ALSO BY CHARLES MURRAY

Human Accomplishment

What It Means to Be a Libertarian

The Bell Curve

Losing Ground

Real Education

FOUR SIMPLE TRUTHS FOR BRINGING AMERICA'S SCHOOLS BACK TO REALITY

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assessments of Catholic private schools, voucher programs, and charter schools provides solid evidence that private and quasi-private education has many advantages over public education. But the evidence does not give reason to expect that private or charter schools produce substantially higher test scores in math and reading among low-ability students who would otherwise go to normal public schools.

No one wants to be education's Grinch, especially when we are talking about children who have gotten the short end of the stick through no fault of their own. The impulse to romanticism is overwhelming. But it has led us to do things to children who are below average in academic ability that are not in their best interests. The notion that we know how to make more than modest improvements in their math and reading performance has no factual basis. In assessing the state of American education, and what can be accomplished for the lower half of the distribution by any of the reforms proposed by either left or right, it is time to recognize that even the best schools under the best conditions cannot overcome the limits on achievement set by limits on academic ability.

This is not a counsel of despair. The implication is not to stop trying to help, but to stop doing harm. Educational romanticism has imposed immeasurable costs on children and their futures. It pursues unattainable egalitarian ideals of educational achievement (e.g., all children should perform at grade level) at the expense of attainable egalitarian ideals of personal dignity. We can do much better for children who are below average in academic ability, but only after we get a grip on reality.

3

Too Many People Are Going to College

In the fall of 2005, more than 1.5 million students enrolled in America's four-year colleges or universities, a number equal to 50 percent of high school graduates that year. Almost all high school graduates need additional education. But a lot fewer than 1.5 million should be going to a four-year residential institution and trying to get a BA. One of the most damaging messages of educational romanticism has been that everyone should go to college.

This chapter discusses five topics. The first is a nuts-and-bolts issue: How smart do you have to be to cope with genuine college-level material? No more than 20 percent of students have that level of academic ability, and 10 percent is a more realistic estimate. The second topic is college's role in providing a liberal education. For all but a minority of students, that job should be done in elementary and secondary school. Next I turn to the ways in which colleges are becoming obsolete. Four years of residence on a college campus is seldom the best way to acquire the knowledge that most students want to acquire. The fourth topic is labeled "College isn't all it's cracked up to be." I make that case in terms of income, job satisfaction, and maturation. Finally, I turn to the divisive role that the

college degree is acquiring in American society. By making a college degree something that everyone is supposed to want, we are punishing the majority of young people who do not get one.

The Intellectual Requirements for College-Level Work

To say that no more than 20 percent of all students have the academic ability to deal with college-level material seems to be false on its face, since the number of BAs awarded in 2005 amounted to 35 percent of all twenty-three-year-olds (I will use *BA* as shorthand for all bachelor's degrees and *college* as shorthand for four-year residential colleges or universities). It is also contradicted by studies of college readiness that say higher percentages of students, as many as 65 percent of high school graduates, are qualified for admission to a four-year college.

This brings us to a distinction that you should keep in mind throughout this chapter: the distinction between college-level instruction in the core disciplines of the arts and sciences, and the courses (and their level of difficulty) that are actually offered throughout much of the current American college system. With regard to this section of the chapter, I am asking how many high-school graduates can cope with college-level material in the core disciplines of the arts and sciences, not how many can survive four years at today's colleges and walk away with diplomas. If surviving to a diploma is the definition of "cope with college-level material," then almost anyone can do it if he shops for easy courses in an easy major at an easy college. But as soon as we focus on college-level material traditionally defined, the requirements become stringent.

For many years, the consensus intellectual benchmark for dealing with college-level material was an IQ of around 115, which demarcates the top 16 percent of the distribution. That was in fact the mean IQ of college graduates during the 1950s. It cannot be nearly that high today (not when 28 percent of adults twenty-five or older have a BA), but the intellectual requirements for coping with traditional college-level material have not changed. The best quantitative evidence for that statement comes from a study by the College Board that used a sample of forty-one colleges to assess the relationship of SAT scores to college readiness. The colleges in the sample ranged from state universities with student SAT means around the national average to highly selective elite schools (the most selective had a student SAT mean above 1250). In other words, they are all likely to have been colleges that actually teach college-level material as traditionally defined.

The College Board researchers defined college readiness as an SAT score that predicts a 65 percent probability or higher of getting a first-year college grade point average of 2.7 or higher—a B-minus average in an age of grade inflation, with no limitations on the courses that qualify. Even with this relaxed expectation, the benchmark scores were 590 for the SAT-Verbal, 610 for the SAT-Math, and 1180 or higher for the combined score (I will use the traditional labels, "Verbal" and "Math," for what are now officially called the Critical Reading and Mathematics sections of the SAT Reasoning Test). The benchmarks were not inflated by unusually high demands for the most selective colleges. The difference between the benchmarks of the unselective institutions and highly selective ones was only twenty-three points for the combined score. Nor were they inflated because many small colleges were part of the sample. The benchmarks were *lower* for schools with fewer than 3,000 students than for large state universities.

How many of America's seventeen-year-olds can meet the benchmarks? Three independent methods of calculating the answer to that question, described in the notes, lead to an estimate of 9 to 12 percent, with a realistic best-guess of about 10 percent.

So few can do well in real colleges because real college-level material is hard. This is obvious for engineering and most of the natural sciences, where students cannot get a degree unless they can handle the math. "Handle the math" means being able to pass courses in at least advanced calculus and statistics, a requirement that immediately makes the 10 percent estimate plausible. In the humanities and most of the social sciences, the difference between high school work and college-level work is fuzzier. It is possible for someone with average reading ability to sit through lectures and write answers in an examination book. But people with average reading ability do not understand much of the text in the assigned readings. They take away a mishmash of half-understood information and outright misunderstandings that probably leave them under the illusion they know something they do not.

Perhaps the best way to convey how tough it is to deal with genuine college-level material is to remind you what the books are like. Each of the following passages of about a hundred words is taken from texts commonly used for college survey courses. To quash the temptation to cherry-pick the most difficult text, I used the same page number for selecting each passage (page 400, chosen arbitrarily).

Western History. "The Protestant Reformation could not have occurred without the monumental crises of the medieval church during the 'exile' in Avignon, the Great Schism, the conciliar period, and the Renaissance papacy. For increasing numbers of

people the medieval church had ceased also to provide a viable religious piety. There was a crisis in the traditional teaching and spiritual practice of the church among its many intellectuals and laity. Between the secular pretensions of the papacy and the dry teaching of Scholastic theologians, laity and clerics alike began to seek a more heartfelt, idealistic, and—often in the eyes of the pope—increasingly heretical religious piety." D. Kagan, S. Ozment, and F. M. Turner (1983). *The Western Heritage* (2nd ed.). New York: Macmillan.

Art. "Although the Humanists received with enthusiasm the new message from pagan antiquity, they nevertheless did not look upon themselves as pagans. It was possible for the fifteenth-century scholar Laurentius Valla to prove the forgery of the Donation of Constantine (an Early Medieval document purporting to record Constantine's bequest of the Roman empire to the Church) without feeling that he had compromised his Christian faith. The two great religious orders founded in the thirteenth century, the Dominicans and the Franciscans, were as dominant in setting the tone of fourteenth- and fifteenth-century Christian thought as they had been earlier, and they continued to be patrons of the arts." H. de la Croix & R. G. Tansey (1975). *Gardner's Art Through the Ages* (6th ed.). New York: Harcourt Brace Jovanovich.

Economics. "Suppose an industry like wine-grape growing requires a certain kind of soil and location (sunny hillsides, etc.). Such sites are limited in number. The annual output of wine can be increased to some extent by adding more labor and fertilizer to each acre of land and by bidding away some hill sites from

other uses. But as we saw in chapter 2, the law of diminishing returns will begin to operate if variable factors of production, like labor and fertilizer, are added to fixed amounts of a factor like land. Why is that? Because each new variable addition of labor and fertilizer has a smaller proportion of land to work with." P. A. Samuelson & W. D. Nordhaus (1985). *Economics* (12th ed.). New York: McGraw-Hill.

Psychology. "An exciting feature of artificial neural networks is their capacity to learn from experience, as some interconnections strengthen and others weaken. Their learning, together with their capacity for parallel processing, enables neural network computers to pick up how to navigate, play soccer, mimic others' expressions, and recognize particular shapes, sounds, and smells—tasks that conventional computers find extremely difficult. A striking example: Thomas Landauer and his colleagues applied principles of computer neural networking to 'read' a previous edition of this textbook. As their 'Latent Semantic Analysis' program read the entire book, it associated all the individual words with one another." D. G. Myers (2004). *Psychology* (7th ed.). New York: Worth Publishers.

Philosophy. "The most prominent philosophical outcome of these several converging strands of postmodern thought has been a many-sided critical attack on the central Western philosophical tradition from Platonism onward. The whole project of that tradition to grasp and articulate a foundational Reality has been criticized as a futile exercise in linguistic game playing, a sustained but doomed effort to move beyond elaborate fictions of its own creation. More pointedly, such a project has been condemned as inherently alienating and oppressively hierarchical —an intellectually imperious procedure that has produced an existential and cultural impoverishment, and that has led ultimately to the technocratic domination of nature and the social-political domination of others." R. Tarnas (1991). *The Passion of the Western Mind: Understanding the Ideas That Have Shaped Our World View.* New York: Ballantine Books.

English Literature: "If a man chooses to call every composition a poem which is rhyme, or measure, or both, I must leave his opinion uncontroverted. The distinction is at least competent to characterize the writer's intention. If it were subjoined that the whole is likewise entertaining or affecting as a tale or as a series of interesting reflections, I of course admit this as another fit ingredient of a poem and an additional merit. But if the definition sought for be that of a *legitimate* poem, I answer it must be one the parts of which mutually support and explain each other." Samuel Taylor Coleridge, "Biographica Literaria." In M. H. Abrams et al. (eds.), *The Norton Anthology of English Literature* (4th ed., Vol. 2, 1979). New York: W. W. Norton & Co.

On any random page of textbooks for introductory courses in the core college disciplines, that's the kind of prose that a freshman must be prepared to read and understand. It's not easy. The sentences in the passages average twenty-six words (by way of comparison, the length of the average sentence in a well-regarded high school history textbook is thirteen). Long sentences demand a high degree of focus even if the syntax and vocabulary are simple. But the syntax in the passages I just quoted actually ranges from demanding to tortuous, involving intertwined independent and dependent clauses and

frequent interpolations of material. Then the reader has to figure out what the words mean, and the barriers are many. The passages are studded with unexplained references that impede understanding if the reader is unfamiliar with them (*Avignon, diminishing returns, Dominicans, Early Medieval, Franciscans, Great Schism, Humanists, parallel processing, Platonism, Reformation, Renaissance, Scholastics*). Then there are the words that most students use in ordinary conversation, but are being used in the text to convey a less familiar, sometimes downright obscure meaning ("... *admit* this as another *fit* ingredient ...," "... is *affecting* as a tale ..., "... by *bidding* away some hill sites ...," "... *fixed* amounts ...," "... the distinction is at least *competent* to characterize ...," "... he had *compromised* his Christian faith ...," "... a futile *exercise*," "... elaborate *fictions* of its own creation," "... rhyme, or *measure*, or both ...," "... religious *orders*," "... the whole *project* of that tradition"). Finally, there is the relentless use of words that not many high-school seniors know. Excluding the specialized vocabulary and historical references, these short passages contain twelve words that are not among the 20,000 most frequently used English words: *alienating, clerics, conciliar, foundational, heretical, imperious, impoverishment, interconnections, pretensions, subjoined, technocratic,* and *uncontroverted.* Nor should one bet that more than a minority of high-school seniors know *antiquity, articulate, characterize, converging, existential, hierarchical, inherently, laity, latent, monumental, neural, pagan, papacy, patrons, piety, pointedly, semantic,* and *viable.*

All of these difficulties arise in passages totaling not much more than the length of a single page in a typical college textbook. The intellectual demands of traditional college-level material in the social sciences and humanities cannot be described as concretely as they

can for engineering, mathematics, and the sciences, but they are as severe in their own way.

We can put a range of numbers on part of the simple truth that too many people are going to college. Purely on the basis of intellectual qualifications, the number of freshmen in four-year institutions is roughly 1.8 times the appropriate number if we use the top 20 percent in academic ability as the right cutoff and 2.1 times the appropriate number if 15 percent is the right cutoff. For sterner souls who agree I have just presented evidence that 10 percent is the right cutoff, then 3.3 times the appropriate number are enrolling. Whatever cutoff you prefer, they are all underestimates—none of them includes another set of students who meet the intellectual cutoff but do not really want what college is designed to provide. And that brings us to two vexed questions:

Who Should Acquire a Liberal Education? When?

To ask whether too many people are going to college requires us to think about the importance and nature of a liberal education. "Universities are not intended to teach the knowledge required to fit men for some special mode of gaining their livelihood," John Stuart Mill told students at the University of St Andrews in 1867. "Their object is not to make skilful lawyers, or physicians, or engineers, but capable and cultivated human beings." If this is true (and I agree that it is), why say that too many people are going to college? Surely a mass democracy should encourage as many people as possible to become "capable and cultivated human beings" in Mill's sense. We should not restrict the availability of a liberal education to

a rarefied intellectual elite. More people should be going to college, not fewer.

E. D. Hirsch's Core Knowledge as the Skeleton of a Liberal Education

Yes and no. More people should be getting the basics of a liberal education. But for most students, the places to provide those basics are elementary and middle school. E. D. Hirsch Jr. is the indispensable thinker on this topic, beginning with his 1987 book *Cultural Literacy: What Every American Needs to Know.* Part of his argument involves the importance of a body of core knowledge in fostering reading speed and comprehension, an important pedagogical finding that I discuss in the notes to this chapter. With regard to a liberal education, Hirsch makes three points that are germane here:

Full participation in any culture requires familiarity with a body of core knowledge. To live in the United States and not recognize Teddy Roosevelt, Prohibition, Minutemen, Huckleberry Finn, Wall Street, smoke-filled room, or Gettysburg is like trying to read without knowing some of the ten thousand most commonly used words in the language. It signifies a degree of cultural illiteracy about America. But the core knowledge transcends one's own country. Not to recognize Falstaff, Apollo, Sistine Chapel, Inquisition, Twenty-third Psalm, or Mozart signifies cultural illiteracy about the West. Not to recognize solar system, Big Bang, natural selection, relativity, or periodic table is to be scientifically illiterate. Not to recognize Mediterranean, Vienna, Yangtze River, Mount Everest, or Mecca is to be geographically illiterate.

This core knowledge is an important part of the glue that holds the culture together. All American children, of whatever ethnic heritage, and whether their families came here three hundred years ago or three months ago, need to learn about the Pilgrims, Valley Forge, Duke Ellington, Apollo 11, Susan B. Anthony, George C. Marshall, and the Freedom Riders. All students need to learn the iconic stories. For a society of immigrants such as ours, the core knowledge is our shared identity that makes us Americans together rather than hyphenated Americans.

K–8 are the right years to teach the core knowledge, and the effort should get off to a running start in elementary school. Starting early is partly a matter of necessity: There's a lot to learn, and it takes time. But another reason is that small children enjoy learning myths and fables, showing off names and dates they have memorized, and hearing about great historical figures and exciting deeds. The educational establishment sees this kind of curriculum as one that forces children to memorize boring facts. That conventional wisdom is wrong on every count. The facts can be fascinating (if taught right); a lot more than memorization is entailed; yet memorizing things is an indispensable part of education, too; and memorizing is something that children do much, much better than adults. The core knowledge is suited to ways that young children naturally learn and enjoy learning. Not all children will be able to do the reading with the same level of comprehension, but the fact-based nature of the core knowledge actually works to the benefit of low-ability students—remembering facts is much easier than making inferences and deductions. The core knowledge curriculum lends itself to adaptation for students across a wide range of academic ability.

In the twenty years since *Cultural Literacy* was published, Hirsch and his colleagues have developed and refined his original formulation into an inventory of more than six thousand items that approximate the core knowledge broadly shared by literate Americans. Hirsch's Core Knowledge Foundation has also developed a detailed,

grade-by-grade curriculum for K–8, complete with lists of books and other teaching materials.

The table on page 79 illustrates the Core Knowledge curriculum with the topics taught in third grade. For purposes of comparison, I have also put in the third-grade curriculum as described on the website of a well-regarded public school system—specifically, the public schools of Frederick County, Maryland, that my two younger children attended. I have omitted topics involving the mechanics of reading, writing, and arithmetic. Both curricula cover roughly the same material. The discrepancy comes in everything else, as the table shows.

The first curriculum presented in the table is the kind of knowledge that, accumulated over the nine years from kindergarten through eighth grade, will make children culturally literate. In effect, it also gives them the skeleton of a liberal education. The second curriculum is representative of a typical progressive school. The problem is not that the progressive curriculum takes too little effort. Frederick County teachers work hard and the children are given lots of homework—arguably, too much homework for children their age. The problem is not the effort, but the anemic content. Lots of process, lots of experiential learning, lots of politically fashionable blather. Not much meat and potatoes.

The Core Knowledge approach need not stop with eighth grade. High school is a good place for survey courses in the humanities, social sciences, and sciences taught at a level below the demands of a college course and accessible to most students in the upper two-thirds of the distribution of academic ability. Some students will not want to take these courses, and it can be counterproductive to require them to do so—more on that in chapter 5—but high school can put

Two Third-Grade Curricula

READING

The Core Knowledge Curriculum.

Poetry by Lewis Carroll, Nikki Giovanni, Langston Hughes, Eve Merriam, & Ogden Nash.

Read or are read *Alice in Wonderland*, tales from *The Arabian Nights*, "The Little Match Girl," "William Tell," selections from *Wind in the Willows*, Norse myths, Greek & Roman myths, & folktales from around the world.

Frederick County Public Schools

Comprehension. How to identify grade-appropriate text, how to identify ideas & information while reading. "Read a variety of literature such as folktales, fairytales, poetry, newspapers, magazines, & Internet Web sites."

SOCIAL STUDIES

The Core Knowledge Curriculum

World Geography. The Mediterranean region, Canada, use of an atlas, measuring distance on a map, important world rivers & associated terms (e.g., source, tributary, delta, strait).

World History. Ancient Rome (Romulus & Remus, adaptation of Greek gods, Julius Caesar, life in the Roman Empire, Pompeii, Constantine & Christianity, rise of Byzantium, the decline & fall of Rome). The Vikings (culture, their exploration of North America).

American History. The earliest Americans (tribes of the Southwest & Eastern Woodlands). Early exploration of North America (Spanish exploration of the Southeast & Southwest, search for the Northwest Passage). Settlement of the Thirteen Colonies, with extended treatment of New York, Pennsylvania, Virginia, Massachusetts, & development of the slave trade.

Frederick County Public Schools

Peoples of the Nation & World. No specific peoples. Sample of curricula: "Describe the benefits of a multicultural setting."

History. No specific period or place. Sample of curricula: "Explain how people lived in the past by using a variety of primary & secondary sources."

Geography. No specific region or geographic features. Sample of curricula: "Locate & describe places using geographic tools."

Economics. No specific economic system. Sample of curricula: "Explain the decision-making process used to make an economic choice."

Political Science. Emphasis on democratic principles. Sample of curricula: "Explain the roles of individuals & groups in creating rules & laws."

SCIENCE

The Core Knowledge Curriculum

Introduction to the Classification of Animals. Warm-blooded & cold-blooded. Characteristics & examples of vertebrates, invertebrates, amphibians, reptiles, birds, mammals.

Human Body. Muscular, skeletal, & nervous systems; how the eye & ear work.

Light & Optics. Use a prism to learn about the spectrum. Use different types of lenses & learn associated terms (e.g., transparent, opaque).

Sound. Causes of sound & differences in pitch, transmission of sound through substances, physiology of the human voice.

Ecology. Ecosystems, the food chain, effects of human activity.

Astronomy. Galaxies, planetary motion & its effects on seasons, gravity, stars, eclipses, space exploration.

Science Biographies (e.g., Copernicus, Alexander Graham Bell, John Muir).

Frederick County Public Schools

Life Science: Populations Unit. Sample of curricula: "Observe & diagram the feeding interactions among land & aquatic populations of plants, plant-eaters, & animal-eaters."

Earth Science: Water Planet Unit. Sample of curricula: "Explain that making choices about the environment has consequences of varying degrees."

Physical Science: Subsystems & Variables Unit. Sample of curricula: "Explain 'subsystem' as it refers to a system that is part of another system."

MUSIC

The Core Knowledge Curriculum

Elements of Music. Recognition of harmony, themes & variations. Musical notation.

Listening & Understanding. The orchestra, focusing on bass & woodwind instruments, illustrated with works by Rossini, Beethoven, Copland, Gilbert & Sullivan, Rimsky-Korsakov & Wagner.

Frederick County Public Schools

Music class. No description of curriculum.

ART

The Core Knowledge Curriculum

Elements of Art. The use of light & shadow illustrated with works by Vermeer & others. Different ways to create the illusion of depth, illustrated with works by Bruegel & others. Combining patterns, balance & symmetry to create designs, illustrated by Matisse cutouts, American quilts, Navajo weavings, & sandpainting. Use of design to tell a story, illustrated with works by Dali & others.

American Indian Art

Art of Ancient Rome & Byzantine Civilization

Frederick County Public Schools

Art class. No description of curriculum.

considerable flesh on the liberal education skeleton for students who are still interested.

In summary: Saying "too many people are going to college" is not the same as saying that the average student does not need to know about history, science, and great works of art, music, and literature. They do need to know—and to know more than they are currently learning. So let's teach it to them, but let's not wait for college to do it.

Liberal Education in College

Liberal education in college means taking on the tough stuff. A high-school graduate who has acquired Hirsch's core knowledge will know, for example, that John Stuart Mill was an important nineteenth-century English philosopher who was associated with something called Utilitarianism and wrote a famous book called *On Liberty.* But learning philosophy in college, which is an essential component of a liberal education, means that the student has to be able to read and understand the actual text of *On Liberty.* That brings us back to the limits set by the nature of college-level material. Here is the first sentence of *On Liberty:* "The subject of this essay is not the so-called liberty of the will, so unfortunately opposed to the misnamed doctrine of philosophical necessity; but civil, or social liberty: the nature and limits of the power which can be legitimately exercised by society over the individual." I will not burden you with *On Liberty*'s last sentence. It is 126 words long. And Mill is one of the more accessible philosophers, and *On Liberty* is one of Mill's more accessible works. It would be nice if everyone could acquire a fully formed liberal education, but they cannot. We are once again looking at the 20 percent tops, and probably closer to 10 percent, who have

the level of academic ability necessary to cope with the stuff of a liberal education at the college level.

Should all of those who *do* have the academic ability to absorb a college-level liberal education get one? It depends. Suppose we have before us a young woman who is in the 98th percentile of academic ability and wants to become a lawyer and eventually run for political office. To me, it seems essential that she spend her undergraduate years getting a rigorous liberal education. I will make this case in detail in the next chapter. The short version is that, apart from a liberal education's value to her, the nation will benefit. Everything she does as an attorney or as an elected official should be informed by the kind of wisdom that a rigorous liberal education can encourage. It is appropriate to push her into that kind of undergraduate program.

But the only reason we can get away with pushing her is that the odds are high that she will enjoy it. The odds are high because she is good at this sort of thing—it's no problem for her to read *On Liberty* or *Paradise Lost*. It's no problem for her to come up with an interesting perspective on what she's read and weave it into a term paper. And because she's good at it, she is also likely to enjoy it. It is one of Aristotle's central themes in his discussion of human happiness, a theme that John Rawls later distilled into what he called the Aristotelian Principle: "Other things equal, human beings enjoy the exercise of their realized capacities (their innate or trained abilities), and this enjoyment increases the more the capacity is realized, or the greater its complexity." And so it comes to pass that those who take the hardest majors and who enroll in courses that look most like an old-fashioned liberal education are concentrated among the students in the top percentiles of academic ability. Getting a liberal education

consists of dealing with complex intellectual material day after day, and dealing with complex intellectual material is what students in the top few percentiles are really good at, in the same way that other people are really good at cooking or making pottery. For these students, doing it well is fun.

Every percentile down the ability ladder—and this applies to all abilities, not just academic—the probability that a person will enjoy the hardest aspects of an activity goes down as well. Students at the 80th percentile of academic ability are still smart kids, but the odds that they will respond to a course that assigns Mill or Milton are considerably lower than the odds that a student in the top few percentiles will respond. Virtue has nothing to do it. Maturity has nothing to do with it. Appreciation of the value of a liberal education has nothing to do with it. The probability that a student will enjoy *Paradise Lost* goes down as his linguistic ability goes down, but so does the probability that he works on double acrostic puzzles in his spare time or plays online Scrabble hour after hour, and for the identical reason. The lower down the linguistic ladder he is, the less fun such activities are.

And so we return to the question: Should all of those who have the academic ability to absorb a college-level liberal education get one? If our young woman is at the 80th percentile of linguistic ability, should she be pushed to do so? She has enough intellectual capacity, if she puts her mind to it and works exceptionally hard.

The answer is no. If she wants to, fine. But she probably won't, and there's no way to force her. Try to force her (for example, by setting up a demanding core curriculum), and she will transfer to another school, because she is in college for vocational training. She wants to write computer code. Start a business. Get a job in

television. She uses college to take vocational courses that pertain to her career interests. A large proportion of people who are theoretically able to absorb a liberal education have no interest in doing so.

And reasonably so. Seen dispassionately, getting a traditional liberal education over four years is an odd way to enjoy spending one's time. Not many people enjoy reading for hour after hour, day after day, no matter what the material may be. To enjoy reading *On Liberty* and its ilk—and if you're going to absorb such material, you must in some sense enjoy the process—is downright peculiar. To be willing to spend many more hours writing papers and answers to exam questions about that material approaches masochism.

We should look at the kind of work that goes into acquiring a liberal education at the college level in the same way that we look at the grueling apprenticeship that goes into becoming a master chef: something that understandably attracts only a limited number of people. Most students at today's colleges choose not to take the courses that go into a liberal education because the capabilities they want to develop lie elsewhere. These students are not lazy, any more than students who don't want to spend hours learning how to chop carrots into a perfect eighth-inch dice are lazy. A liberal education just doesn't make sense for them.

Colleges do their best to avoid admitting this. Because the BA is still supposed to signify that its possessor has acquired a liberal education, almost every college pays lip service to that tradition by stipulating that students must take a certain number of classes outside their major and that those classes must be distributed among the disciplines that traditionally went into a liberal education. Students then examine the course catalog and select the courses that will check off the humanities box, the social sciences box, and the natural sciences box.

They are unlikely to have much guidance in this task. Few parents even try to guide their children's choice of college courses, and still fewer succeed. Faculty advice is usually limited to telling students what they will need to fulfill their major requirements or what courses a law school or medical school wants to see on an application. Otherwise, college students are left to make their own choices. They tend to make two kinds of mistakes.

Some students take the distribution requirements seriously, but don't want to take the broad survey courses in history, literature, philosophy, the sciences, and the arts that would in fact give them a decent liberal education. They see course titles such as "European History from the Renaissance to World War I" or "The Epic Poem from Homer to Milton" and, remembering that they studied European history in eleventh grade and read the *Odyssey* in ninth grade, think to themselves that they already know that stuff. So they fulfill the literature requirement with a course on twentieth-century French drama instead of the epic poem and fulfill the history requirement with a course on medieval Japan instead of taking the survey course on European history. Their enthusiasm for trying something new is understandable (I am reporting the logic behind my own odd course choices when I was an undergraduate), but they leave students with gaping holes in their education. The European history of the high-school course is nothing like the European history of a good college course; reading the *Odyssey* in ninth grade is nothing like reading the *Odyssey* in a good college course. Distribution requirements that do not require the survey courses do not produce many undergraduates who acquire a liberal education even among those who are eager to push themselves.

Other students see the distribution requirements as a distraction from their real interests and something to be gotten out of the way

with the least work and the most fun. If they can choose between checking off the humanities box by taking "The Epic Poem from Homer to Milton" or "The Epic Film from *Ben Hur* to *Lord of the Rings*," they opt for the latter. I made up that one, but here are samples of actual courses that fulfilled humanities and literature requirements at major schools as of 2004: "History of Comic Book Art" (Indiana University), "History and Philosophy of Dress" (Texas Tech University), "Love and Money" (Bryn Mawr), "Survey of World Cinema" (University of Illinois), "Ghosts, Demons, and Monsters" (Dartmouth), "Rock Music from 1970 to the Present" (University of Illinois), "American Popular Culture and Folklife" (Penn State University). At Duke, you could fulfill a social science requirement with "Campus Culture and Drinking."

Hardly any colleges require the demanding survey courses that are the foundation of a liberal education. The course examples I just listed were drawn from a study of fifty colleges, including the most prestigious ones. The study inventoried their requirements for course work in literature, composition, foreign language, American government or history, economics, mathematics, and the natural sciences. Remedial writing and mathematics courses did not count, nor did a distribution requirement that could be met by a course that focused on a narrow era or specialty. Out of the fifty institutions, none had core course requirements for all seven categories. Baylor did the best, with a requirement for six of them. Thirty-five of the fifty institutions required core courses in three categories or fewer. The twelve colleges that required just two included Harvard, Princeton, and Yale. The ten that required only one included Berkeley, Cornell, and Smith. Two colleges, Brown and Vassar, required none. Distribution requirements *could* serve the broadening function of a liberal education, but they hardly ever do.

It is appropriate that the meaning of the BA be intertwined with the concept of a liberal education. That's why four years makes sense—it takes that long to get a solid grounding in the many elements of a liberal education. That's why a degree makes sense instead of some other way of more directly measuring what a student has learned: If undergraduate education consists of a set of core courses that everyone has to take, then it is possible to attach meaning to a piece of paper with "Bachelor of Arts" on it. But colleges are no longer in the business of imparting a liberal education. The educational goals of most students now in college have nothing to do with such a thing. In a reasonable world, these students would have better options than going from high school to college.

For Learning How to Make a Living, the Four-Year Brick-and-Mortar Residential College Is Increasingly Obsolete

We now go from one extreme to the other, from the ideal of liberal education to the utilitarian process of acquiring the knowledge that most students go to college to acquire—practical and vocational. The question here is not whether the traditional four-year residential college is fun or valuable as a place to grow up, but when it makes sense as a place to learn how to make a living. The answer is: in a sensible world, hardly ever.

Four years is almost always too long. Start with the time it takes—four years. Assuming a semester system with four courses per semester, four years of class work means thirty-two semester-long courses. The occupations for which "knowing enough" requires thirty-two

courses are exceedingly rare. For some professions—medicine and law are the obvious examples—a rationale for four years of course work can be concocted (combining pre-med and pre-law undergraduate courses with three years of medical school and law school), but for every other occupation, the body of knowledge taught in classrooms can be learned more quickly. Even PhDs don't require four years of coursework. The PhD is supposed to signify expertise, but that expertise comes from burrowing deep into a specialty, not from dozens of courses.

Those are the jobs with the most stringent academic requirements. For the student who wants to become a good hotel manager, software designer, accountant, hospital administrator, farmer, high-school teacher, social worker, journalist, optometrist, interior designer, or football coach, four years of class work is ridiculous. Actually becoming good in those occupations will take longer than four years, but most of the competence is acquired on the job. The two-year community college and online courses offer more flexible options for tailoring course work to the real needs of the job.

A brick-and-mortar campus is increasingly obsolete. The physical infrastructure of the college used to make sense for three reasons. First, a good library was essential to higher learning, and only a college faculty and student body provided the economies of scale that made good libraries affordable. Second, scholarship flourishes through colleagueships, and the college campus made it possible to put scholars in physical proximity to each other. Third, the best teaching requires interaction between teachers and students, and physical proximity was the only way to get it. All three rationales for the brick-and-mortar campus are fading fast.

The rationale for a physical library is within a few years of

extinction. Even now, the Internet provides access, for a price, to all the world's significant technical journals. The books are about to follow. Google is scanning the entire text of every book in the libraries of Harvard, Princeton, Stanford, Oxford, the New York Public Library, the Bavarian State Library, Ghent University Library, Keio Library (Tokyo), the National University of Catalonia, University of Lausanne, University of Mysore, and an expanding list of others. Collectively, this project will encompass close to the sum total of human knowledge. It will be completely searchable. Everything out of copyright will be free. Everything still under copyright will be accessible for a fee. Libraries will still be a selling point for colleges, but as a place for students to study in pleasant surroundings—an amenity in the same way that an attractive student union is an amenity. Colleges and universities will not *need* to exist because they provide libraries.

The rationale for colleges based on colleagueships has eroded. Until a few decades ago, physical proximity was important because correspondence and phone calls just weren't as good. As e-mail began to spread in universities during the 1980s, physical proximity became less important. As the capacity of the Internet expanded in the 1990s, other mechanisms made those interactions richer. Now, regular e-mails from professional groups inform scholars of the latest publications in their field of interest. Specialized chat groups enable scholars to bounce new ideas off other people working on the same problems. Drafts are exchanged effortlessly and comments attached electronically. Whether physical proximity still has any advantages depends mostly on the personality of the scholar. Some people like being around other people during the workday and prefer face-to-face conversations to e-mails. For those who don't, the

value of being on a college campus instead of on a mountaintop in Montana is nil. Their electronic access to other scholars is incomparably greater than any scholar enjoyed even within the world's premier universities before the advent of the Internet. Like the library, face-to-face colleagueships will be an amenity that colleges continue to provide. But colleges and universities will not *need* to exist because they provide a community of scholars.

The third rationale for the brick-and-mortar college is that it brings teachers together with students. Working against that rationale is the explosion in the breadth and realism of what is known as *distance learning*. The idea of distance learning is surprisingly old—Isaac Pitman was teaching his shorthand system to British students through the postal service in the 1840s, and the University of London began offering degrees for correspondence students in 1858—but the technology of distance learning changed little for the next century. The advent of inexpensive videocassettes in the 1980s opened up a way for students to hear and see lectures without being in the classroom. By the early 1990s, it was possible to buy college-level courses on audio- or videotape, taught by first-rate teaching professors, on a wide range of topics, for a few hundred dollars. But without easy interaction between teacher and student, distance learning remained a poor second-best to a good college seminar.

Once again, the Internet is revolutionizing everything. As personal computers acquired the processing power to show high-definition video and the storage capacity to handle big video files, the possibilities for distance learning expanded by orders of magnitude. We are now watching the early expression of those possibilities: podcasts and streaming videos in real time of professors' lectures, online discussions among students scattered around the country, online

interaction between students and professors, online exams, and tutorials augmented by computer-aided instruction software.

Even today, the quality of student-teacher interactions in a virtual classroom competes with the interactions in a brick-and-mortar classroom. But the technology is still in its early stages of development and the rate of improvement is breathtaking. Compare video games such as Myst and Sim City in the 1990s to their descendants today; the Walkman you used in the 1990s to the iPod you use today; the cell phone you used in the 1990s to the BlackBerry or iPhone you use today. Whatever technical limitations might lead you to say, "Yes, but it's still not the same as being there in the classroom," are probably within a few years of being outdated.

College Isn't All It's Cracked Up to Be

College looms so large in the thinking of both parents and students because it is seen as the open sesame to a good job. It has also become commonly accepted that four years on a college campus is a desirable way for young people to make the transition from adolescence to adulthood. On examination, neither reason is as persuasive as it first appears.

The Wage Premium of the BA

When high-school graduates think that obtaining a BA will help them get a higher-paying job, they are only narrowly correct. Economists have established beyond doubt that people with BAs earn more on average than people without them. But why does the BA produce that result? For whom does the BA produce that result?

For some jobs, the economic premium for a degree is produced by the actual education that has gone into getting the degree. Lawyers, physicians, and engineers can earn their high incomes only by deploying knowledge and skills that take years to acquire, and degrees in law, medicine, and engineering still signify competence in those knowledges and skills. But for many other jobs, the economic premium for the BA is created by a brutal fact of life about the American job market: Employers do not even interview applicants who do not hold a BA. Even more brutal, the advantage conferred by the BA often has nothing to do with content of the education. Employers do not value what the student learned, just that the student has a degree.

Employers value the BA because it is a no-cost (for them) screening device for academic ability and perseverance. The more people who go to college, the more sense it makes for employers to require a BA. When only a small percentage of people got college degrees, employers who required a BA would have been shutting themselves off from access to most of the talent. With more than a third of twenty-three-year-olds now getting a BA, many employers can reasonably limit their hiring pool to college graduates because bright and ambitious high-school graduates who can go to college usually do go to college. An employer can believe that exceptions exist but rationally choose not to expend time and money to identify them. Knowing this, large numbers of students are in college to buy their admission ticket—the BA.

But while it is true that the average person with a BA makes more than the average person without a BA, getting a BA is still going to be the wrong economic decision for many high-school graduates. Wages within occupations form a distribution. Young people with okay-but-not-great academic ability who are thinking about whether

to go after a BA need to consider the competition they will face after they graduate. Let me put these calculations in terms of a specific example, a young man who has just graduated from high school and is trying to decide whether to become an electrician or go to college and major in business, hoping to become a white-collar manager. He is at the 70th percentile in linguistic ability and logical-mathematical ability—someone who shouldn't go to college by my standards, but who can, in today's world, easily find a college that will give him a degree. He is exactly average in interpersonal and intrapersonal ability. He is at the 95th percentile in the small-motor skills and spatial abilities that are helpful in being a good electrician.

He begins by looking up the average income of electricians and managers on the Bureau of Labor Statistics website, and finds that the mean annual income for electricians in 2005 was $45,630, only about half of the $88,450 mean for management occupations. It looks as if getting a BA will buy him a huge wage premium. Should he try to get the BA on economic grounds?

To make his decision correctly, our young man must start by throwing out the averages. He has the ability to become an excellent electrician and can reasonably expect to be near the top of the electricians' income distribution. He does not have it in him to be an excellent manager, because he is only average in interpersonal and intrapersonal ability and only modestly above average in academic ability, all of which are important for becoming a good manager, while his competitors for those slots will include many who are high in all of those abilities. Realistically, he should be looking at the incomes toward the bottom of the distribution of managers. With that in mind, he goes back to the Bureau of Labor Statistics website and discovers that an electrician at the 90th percentile of electricians' incomes made

$70,480 in 2005, almost twice the income of a manager at the 10th percentile of managers' incomes ($37,800). Even if our young man successfully completes college and gets a BA (which is far from certain), he is likely to make less money than if he becomes an electrician.

Then there is job security to consider. A good way to make sure you always can find work is to be among the best at what you do. It also helps to have a job that does not require you to compete with people around the globe. When corporations downsize, they lay off mediocre managers before they lay off top electricians. When the economy gets soft, top electricians can find work when mediocre managers cannot. Low-level management jobs can often be outsourced to India, whereas electricians' jobs cannot.

What I have said of electricians is true throughout the American job market. The income for the top people in a wide variety of occupations that do not require a college degree is higher than the average income for many occupations that require a BA. Furthermore, the range and number of such jobs is expanding rapidly. The need for assembly-line workers in factories (one of the most boring jobs ever invented) is falling, but the demand for skilled technicians of every kind—in health care, information technology, transportation networks, and every other industry that relies on high-tech equipment—is expanding. The service sector includes many low-skill, low-paying jobs, but it also includes growing numbers of specialized jobs that pay well (for example, in health care and the entertainment and leisure industries). Construction offers an array of high-paying jobs for people who are good at what they do. It's not just skilled labor in the standard construction trades that is in high demand. The increase in wealth in American society has increased the demand for all sorts of craftsmanship. Today's high-end homes and office buildings may entail the work of specialized skills in stonework, masonry, glazing, painting, cabinetmaking, machining, landscaping, and a dozen other crafts. The increase in wealth is also driving an increased demand for the custom-made and the exquisitely wrought, meaning demand for artisans in everything from pottery to jewelry to metalworking. There has never been a time in history when people with skills not taught in college have been in so much demand at such high pay as today, nor a time when the range of such jobs has been so wide. In today's America, finding a first-rate lawyer or physician is easy. Finding first-rate skilled labor is hard.

Intrinsic Rewards

The topic is no longer money but job satisfaction—intrinsic rewards. We return to our high-school graduate trying to decide between going to college and becoming an electrician. He knows that he enjoys working with his hands and likes the idea of not being stuck in the same place all day, but he also likes the idea of being a manager sitting behind a desk in a big office, telling people what to do and getting the status that goes with it.

However, he should face facts that he is unlikely to know on his own, but that a guidance counselor could help him face. His chances of getting the big office and the status are slim. He is more likely to remain in a cubicle, under the thumb of the boss in the big office. He is unlikely to have a job in which he produces something tangible during the course of the day.

If he becomes a top electrician instead, he will have an expertise that he exercises at a high level. At the end of a workday, he will often be able to see that his work made a difference in the lives of people whose problems he has solved. He will not be confined to a cubicle and, after his

apprenticeship, will be his own supervisor in the field. Top electricians often become independent contractors who have no boss at all.

The intrinsic rewards of being a top manager can be just as great as those of a top electrician (though I would not claim they are greater), but the intrinsic rewards of being a mediocre manager are not. Even as people in white-collar jobs lament the soullessness of their work, the intrinsic rewards of exercising technical skills remain undiminished.

Finally, there is an overarching consideration so important it is hard to express adequately: the satisfaction of being good at what one does for a living (and knowing it), compared to the melancholy of being mediocre at what one does for a living (and knowing it). This is another truth about living a human life that a seventeen-year-old might not yet understand on his own, but that a guidance counselor can bring to his attention.

Guidance counselors and parents who automatically encourage young people to go to college straight out of high school regardless of their skills and interests are being thoughtless about the best interests of young people in their charge. Even for students who have the academic ability to succeed in college, going directly to college may be a bad way for them to discover who they are and how they should make a living.

College as a Place to Mature

In addition to deciding what they want to do for a living when they grow up, eighteen-year-old high-school graduates have a lot of growing up to do. Where is the best place for them to do it?

It is possible to envision a college that would be a terrific place to grow up. In this idealized college, young people are living away from

home, responsible for the first time for making decisions about personal behavior. Students cannot count on the Dean of Students to make allowances for childish mistakes, and must learn to think ahead and weigh the potential consequences of behavior, just as in adult life. The college curriculum demands the students' most strenuous efforts, so that students who succeed in getting degrees must necessarily have learned how to allocate their time, set priorities, and discipline themselves. They also have learned what it is like to work hard over a long period of time.

In this idealized college, students must behave with their professors much as they will have to behave with employers in adult life. They are not on an equal footing with their professors, but in a student-teacher relationship that bears some similarities to the subordinate-supervisor relationships that they will have to negotiate when they get jobs in the real world. Students must also accept that the point is not whether they try hard, but whether they get the job done. If they don't get the job done, they are flunked with as little ceremony as they will be fired in adult life.

I have focused on the life-is-real-and-life-is-earnest functions of the college environment, but they need not dominate day-to-day life. My idealized college is a pleasant place to spend four years, with a sylvan campus, an engaged faculty, comfortable dorms, and parties on the weekends. But it provides a bridge between childhood and adulthood, giving adolescents practice in meeting the kinds of responsibilities that are part of being an adult.

I cannot say confidently that my idealized college environment has ever existed, but, without doubt, it bears no resemblance to the environment of today's typical college. The light workload alone can make college a joke. Students have a wide choice of easy courses in

easy majors, and many students don't do the work that even these require. The most recent (2007) survey conducted by the National Survey of Student Engagement showed a self-reported average of only about fourteen hours per week spent studying, about half the hours that faculty say is necessary to do well in their classes. Assume four to five courses meeting for an average of three hours per week (and perfect attendance), and the average student is busy with academics for around twenty-six to twenty-nine hours per week. Even those hours of class time are structured to meet the students' preferences. Saturday classes no longer exist at most schools, and Friday classes are becoming rare because the weekend starts on Thursday night. Even Monday classes are being reduced. Or as a Duke administrator put it, "We've run out of classroom space between ten a.m. and two-thirty p.m. Tuesday through Thursday."

Using the student-teacher relationship as practice for the adult world of work? Among the many ways that colleges have evolved during the last three decades, the change in the student-teacher relationship appears to have been the most complete. In important respects, it is now the professors who must accommodate themselves to the preferences of the students, not the other way around. Requirements that used to be inflexible, such as the due date for papers, are now commonly revised when the student just can't get it done by then. Many professors permit quizzes or even final exams to be made up if missed—missed not because of an emergency at home or a fever of 104 degrees, but just, sort of, like, missed. At many schools, student evaluations of professors are now systematically collected and used as part of the tenure decision process, and being a tough teacher does not lead to enthusiastic evaluations. One instructor who gave his students a questionnaire asking what qualities they most valued in a teacher reports that the two most highly rated qualities were "entertaining" and "warm and friendly." One of the other options, "demanding," was not deemed desirable by a single student.

Teachers are even under pressure to accommodate students when it comes to right answers and wrong answers. Talk to any college teacher, and you will hear bemused accounts of encounters with students who think that the professor's criticisms of their work are "just your opinion," no more valid than the student's opinions. From a professor of psychology at San Diego State:

> I heard this complaint even when I corrected obvious errors like run-on sentences and incorrect punctuation, things that were clearly not a matter of opinion. Even multiple-choice tests weren't free from this kind of challenge. In one class, I decided it might be a good idea to review the correct answers to exam questions. . . . Almost immediately, several students began to argue with me about the questions, claiming that the answer they had chosen was right. Since there wasn't a grading mistake, I was forced to explain again why the answers were correct, but they continued to argue. . . .

The complaints become still louder and more frequent when a low grade is based on the professor's qualitative assessment of a student's term paper—now it's *really* just the professor's opinion—and it is not important that the professor's opinion was formed over years of advanced training and professional experience. On the contrary, invoking training and professional experience only antagonizes students. That way lies negative student evaluations, falling enrollment

in your classes, and a session with the dean in which you are told to adjust to the new reality of the teacher-student relationship if you want to get tenure.

Nor is it possible for an individual teacher to do things the old-fashioned way, even if tenured. A history professor at Berkeley reports that she assigns today's students far fewer pages to read than in years past because she has discovered that it is futile: "They won't read them." The obvious retort is: If they don't read them, grade them accordingly. But that runs up against the pressures that make grade inflation so hard to reverse: If everyone else is giving out nothing but As and Bs, graduate schools and employers interpret Cs as the equivalent of a failing grade. There's no way for the professor to put on the transcript, "I grade the old-fashioned way. C represents average work." It is this reality—an honest C looks so bad that it may prevent a student from being accepted at medical school or law school—that finally drove one of the sternest of the old-school professors, Harvard's Harvey C. Mansfield (known to generations of students as Harvey C-minus Mansfield), to start giving out two grades: the inflated one for the transcript and the real one.

In this environment, the opportunities for learning of all kinds have diminished. Students learn less in the way of subject matter, but also less in the way of hard work, self-discipline, self-restraint, and respect for superior knowledge. This chapter is not the place to spin out the possible connections with the social phenomena—hooking up, date rape, binge drinking—that have been the subject of recent books about America's campuses. I am also wary of painting with too broad a brush. While changes such as grade inflation are almost universal, some schools have held the line on many standards of personal behavior and academic performance. But the larger and more

impersonal the institution—and state universities routinely have more than 20,000 undergraduates—the harder it has been to hold the line. Admitting the exceptions, I put this proposition to you: For students whose parents are paying the bills, college life throughout much of the American system is not designed to midwife maturity but to prolong adolescence.

That proviso, "for students whose parents are paying the bills," raises the possibility that many of the problems of college life would go away if the parents were not paying the bills. College professors commonly observe that students who come to college after a hitch in the military or after working for several years, paying their own tuition, tend to take their courses more seriously and have a clearer sense of why they are taking a course than students who have come straight from high school. But the key factor may not be the money, but the greater maturity that has come during the intervening years. Students who are paying the bills but do not have that maturity can easily come to see education as a product they are buying. A professor at a community college, where many students come straight from high school but are paying their own way, described it this way:

> By and large, students view themselves primarily as consumers who intended to study just a handful of hours a week for all their classes, and who expected, at a minimum, solid B's for their efforts. Students raised in a postmodern society of hyperconsumerism appear to want facile knowledge, served up in easily digestible, bite-sized chunks. . . . [They] pay their teachers to provide "knowledge," regardless of how superficial that knowledge might be. After all, how hard should a consumer have to work at buying something?

Being the person who pays the bills is no guarantee that college will be taken more seriously than it is taken by students who are not paying the bills. Whether any of this is a problem depends on what college is supposed to represent. If it is supposed to be a halcyon interlude before getting on with life as an adult, then there's no point in worrying about a prolonged adolescence. Many parents remember their own college years as a halcyon interlude, don't think it did them any harm in the long run, and are happy to finance the same experience for their children. But if the goal is to enable adolescents to become mature adults, parents should discard the idea that today's typical college can compete with going into the military or, for that matter, just moving out of the house and supporting themselves by working at any kind of job.

The Dark Side of the BA as a Norm

It is possible to accept all that I have presented as fact and still disagree with the proposition that too many people are going to college. The argument goes something like this:

> *The meaning of a college education has evolved since the nineteenth century. The traditional liberal education is still available for students who want it, but the curriculum is appropriately broader now, and includes many courses for vocational preparation that today's students want. Furthermore, intellectual requirements vary across majors. It may be true that few students can complete a major in economics or biology, but larger proportions can handle the easier majors.*
>
> *A narrow focus on curriculum also misses the important nonacademic functions of college. The lifestyle on today's campuses may leave something to be desired, but four years of college still give youngsters in late adolescence a chance to encounter different kinds of people, to discover new interests, and to decide what they want to make of their lives. And if it is true that some students spend too much of their college years partying, that was also true of many Oxford students in the eighteenth century. Lighten up.*

If the only people we had to worry about were those who are on college campuses and doing reasonably well, this position would have something to be said for it. It does not address the issues of whether four years makes sense or whether a residential facility makes sense; nevertheless, college as it exists is not an intrinsically evil place for the students who are there and are coping academically. But there is the broader American society to worry about as well. However unintentionally, we have made something that is still inaccessible to a majority of the population—the BA—into a symbol of first-class citizenship. We have done so at the same time that other class divisions are becoming more powerful. Today's college system is implicated in the emergence of class-riven America.

The problem begins with the message sent to young people that they should aspire to college no matter what. Some politicians are among the most visible offenders, treating every failure to go to college as an injustice that can be remedied by increasing government help. American educational administrators reinforce the message by instructing guidance counselors to steer as many students as possible toward a college-prep track (more than 90 percent of high-school students report that their guidance counselors encouraged them to go to college). But politicians and educators are only following the lead of

the larger culture. As long as it remains taboo to acknowledge that college is intellectually too demanding for most young people, we will continue to create crazily unrealistic expectations among the next generation. If "crazily unrealistic" sounds too strong, consider that more than 90 percent of high school seniors expect to go to college, and more than 70 percent of them expect to work in professional jobs.

One aspect of this phenomenon has been labeled *misaligned ambitions*, meaning that adolescents have career ambitions that are inconsistent with their educational plans. Data from the Sloan Study of Youth and Social Development conducted during the 1990s indicate that misaligned ambitions characterized more than half of all adolescents. Almost always, the misalignment is in the optimistic direction, as adolescents aspire to be attorneys or physicians without understanding the educational hurdles they must surmount to achieve their goals. They end up at a four-year institution not because that is where they can take the courses they need to meet their career goals, but because college is the place where BAs are handed out, and everyone knows that these days you've got to have a BA. Many of them drop out. Of those who entered a four-year college in 1995, only 58 percent had gotten their BA five academic years later. Another 14 percent were still enrolled. If we assume that half of that 14 percent eventually get their BAs, about a third of all those who entered college hoping for a BA leave without one.

If these numbers had been produced in a culture where the BA was a nice thing to have but not a big deal, they could be interpreted as the result of young adults deciding that they didn't really want a BA after all. Instead, these numbers were produced by a system in which having a BA is a very big deal indeed, and that brings us to the increasingly worrisome role of the BA as a source of class division. The

United States has always had symbols of class, and the college degree has always been one of them. But through the first half of the twentieth century, there were all sorts of respectable reasons why a person might not go to college—not enough money to pay for college; needing to work right out of high school to support a wife, parents, or younger siblings; or the commonly held belief that going straight to work was better preparation for a business career than going to college. As long as the percentage of college graduates remained small, it also remained true, and everybody knew it, that the majority of America's intellectually most able people did not have BAs.

Over the course of the twentieth century, three trends gathered strength. The first was the increasing proportion of jobs screened for high academic ability due to the advanced level of education they require—engineers, physicians, attorneys, college teachers, scientists, and the like. The second was the increasing market value of those jobs. The third was the opening up of college to more of those who had the academic ability to go to college, partly because the increase in American wealth meant that more parents could afford college for their children, and partly because the proliferation of scholarships and loans made it possible for most students with enough academic ability to go.

The combined effect of these trends has been to overturn the state of affairs that prevailed through World War II. Now the great majority of America's intellectually most able people do have a BA. Along with that transformation has come a downside that few anticipated. The acceptable excuses for not going to college have dried up. The more people who go to college, the more stigmatizing the failure to complete college becomes. Today, if you do not get a BA, many people assume it is because you are too dumb or too lazy. And all this because of a degree that seldom has an interpretable substantive meaning.

A few pages ago, I laid out the benign description of college as seen from the perspective of people lucky enough to have the brains and money to spend four years successfully on a college campus. Let's approach the situation from a different angle. Imagine that America had no system of postsecondary education and you were made a member of a task force assigned to create one from scratch. Ask yourself what you would think if one of your colleagues submitted this proposal:

> *First, we will set up a common goal for every young person that represents educational success. We will call it a BA. We will then make it difficult or impossible for most people to achieve this goal. For those who can, achieving the goal will take four years no matter what is being taught. We will attach an economic reward for reaching the goal that often has little to do with the content of what has been learned. We will lure large numbers of people who do not possess adequate ability or motivation to try to achieve the goal and then fail. We will then stigmatize everyone who fails to achieve it.*

What I have just described is the system that we have in place. There must be a better way.

4

America's Future Depends on How We Educate the Academically Gifted

The last of the simple truths is easily misunderstood, so let me be clear at the outset: The proposition is not that America's future *should* depend on an elite that is educated to run the country, but that, whether we like it or not, America's future *does* depend on an elite that runs the country. The members of that elite are drawn overwhelmingly from among the academically gifted. We had better make sure that we do the best possible job of educating them.

The idea is instinctively unattractive. Educating people for leadership smacks of Plato's Guardians. Specifying academic giftedness puts logical-mathematical ability and linguistic ability on a pedestal, and it is not at all clear that these are the crucial abilities for leadership. What we need is leaders with more integrity, prudence, self-discipline, and moral courage, not smarter ones. What we need is more common sense in public life, not a bunch of overeducated intellectuals telling us what to do.

I agree with these sentiments, just as I agree with the late William F. Buckley that it would be better to be governed by the first

65 On vouchers, my advocacy goes back to the concluding chapter of *Losing Ground* (Murray, 1984). See also Murray (1988), chapters 10 and 11, and Murray (1997): 90–97. I remain nervous about the degree of regulation that the government would impose on private education if a voucher program were enacted.

The empirical literature bearing on the potential effects of school-choice programs began in 1982 with the publication of *High School Achievement: Public, Catholic, and Private Schools*, coauthored by James Coleman of the Coleman Report (Coleman, Hoffer, and Kilgore, 1982). In the 1990s, that literature began to be augmented by the evaluations of pilot voucher programs, notably in Milwaukee, and then by evaluations of charter schools. For an excellent recent summary of the findings and an extensive bibliography, see Walberg (2007).

The technical difficulties in drawing comparisons between children who get vouchers and those who do not are formidable because of self-selection effects. As I write, there have been five random assignment voucher experiments that mitigate that problem. In Charlotte, North Carolina, the experimental group showed net gains (all of the following results refer to comparisons with the control group) of 4 to 6 percentile points in math and 5 to 8 percentile points in reading after one year (Greene, 2001 and Cowen, 2007). In Dayton, the black members of the experimental group showed a 6.5-percentile-point gain overall after two years but not whites (Howell and Peterson, 2006). In Milwaukee, one study found a 6-percentile-point gain in reading and an 11-percentile-point gain in math after four years (Greene, Peterson, and Du, 1999), but another that included more extensive controls (Rouse, 1998) found a positive effect only for math

(about 8 percentile points after four years). In Washington, a privately funded voucher experiment produced a 9-percentile-point gain for African-American students after two years (Howell and Peterson, 2006). The subsequent publicly funded DC Opportunity Scholarship Program did not find a statistically significant impact after one year (Wolf et al., 2007). If you want to see just how technically complex these assessments become, go to http://biosun01.biostat.jhsph.edu/~cfrangak/papers/sc/vouchers.pdf, where you will find an article, three comments on it, and rejoinder about the New York City voucher experiment. The target article, Barnard, Frangakis, Hill, and Rubin (2003), found that experimental subjects from low-achieving schools achieved a 3- to 5-percentile-point gain on math scores that reached statistical significance. A reanalysis of the data in one of the comments, Kreuger and Zhu (2003), found smaller changes that did not reach statistical significance. None of these evaluations in any of the experimental sites as yet have data on the fadeout effects that have been universally observed in attempts to raise IQ.

Chapter 3

68 The number of bachelor's degrees in 2005 comes from *Digest of Educational Statistics 2006*, Table 257. The number of twenty-three-year-olds comes from Bureau of the Census population projections, available at http://www.census.gov/population/www/projections/popproj.html.

68 For alternative measures of college readiness and their calculation, see Kobrin (2007), which is also the source for the discussion of the College Board's college readiness benchmarks. On 115 as the modal IQ for college around mid-century see, for example,

Matarazzo (1972), pages 178–179. For changes across time and differences among colleges, see Herrnstein and Murray (1994), chapter 1. For the percentage of adults with a BA, see *Digest of Education Statistics 2006*, Table 8.

69 The benchmark for the combined score does not equal the total of the benchmarks for the SAT-Verbal and SAT-Math separately because, put roughly, fewer people get high scores on both of two separate tests than get a high score on one of two tests.

70 The estimate of how many American seventeen-year-olds meet the benchmark scores was reached using three independent methods that yield parallel results.

Method I. The first method starts with the fact that a combined score of 1180 or higher was achieved by the top 25 percent of students who took the SAT in 2005 (Kobrin, 2007). Those who take the SAT are a self-selected population with academic ability well above the national average. In 2005, they constituted about 47 percent of high-school graduates that year and 35 percent of all seventeen-year-olds. How many of the 65 percent who do *not* take the SAT could get 1180 or higher? Suppose we establish a lower bound, assuming that none of those who did not take the SAT would have gotten a combined score of 1180 or higher (an underestimate). In that case, the 1180 benchmark would have included only 8.8 percent of seventeen-year-olds in 1995. The upper bound cannot be a large proportion. Students with high enough academic promise to get an 1180 on the SAT typically apply to several schools, one of which requires the SAT, even in the Midwest and South, where the ACT is most widely used. Applications for scholarships and other awards typically require SAT scores. Counselors who see high-school students with high academic promise urge them to take the SAT. I will use an upper-bound estimate of 4 percent. To see how implausibly high this is, think in terms of an average public high school with a graduating class of 500 students in 2005. Forty-seven percent of them (235) took the SAT, and 265 did not. The mean score of the students who took the test was 1028 (the national mean). Now imagine going to the principal and asking how many of the 265 students who didn't take the SAT could have scored 1180 or higher. The answer one would expect to hear would be "none," and no more than one or two, whereas the 4 percent assumption implies that about eleven of the 265 students who did not take the SAT would have gotten 1180 or higher—an exceedingly implausible number. Using 4 percent as the upper bound gives us an estimate of 11.4 percent of seventeen-year-olds who could have gotten 1180 or higher—almost certainly an overestimate.

Method II. The second method takes advantage of the little-known "national norm studies" that the College Board sponsored periodically through 1983, based on nationally representative samples of all students still in school, not just those headed for college. During the same years that the SAT scores of college-bound seniors dropped precipitously, then began to rebound, the norm studies showed remarkably level scores for the national population (Herrnstein and Murray, 1994): 422. I use data from the 1983 norm study. It does not report combined scores, so I used the separate SAT-Verbal and SAT-Math benchmarks in Kobrin (2007), 590 and 610 respectively. Those are recentered scores that I converted to pre-recentered scores using the College Board's conversion tables, available at http://professionals.collegeboard.com/data-reports-research/sat/equivalence-tables. After taking high-school

dropouts into account, the percentages in the 1983 norm study who reached the benchmarks were 9.2 and 9.9 percent for the SAT-Verbal and between 5.6 and 6.3 percent for the math. Since 1983, NAEP tells us that reading scores among seventeen-year-olds have been effectively flat. There is no reason to think that the 2005 figures would have been higher for today's youths. But NAEP does indicate an increase in math scores among seventeen-year-olds from 1983 to 2004. If we assume that the SAT scores from the 1983 norm study should be inflated commensurately, then the percentage of 2005 youth meeting the SAT-Math benchmark would have been about 7.5 to 8.2 percent.

Method III. The third method calls on the work of Meredith Frey and Douglas Detterman, who used the NLSY-79 to determine the IQ scores implied by SAT scores as of 1980. To get a score of 1100 on the pre-recentered test—the equivalent of an 1180 on the recentered test—implied an IQ of about 121.7 (Frey and Detterman [2004], and Douglas Detterman, personal communication). An IQ of 121.7 or higher includes the top 7.4 percent of the distribution. Since math scores went up between 1980 and 2005, let us assume that a parallel analysis done for 2005 would have shown a lower IQ equivalent. Using NAEP trends from 1980 to 2004 to make that adjustment, the IQ corresponding to the benchmark of 1100 (pre-recentered) would be approximately 119.5, cutting off the top 9.7 percent of the distribution.

Summarizing the lower-bound and upper-bound estimates of students who meet the College Board Benchmark as of 2005:

Method I. 8.8 to 11.4 percent meeting the benchmark for the combined scores.

Method II. 9.2 to 9.9 percent meeting the benchmark on the SAT-Verbal; 7.5 to 8.2 percent meeting the benchmark for the SAT-Math.

Method III. 7.4 to 9.7 percent meeting the benchmark for the combined scores.

If I had used a more plausible upper bound for the number of students who would have gotten 1180 or higher in calculating the results for method I, the three sets of results would have been close to identical. There is reason for confidence that the range given in the text—9 to 12 percent—encloses the true number, with the most realistic best guess being that the true number is about 10 percent.

73 On the length of sentences, the well-regarded high-school history textbook is John A. Garraty's *The Story of America: Beginnings to 1914* (New York: Holt, Rinehart and Winston, 1991).

74 The rankings of the vocabulary items come from the British National Corpus (BNC), described as "a 100 million word collection of samples of written and spoken language from a wide range of sources, designed to represent an accurate cross-section of current English usage." The 86,800 items include all the words that occur at least twice in the BNC. You may find the ranking for any word at www.wordcount.org. Since the BNC is based on British sources, I checked for words that would have a much different ranking in American English than in British English. There were none in the chosen passages.

75 On the calculation of the "too many" ratio, it is important to take into account the number of high-school dropouts, which can be estimated from the percentage of high-school freshmen who graduate from high school, and the number of first-time college freshmen who did not go to college directly from high school. For the

latter number, I assumed that all first-time freshmen ages eighteen and younger had gone directly from high school to college, and that 50 percent of all those who entered at age nineteen had gone directly from high school to college. Since first-time freshmen who are nineteen constitute only 29 percent of incoming freshmen, the choice of any reasonable estimate of the proportion of nineteen-year-olds who went directly to college has little effect on the "too many ratio." Sources for the data were the *Digest of Education Statistics 2006*, Tables 99 and 184, and unpublished data from the 2003–2004 Beginning Postsecondary Students Longitudinal Study provided by the National Center for Education Statistics. Applying these figures, it can be estimated that, as of 2005, about 4,100,000 American young people would have been eligible for enrollment as freshmen if everyone completed high school.

In the first iteration for calculating the "too many" ratio, I used the high end of the range of people who can absorb college-level material, 20 percent. Based on the NLSY-79, it may be assumed that about 80 percent of all those in the top 20 percent of academic ability enroll in four-year colleges directly out of high school. In that case, the expected number of incoming freshmen in 2005 should have been about 656,000. The actual number of first-time freshmen who had come directly from high school was approximately 1.2 million—about 1.8 times the "should" number. When I use the 15 percent cutoff instead, it should be assumed that about 85 percent of the eligible population enrolls as freshmen (the higher the IQ, the higher the probability that an American child goes to college). In that case, we should expect about 523,000 freshmen instead of 1.2 million, and the actual-to-should ratio is 2.3. When I use the 10 percent cutoff, it should be

assumed that about 90 percent of all of the intellectually eligible enroll. In that case, we should have 369,000 freshmen instead of 1.2 million, and the "too many" ratio becomes 3.3. For the relationship of IQ to probability of college attendance, see Herrnstein and Murray (1994): 33–37.

75 The quotation from Mill is taken from Mill (1867): 217, available online at Google Books.

76–8 In the twenty years since *Cultural Literacy* was written, Hirsch has written several follow-up books. The most recent is Hirsch (2006). On the relationship of core knowledge to reading comprehension, Hirsch calls upon the distinction between reading as a process of decoding strings of letters and as the extraction of meaning from strings of words. At the beginning, learning to read is indeed a matter of learning to decode strings of letters and associate them with known words. Children at a wide range of linguistic ability can become competent at decoding. But as soon as this simplest level is left behind, background information begins to become important. Almost any text, whether in a newspaper or a novel or a third-grade reader, assumes that you have information at your disposal that the text itself need not explain. Two examples drawn from Hirsch (1987) illustrate how decisively background information affects our understanding of even the simplest text:

> *The punter kicked the ball.*
>
> *The golfer kicked the ball.*

These two five-word sentences, differing in just one word, call up completely different mental images of what the ball looks like, how and why the ball was kicked, and even the kicker's state of

mind—but only if the reader knows something about football and golf. Just knowing the dictionary definitions of "punter," "golfer," "kick," and "ball" is not enough.

Now consider a sentence that uses the phrase *Achilles' heel.* If you do not know at least a little about Greek myths you cannot understand what you are reading. If a sentence uses the phrase "classical music" and you do not know at least a little about classical music and how it relates to other kinds of music, you cannot understand what you are reading. Reading speed is involved as well as reading comprehension. In all of these examples, your reading speed will slow to a crawl as you try to infer what the sentences mean from incomplete information. These examples are backed by an extensive research literature on the importance of background information to reading speed and comprehension that Hirsch reviews.

77–81 Regarding the Core Knowledge curriculum, you may examine an outline at www.coreknowledge.org. For a full description of the third-grade curriculum, including specific texts used to teach it, see Holdren and Hirsch (1996). On the quality of the Frederick County school system: According to a respected national survey (the 2007 edition of *Quality Counts*, conducted by the organization that publishes *Education Week*, and shown at http://www.edweek.org/ew/articles/2008/01/10/18sos.h27.html), Maryland's statewide system ranks third in the nation. The test scores from Frederick County's public schools are above the Maryland average (Maryland State Assessment data for 2007 taken from http://www.baltimoresun.com/news/education/bal-msareports2007,0,2020297.htmlstory).

My wife and I left our children in the Frederick County public schools because in many ways they were just fine. The facilities were good and the school environments were nurturing, orderly, and safe. Most of the principals and teachers were competent and dedicated, only a few were conspicuously poor, and several were excellent. Three were the finest K–12 teachers, public or private, that my wife and I have ever known. They deserve to be named: Frank Booth, Steve Nikirk, and Lee Vogtman.

I did not use cosmetic shortcomings in the Frederick County website to make its curriculum look bad. On the contrary, my wife and I knew that mathematics and writing were taught more rigorously in the classroom than the website description would lead one to believe, so I omitted the website's descriptions of those subjects from the table. By the same token, we also knew that the website's characterization of Frederick County's third-grade curriculum for everything else accurately reflected what was taught in the classroom and assigned as homework. You may check the website for your local school system and compare it with the Core Knowledge curriculum for yourself.

81 *On Liberty* was accessed through Google Books.

82 Rawls's formulation is in Rawls (1971): 426. Aristotle's discussion is mostly in books seven and ten of *Nichomachean Ethics.*

86 The examples of courses that fulfill the distribution requirements and the data on distribution requirements in the fifty colleges are taken from Latzer (2004): 3–4, 26. On the topics for course requirements, the obvious omission is a course in Western Civilization. The problems of deciding what courses qualified proved to be so difficult that the category had to be dropped. For another excellent discussion of the deficiencies in distribution requirements, see Mathews (2005).

91–2 On the reasons that people with BAs make more than people without BAs, an extensive technical literature tries to get into the black box linking education with earnings. Human capital theory (Becker, 1962 and Schultz, 1962) says that education adds skills, and greater skills lead to higher earnings. Screening and signaling theories (Arrow, 1973 and Spence, 1973) say that employers use educational credentials as a screen for qualities they want (ability, perseverance, etc.) and students use those credentials to signal that they possess such qualities. I assume that the human capital theory in higher education applies most strongly to occupations requiring specific knowledge and skills taught in the classroom (e.g., engineering, medicine, and law), and is least relevant to occupations for which the specific knowledge and skills can be taught on the job (e.g., journalism, many entry-level business jobs). My point in the text is not that the BA for history majors and English lit majors is completely worthless in a human capital sense (it usually has some value, I am willing to assume), but that employers care mostly about its screening value.

93 The occupational income data are available at http://www.bls.gov/oes/oes_dl.htm.

98 On the time that students spend studying, three surveys sponsored by the Pew Charitable Trusts are conducted annually: the National Survey of Student Engagement (NSSE), the Faculty Survey of Student Engagement (FSSE), and the Beginning College Survey of Student Engagement, focusing on entering classes (BSSE). The figures in the text are taken from their 2007 annual reports, available at http://nsse.iub.edu/index.cfm. The first administration of the BSSE occurred in the summer of 2007.

98 The quotation from the Duke administrator comes from Seaman (2005): 66.

99 The survey of student priorities is reported in Sacks (1996): 55.

99 The quotation about students who argued about the right answer comes from Twenge (2006): 28.

100 The Berkeley professor is quoted in Seaman (2005): 62.

100 On the excesses of campus life, Seaman (2005) has the most complete presentation. Other useful discussions are found in Sacks (1996), Schneider and Stevenson (1999), and Twenge (2006). Tom Wolfe's fictional account of contemporary college life, *I Am Charlotte Simmons* (Wolfe, 2005), reflects extensive journalistic research.

101 On the seriousness of students who come to college after several years away, I am reporting anecdotal evidence from college professors with whom I have discussed this issue. The quotation about students as consumers comes from Sacks (1996): 162.

103 The figure regarding guidance counselors comes from Schneider and Stevenson (1999): 1292.

104 The figures on students aspiring to professional jobs and with misaligned ambitions come from Schneider and Stevenson (1999): 5, 81. The book has an extended discussion of misaligned ambitions and associated topics.

104 The data on students completing their college degree within five years come from *Digest of Education Statistics 2006*, Table 317.

Chapter 4

107–8 William F. Buckley's famous dictum dates from an essay he wrote in 1956, which he quotes approvingly in a later book (Buckley, 1963): 103.

109–10 Steven Goldberg's analogy between IQ and weight in NFL tackles comes from Goldberg (2003): 51–52.