District* in 1990, in which the Seventh Circuit Court of Appeals held that a school district could prohibit a teacher from teaching creation science. Since teaching “creation science” is a form of religious advocacy, according to the Court, the teacher’s right to free speech was not violated by prohibiting him from teaching “creation science.” [website of the National Academy of Sciences]

Some think that Darwinism should be taught only with the disclaimer that natural selection is “just a theory.” (Textbooks in Alabama carry a label pasted on to the front of textbooks warning the readers.) Others think that creationism has no place in the public schools, and especially not in its science classrooms.

The Darwinism/Creationism collision is partly a fundamental normative difference about the nature of reality, but partly a result of semantic slipperiness about the concept of science. All science, I believe, is constrained by methodological naturalism: That is, scientific explanations cannot appeal to anything supernatural, on pain of not being scientific explanations at all. Methodological naturalism should not be confused with *metaphysical* naturalism, the view that there is nothing supernatural in reality. Darwinism—or any other scientific theory—is simply silent on any questions about God; its methodological naturalism prevents science from saying anything, one way or the other, about the supernatural.

Creationists think that Darwinism is atheistic. But in order to get any implications about the nonexistence of God out of Darwinism, you need two premises:

- (1) Darwinism does not need to make reference to God in any explanations.
- (2) If Darwinism does not need to appeal to God in any explanations, then it follows from Darwinism that God does not exist.

∴(3) It follows from Darwinism that God does not exist.

The argument is valid, but are its premises true? Premise (1) just follows from methodological naturalism. Premise (2) is often the unspoken—and, I believe, dubious—premise. But Premise (2) (or some comparable premise) is essential to the alignment of Darwinism and atheism. I believe that premise (2) is false on very general grounds. Premise (2) rests on a thesis about science. The thesis is this: Science reveals all knowable reality. Call this thesis—that science reveals all knowable reality—‘scientism.’ It is important to note that scientism is not itself a part of science; it is rather a closure principle on science—“and that’s all there is, folks.” Scientism is a metaphysical or philosophical thesis, not a scientific thesis. Scientism (along with *metaphysical* naturalism) is, in my opinion, just extra baggage. [For arguments to this effect, see my Gifford Lectures in *The Nature and Limits of Human Understanding* (Edinburgh: T. & T. Clark, forthcoming).]

Believers in God, then, should not oppose teaching Darwin on the grounds that Darwinism does not need God; no science does. (If God created the world, He created tectonic plates as well as human beings. So, I don’t see why leaving God out of the account of human beings is any different than leaving God out of the account of tectonic plates. But nobody goes to court over teaching geology naturalistically.) From the fact that there’s no appeal to God in scientific explanations, it does not follow that there’s no God in reality. If we understand Darwinism strictly as a scientific theory (as it should be understood), the justification for the scientific premise (2) is undercut. The concept of science entails methodological naturalism, but not scientism.

The other semantic issue raised by the controversy over teaching Darwinism concerns the term ‘origin’. Darwinism and Creationism are said to be competing theories of origins. But Darwinism purports to explain the origin of *species*; Creationism purports to explain the origin of *everything*. It is possible that Darwin gives the correct explanation of the origin of species, and that God still exists. Natural selection could be one of the many secondary causes by means of which God works His will. Use of the term ‘theory of origins’ for both what naturalistic science and supernaturalistic religion

offer is misleading. [Here's an analogy: The term 'evolution' used to mean the development of an egg; by the 19th century, the term 'evolution' meant the development of life on earth. So, there could be two theories of evolution that do not apply to the same things, and hence are not in competition. Similarly, there could be two theories of origins that do not apply to the same things, and hence are not in competition. If one of the theories applies to the origin and development of species and the other applies to the origin of everything, they do not obviously apply to the same domain.

However, I do not think that these semantically slippery issues—about 'science' and about 'origins'—come near to exhausting the disagreement between Darwinists and Creationists. On the one hand, I believe that it is important for students to understand science, and Darwinism is an important scientific theory, and should be taught as a scientific theory. Creationism, as the courts have held, is disguised religion, and should not be taught as science.

It may sound as if I have no sympathy for those advocating the teaching of Creationism in the schools. That is not correct. Creationists, along with other theists, have a legitimate complaint when Darwinism is taught, not as quantum mechanics is taught, but rather as a comprehensive worldview that closes off even the possibility of a God; when this happens, then Darwinism is being taught as a metaphysics in the guise of a science. I think that it is reasonable for parents to object to this—whether the metaphysics so taught is naturalistic (as the Darwinist's is) or transcendent (as the Christian's is). [The solution seems to be to teach Darwinism as a science—an important science that unifies data from paleology, geology and other sciences—but not as a total metaphysical picture. The error, again, is *scientism*—the assumption that all knowable reality is accessible to the sciences. I see no reason to assume that if the sciences do not appeal to God, then there is no God to appeal to.]

So, in the collision of Darwinism and Creationism, I definitely support Darwinism, but only if taught strictly as a scientific theory. Although Darwinism is most probably true, teachers of it should not add the scientistic closure principle, "that's all there is, folks."

Collisions in Theory II: The Humanities

The other collision on which I want to take a position is the place of the Humanities in the university curriculum. Actually, the term ‘collision’ may not be quite right; for what is going on is not so much an open battle as a stealth attack. I have never heard harsh words spoken against the humanities. (In the “culture wars,” many harsh words are spoken against recent interpretations of the humanities, but that’s another issue.) Even though the humanities are not overtly attacked, however, I have just seen retirees not replaced, and budgets cut in humanities departments; the words of pious praise for the humanities are followed by “but we must prioritize.” The unspoken assumption is that if we rank our priorities for the university, the humanities lose. The humanities are regarded as frills, easily dispensable when times are tough.

Public universities are particularly vulnerable to downturns in the economy. In this current period of austerity [at least in my home state of Massachusetts], it sometimes seems that the university stays afloat by diverting money from the humanities. Withdrawing funds from the humanities to use elsewhere is not unique to my university. In a recent article in the Harvard Magazine, “Humanities in the Age of Money,” the authors report, among other things: “Nationally, in 1976, a newly hired assistant professor teaching literature earned \$3000 less than a new assistant professor in business. In 1984, that gap had grown to \$10,000. In 1990, it was \$20,000, and by 1996 exceeded \$25,000.” They ask: “Is our disinvestment in the humanities—what we might call the dehumanization of higher education—a legitimate response to desirable market factors? Or is it more accurately one core symptom of a national loss of faith in whole areas of human endeavor as they’re treated in the academic world—those areas not quantifiable, not primarily driven by economics, representing a quality of life we call culture?” [James Engell and Anthony Dangerfield, 50, 111.]

In our market-driven society, those parts of the university (such as philosophy, literature, and history) that neither increase our wealth nor cure diseases nor even channel students into lucrative careers have no recognized claim on the public purse. At best, they are ornamental extras that we cannot afford in an era of austerity. The decline of the

humanities prompts the question: Are professors of the humanities just today's buggy-whip-makers in an age of the automobile?

Today's humanities departments—English, foreign languages, philosophy, religion, classics, history (sometimes), art, music—are at the core of the liberal arts. Aristotle, and then 2500 years later, John Henry Newman, distinguished the liberal arts from the “useful or mechanical arts,” and elevated the liberal arts over the “useful or mechanical arts.” It's not that the useful or mechanical arts lack importance. Indeed, as Newman said, “Life could not go on without them; we owe our daily welfare to them; their exercise is the duty of the many, and we owe to the many a debt of gratitude for fulfilling that duty.” (Pelikan, 19-20) I'm not worried about the future of “the useful or mechanical arts.” Not only do we owe our daily welfare to them, but their place in the public universities is secure. Their importance is self-evident—especially to taxpayers. Engineering, business, and clinical studies and practice of various kinds are in demand. But the liberal arts are in jeopardy. Even basic research in the physical sciences, which has fuelled the remarkable advances in technology, seems to be in trouble. At least, there is a great deal of public lament over nondirected research that makes no promises about application to anything beyond increasing the store of knowledge. In the case of the physical sciences, there is funding from beyond the university. I want to focus on the humanities—disciplines whose funding is almost exclusively from college and university budgets.

There are some important differences between the humanities and the sciences, whether applied or basic. One kind of difference between the humanities and the sciences is that a humanistic field has a different relation to its own history from that of the sciences. Not only are centuries-old texts taken seriously in the humanities, but also are critiques from earlier generations of those texts still relevant to current inquiry. This is most apparent in philosophy, where the history of philosophy is part of the field. (The logical positivists and especially the late W.V.O. Quine at Harvard in the mid-20th century took history of philosophy to be a distinct, and distinctly inferior, field from philosophy. But recently, Hilary Putnam, a colleague of Quine's announced that the “long dominance of the idea that ‘philosophy is one thing and history of philosophy is

another' is now visibly coming to an end.” (“A Half-Century of Philosophy, Viewed from Within,” *Daedalus* 126 (1997): 200.)

The fact that history of philosophy is an important part of current philosophy affects not only the ways in which philosophers regard historical texts, but also the ways that philosophers produce new work. Scientists do not study epicycles or humors as part of their thinking about reality today; but philosophers do study, say, Aristotle on the virtues as part of their thinking about reality today. Far from being discredited, old (even ancient) philosophical texts are sources of wisdom. In the humanities, the past is not the history of error as it tends to be in the sciences, but a garden of delights that we learn from and are enlightened by.

Perhaps the most obvious difference is that the sciences, social as well as physical, typically collect data which they subject to various kinds of quantitative analysis. The data, or what passes for it, in the humanities may be texts, or legal documents, or paintings, or even intuitions, which are subjected to various kinds of analysis, usually nonquantitative. Now it's true that some post-modern research studies things like the number of occurrences of the definite article in Shakespeare's plays, but, I suspect, such inquiries are not meaty enough to sustain scholars for long. Recently, I was on the Selection Committee for the National Humanities Center, and the applications seemed to me mostly substantive—e.g., on genetic dilemmas, or on Nigerian literature, or on conditions of slavery in ancient Greece. These research topics do not lend themselves to quantitative research methods. But nonquantitative does not mean loose. For example, research into primary sources in original languages is governed by very strict standards. And as Aristotle warned, we should not require greater precision than the subject matter admits.

So, although the humanities and the sciences differ both in their kinds of data and in the methods they use, these differences indicate difference in subject matter, not difference in legitimacy. The humanities are not sciences *manqué*. Of course, the humanities gratefully use the results of the sciences—art historians benefit from spectragraphic analysis of paint to determine its constituents (e.g, lapis lazuli in

Renaissance painting). But spectragraphic analysis is used in the service of ordinary scholarship; it does not supplant it. Some humanistic fields—e.g., archeology—may have been more transformed by science than others, but my point is that it is unreasonable to suppose that the sciences could replace or supersede the humanities. The humanities stand on their own.

To sum up my first claim about the humanities: They are a genuine and genuinely important intellectual enterprise, and their demise would be the loss of a contribution that could not be replaced by the contributions of the sciences.

My second claim about the humanities concerns the nature of the contribution of the humanities to the fabric of human knowledge. As indicated by the respect in the humanities for the past, the humanities are a repository of learning. But perhaps more important, the humanities are a main source of our self-understanding. By ‘self-understanding,’ I mean to include the possibilities of how we—we as unique individuals, as 21st century denizens, as citizens of the so-called developed world, as human beings with a kinship to those of other places and times—the possibilities of how we can see our place in the world. Some of these possibilities are religious; others are secular. All belong to the humanities. These possibilities are discovered, invented, studied and transmitted in humanities departments of universities.

To speak more specifically of my own field, philosophy, let me note that Plato never dies. Neither does Aristotle or Thomas Aquinas or Descartes or Hume or Kant or Hegel or more recently, perhaps Wittgenstein. Philosophers like these have shaped the self-understandings of Western civilization. The man-on-the-street, as we used to say, who has never heard of Descartes, speaks easily of the mind-body problem. And almost everyone wonders, from time to time, under what conditions are people morally responsible for what they do. There is deep satisfaction in coming to see how the ideas that we take for granted have seeds in the thoughts of the intellectual giants of the past.

But, of course, the humanities are not just of antiquarian interest. What makes the philosophers, historians and poets of the past intellectual giants is that they speak to us today. After the horrific events of September 11, several times I read in newspapers and

magazines quotes from W.H. Auden's poem, "September 1, 1939," marking the day that the Nazis invaded Poland:

I sit in one of the dives
On Fifty-second Street
Uncertain and afraid
As the clever hopes expire
Of a low dishonest decade:
Waves of anger and fear
Circulate over the bright
And darkened lands of the earth,
Obsessing our private lives;
The unmentionable odour of death
Offends the September night.

Religion certainly can be a solace, but so can a poem like this that captures the despair of the moment so well. [In some versions, the poem had a verse that ended, "We must love one another or die." Auden found that verse too sentimental and eliminated it; later he repudiated the whole poem. Still, this poem has been important to a lot of people. A friend of mine read part of it at his father's funeral. I found it uncannily fitting for September 11. So, perhaps the author is not the best judge of the poem.] In articulating inchoate feelings, the poem can serve a purpose beyond the utilitarian. In his poem, "In Memory of W. B. Yeats," Auden himself pronounced a verdict on poetry:

For poetry makes nothing happen: it survives
In the valley of its saying where executives
Would never want to tamper; it flows south
From ranches of isolation and the busy griefs,
Raw towns that we believe and die in; it survives,
A way of happening, a mouth. ["In Memory of W. B. Yeats"]

Poetry just does not stand in need of being justified by making things happen.

Consider the thought expressed by Jaroslav Pelikan in *The Idea of the University: A Reexamination*: "The university has not discharged its intellectual and moral responsibility if, in its heroic achievement of attaining the possibility of putting bread on every table, it ignores the fundamental axiom, which may be biblical in its formulation but is universal in its authority, that man does not live by bread alone." (p. 18)

Acknowledging that the “useful or mechanical arts” put bread on the table, we may well ask, What else is needed?

Alfred North Whitehead, in his 1916 Presidential Address to the Mathematical Association of England, had an answer: Culture. “Culture,” he said, “is activity of thought, and receptiveness to beauty and humane feeling. Scraps of information have nothing to do with it [he continues]. A merely well-informed man is the most useless bore on God’s earth. What we should aim at producing is men [I’d add women] who possess both culture and expert knowledge in some special direction. Their expert knowledge will give them the ground to start from, and their culture will lead them as deep as philosophy and as high as art.” (“The Aims of Education,” p. 13).

Broadening the use of the gendered ‘man’ and ‘men’ to include women, I would also interpret, as perhaps Whitehead would not, the scope of ‘expert knowledge’ to include the humanities. One may have expert knowledge of Mannerist painting as well as of agriculture or computer programming. That is, expert knowledge may be acquired in both the useful or mechanical arts and the humanities. (Although I would include in the liberal arts, pure mathematics and basic sciences, along with the humanities, my concern here is on the humanities. The humanities are in more immediate danger in cash-starved public universities.) So, the first point is that there is such a thing as expert knowledge in the humanities. Whatever the field of expert knowledge, what still is needed is what Whitehead called ‘culture’—“activity of thought, and receptiveness to beauty and humane feeling.” Although no single course of study has a monopoly on fostering activity of thought, and receptiveness to beauty and humane feeling, certainly the humanities explicitly aim in that direction.

My plea is this: Let’s make available to everyone the intellectual treasures that have been the province of the few. Some students (and, apparently, administrators and legislators) have no interest in knowledge for its own sake, and for these students there are hotel management and social work and many other nontraditional fields. But let’s not write off such students. Hotel managers and social workers might be surprised at how their lives would be enriched by an appreciation of history, literature and philosophy. A

reading group may offer welcome relief from the vacuous world of television and shopping malls—of getting and spending, as we lay waste our powers.

When it is time to cut up the pie in a university budget, the humanities deserve a healthy slice. The humanities are more likely to get the healthy slice that they deserve in the more elite private institutions, where the humanities used to be the center of education. But a public university that seeks excellence should be as avid in the support—and I mean funding—of the humanities as their more affluent neighbors.

Of course, universities must provide avenues for utilitarian learning. But a narrow utilitarianism is an insufficient guide for a university, as it is for an individual's own life. The person deeply engaged in Reformation history, or Renaissance art, or Baroque music will bring to employers qualities of mind that enhance one's abilities to do many jobs that require nuance and insight. Such effects of the humanities are not easily discerned by cost/benefit analysis. How do you measure suppleness of mind? To be utilitarian in a sense that values only what can be quantified is...well...not useful: Not useful because it leaves out many qualities that are important for the individual, for organizations, even for the economy.

Noting again the irreplaceability of the humanities by the sciences, I would rest my case for the humanities on their providing a repository of learning; their being a source of our self-understanding; and their offering, to borrow a phrase, "a very present help in times of trouble." I certainly do not want to demote the humanities to the status of "service" departments, whose aim is to add a dollop of icing to an uninspiring curriculum. Indeed, I think that the humanities are important for our culture, and more generally, for the preservation of civilization. So, the collision between the humanities and the utilitarian fields should be resolved by giving the humanities the respect that they deserve—just as we already give the utilitarian fields the respect that they deserve.

Conclusion

Let me conclude with a speculation. Perhaps the market model, the resistance to Darwinism and the threat to the humanities are strands of a single fabric. The market

model has so permeated our thinking about everything, that we require a market-model justification for any expenditure of money. [There's a lot of hypocrisy in market-model justifications—e.g., outsized compensations for CEOs—but that's another story.] By this market-model standard, the humanities fail: the humanities do not routinely produce much that attracts venture capital. (University presses are chronically short of money.) But what the humanities do uphold are the dignity of human beings and the value of human creation. And here is where Darwinism comes in. The resistance to teaching Darwinism, I think, stems not (or not only) from fears that students will become atheists, but also from widespread fears that we human beings will lose our special place in nature. From a Darwinian point of view, we are just one more product of historical accidents in the environment—on a par with earthquakes and cockroaches. It is this, I think—a conflict about the status of human persons, not about “origins”—on which the humanities and Darwinism as a worldview clash. Darwinism as a science does not clash with the humanities, because one may accept Darwinism as science as true, but deny that it (or any other scientific theory) is the *whole truth* about human persons. There are further truths about human persons that reside in the humanities. If it's wisdom that we seek, and not just money, the humanities remain a good buy.

University of Massachusetts
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