Jurassic U

THE STATE OF UNIVERSITY-INDUSTRY RELATIONS

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Concerns about the university's business deals are as old as the university itself, but never have they been as widespread as they are these days. Nearly everyone assumes that the university has entered a new era, and many feel that the university's traditions of public service and academic freedom are threatened. The era's formal starting point was the 1980 passage of the federal Bayh-Dole Act, which allowed universities for the first time to retain title to the inventions of their employees. The intent of the legislation was to give universities financial incentives to patent useful technologies, ones that would then be licensed to an industry partner in exchange for royalties on sales.[1] The act's supporters argued that the profit motive would enhance the search for new knowledge by linking it to market goals, and the claim that the act promoted entrepreneurship helped it prevail over some prominent opposition.[2]

By the year 2000, university-industry relations seemed all-encompassing. Athletes had become human billboards for sporting goods companies while their coaches collected large endorsement fees. Student centers had assumed most of the functions of suburban shopping malls, and a large portion of campus Internet traffic was devoted to consumer uses like downloading music files. Universities marketed themselves as prestige brands to the most affluent demographic and raised tuition rates so consistently that graduates carried credit card debt to rival the ever-increasing size of their student loans. From coast to coast, campus life seemed as much about buying stuff as about learning things. After two decades of marketing tie-ins, fiscal crises, and financial incentives, commerce had moved from the edges to the core of the academic mission.

By the late 1980s, critiques of corporate research funding had begun to arrive from the battlegrounds of academic commerce. The president of Harvard University, Derek C. Bok, wrote that contemporary pressures were endangering the university's social mission.[3] The president of Yale University, A. Bartlett Giamatti, claimed that commercialization placed faculty members at odds with their academic responsibilities. He described a growing tension between "the private, proprietary corporation, whose norms are competition, efficiency, and 'profit maximization,' and whose goals are short-term, and the traditional university, which is nonprofit, and

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whose goals are intellectual, civic, and long-term."[4] The international dimensions of this tension were described in the landmark study *Academic Capitalism* (1997), whose authors anatomized a long-term pattern in which cutbacks in public funding increased the university's dependence on corporate funding, which in turn encouraged universities to fund areas that corporations would support.[5]

But by the late 1990s, it wasn't clear who still cared. The new economy was in full swing, and the university's main constituency was a professional middle class (PMC) apparently committed to technological and market cures for all economic, social, cultural, physical, and emotional problems. The 1980s authors had assumed that their audience would immediately accept a basic distinction between profit-driven commercialization and knowledge in the public interest. But this was exactly the distinction that the Reagan-Clinton era had undermined. By the late 1990s, most university graduates apparently believed that society's core function was to stimulate economic growth and that as a stimulant, financial incentives worked best. They appeared to assume that the commercialization of the university would lead to the mutual enrichment of both business and the university, that it was one of the synergies that explained the greatness of American capitalism. The pervasive conception of progress through the commercialization of everything was what Louis Althusser might have called the spontaneous philosophy of the PMC.

This was a far cry from the traditional focus of educators, which had been to preserve the university's independence from society's rulers. This had meant no direct control by church or crown or state or elected government or big labor or big business. Independence meant freedom from any ruling ideology, for society's conventional wisdom held back the pursuit of both truth and justice. In the period after World War II, university leaders were most concerned about the impact of the federal government on research. Writing in the midst of the research university's federally sponsored golden age, Clark Kerr, then president of the University of California, lamented that the university's "directions have not been set as much by [its] visions of its destiny as by the external environment, including the federal government, the foundations, the surrounding and sometimes engulfing industry."[6] By the late 1970s, business had become an equal concern. The philosopher Jean-François Lyotard, for example, identified the postmodern with an era in which the intertwined pursuits of truth and emancipation had become increasingly subordinated to economic optimization.[7] The underlying demand of all such analyses was that the university not be subject to a social determinism that would destroy its core functions to create knowledge and serve society: real creation could not be steered by any interest outside the discovery process itself. The only solution was, in these terms, for society to guarantee the university's intellectual independence even in the midst of its financial dependence. If a society damaged the university's academic freedom by pushing too hard for an economic or ideological contribution, the university, properly speaking, would cease to exist.

The year 2003 brought a new wave of attempts to cope with the university's contradictory position as an independent servant of an ever more commercial society. Various articles and books, including the three here under review, rejected the strong version of the commercialization thesis, including its usually unstated component claims that social progress is the same as economic growth, that knowledge is best propelled by commerce, that universities should be businesses.[8] These three books offer profound criticisms of business's influence. At the same time, they avoid the widespread temptation to set up a dichotomy between the university and commerce, and explore how capitalism not only commodifies and exploits but also advances and transforms, thus following in the tradition of Marx, as well as very different thinkers like Joseph Schumpeter and Friedrich Hayek. It is much in the favor of these books that they seek a hybridized position in which educational purposes can diverge from commercial purposes without having to define themselves as the *opposite* of commerce.[9] In so doing, these books help consolidate an emerging consensus about realistic university reforms.

At the same time, some shared elements of these authors' philosophical frameworks are flawed, and flawed in ways that limit the potential of their best ideas. The frameworks are damaged less by errors in the individual thinking of these writers than by some bad turns in the recent evolution of PMC culture, including its simultaneously triumphant, fatalistic, and static image of American capitalism. These I will have to treat unkindly before I am finished here.

The Market and Its Failures

The outline of the emerging reform consensus is as follows: American capitalism is here to stay, and in any case it has always been the university's environment. Public support for higher education has been declining for twenty years and shows no sign of stopping. There is therefore no point in expecting a clean break between higher education and the marketplace. To the contrary, universities will need to substitute lost public income with private funds, and this will deepen the university's involvement with business, which, by its very nature, gives money only to receive more money in return. At the same time, the university's core mission is noncommercial and not-for-profit. To pursue its educational mission, the university cannot be a business; in the 1990s, calls to make the university resemble corporations failed to grasp how universities work. Business language and goals have come to have too much influence on the core of the educational mission. Even as the university must work with business, and acknowledge that it can learn much from the best business practices, it must clearly distinguish educational from commercial goals. The university and business are partners that should not fuse, neighbors that need good fences, friends who remember that opposites attract.

To examine this general perspective in action, I'll start with the book with the best title, David L. Kirp's *Shakespeare, Einstein, and the Bottom Line*.[10] Kirp also offers the best recent survey of market-led changes across the full range of educational settings. The modern university has been compared to a medium-sized city, and Kirp's book is a primer on the staggering variety of functions of the contemporary university. He has chapters on undergraduate admissions, business schools, distance learning, Web-based humanities consortia, university-industry research collaborations, law schools, and much more. In each case, Kirp describes a "business vocabulary [that] reinforces businesslike ways of thinking." Overall, he suggests that business improves some functions while damaging others. In the book's parting shot, he says that universities have made deals that only Faust could love.

One of Kirp's best examples of the Faustian bargain is the response of the Darden Graduate School of Business Administration at the University of Virginia to continual cutbacks in state funding. Originally, one educator notes, state universities had a deal with the public: "In return for financial support from the taxpayers, these universities would keep tuition low and provide broad access, train graduate and professional students, promote arts and culture, help solve local problems, and perform ground-breaking research" (131). But across the country, states have reduced their share of public universities' operating expenses by a total of 30 percent over the past twenty years. Those units that can follow the money have done exactly that, and no unit is in a better position to do this than a university's business school.

At Virginia, Darden has responded in various ways. It has increased its tuition base by increasing the size of its classes. It has expanded the resources it devotes to fund-raising. It has fought to reduce its contribution to the overall university infrastructure, which helps increase the gap between the campus's rich and poor units. It has expanded its lucrative executive education program, and at least informally requires most faculty to participate. The business school allows a portion of this instruction to be proprietary, in violation of traditional academic standards of open publication. Darden faculty also appear to do less research in the first place, as they have shifted some of their professional activity into preparing executive seminars that pay them at much higher rates than do their regular courses.

We could add three other concerns about this arrangement to Kirp's long list: first, customized, pricey corporate seminars are likely to tell their paying customers what they want to hear, casting doubt on the academic freedom of the enterprise and the quality of the knowledge produced. Second, such seminars siphon much of their proprietary material from the public domain, making them vehicles of a dubious privatization of common intellectual property. Finally, executive education allows wealthy businesses and businesspeople to bypass public education altogether, making them less likely to support public education with their tax contributions. We must remember, of course, that few businesspeople pay for continuing education in the hope of hearing flattering propaganda, but this doesn't mitigate the negative effects of the overall system. Suspicions about the product and its apparatus reach a pitch of irony or even tragedy when Kirp cites a letter from the University of Virginia's founder, Thomas Jefferson, complaining as though he were writing today that legislators "do not generally possess information enough to perceive the important truths, that knowledge is power, that knowledge is safety, and that knowledge is happiness" (143). Kirp concludes this chapter with a crucial question: "Can a university maintain the intellectual world that Thomas Jefferson sought to represent in his design of the Lawn—professors and students with diverse academic interests coming together in a single open space to pursue and create knowledge—if learning becomes just another consumer good" (145)?

Eric Gould raises similar questions in his book, *The University in a Corporate Culture*.[11] While Kirp is a public policy professor at a large public university (the University of California at Berkeley) with much experience in educational and community issues, Gould is an English professor with an understandable interest in giving the liberal arts something important to do. He sees corporate culture as a challenge to the university and especially to what he calls democratic liberal education in a sense he traces in large part to John Dewey. Early on, Gould presents the calling card of the reform consensus, namely, treating the current form of capitalism as a determinant fact of life. "The search for important knowledge in technoscience is not going to slow down. University bureaucracies are not going to look less like corporate bureaucracies in the future. Students are not going to cease to search for credentials for the workplace. Neither are they going to have fewer problems financing their education. Discipline-based knowledge in the arts and sciences is not going to become less professionalized. The old ideal of a liberal education as something that is pursued for its own sake is most unlikely to have a revival" (x). Gould shows how the capitalist university is increasingly devoted to economic functionality, and at one point he provides a particularly good summary of this functionality's major components:

> Quality management criteria and strategies drawn from the world of business; an emphasis on marketing, visibility, and public image promotion; accounting concerns for contribution margins, and the perennial cost effectiveness of learning; decentralized power structures with incentives for growth and gain-share revenues; the redistribution of labor—in this case away from tenured to part-time and adjunct faculty; the development of sophisticated ancillary products, patents, and services; a vague rhetoric of excellence that replaces specific details of what an education is about, and, of course, research and other financial collaborations with the corporate world. (31)

Tuition costs have probably done more damage to the university's image than the cultural wars and student protests combined.

One of Gould's examples is the tuition spiral, and he offers the best short treatment of the subject that I have read (chap. 3). For most of the twentieth century, universities—especially public universities—tried to minimize tuition costs in order to maximize public access. It was hoped that every qualified person could go to college without regard for ability to pay. Academic attributes trumped financial ones, and the role of financial aid was to bridge the gap between educational cost and student income. In recent decades, the college admissions office has become an important component in the institution's overall financial strategy, where tuition rates, financial aid, and even admissions have become weapons in the competition for the most desirable students.

Gould's crucial point is that this market system does not work properly even on its own terms. Tuition costs have never stopped rising at well above the rate of inflation—growing at about ten times the rate of family income growth between the mid-1970s and the mid-1990s—and they have probably done more damage to the university's image than the cultural wars and student protests combined. The damage is especially clear when we consider their impact on student finances: Nellie Mae, the student-loan provider, "found that the average student-loan debt had more than doubled" between 1991 and 1997 (cited in Gould, 54); in addition, the average credit card debt for the class of 2002 was over $3,000 (55). In that year, "thirty-nine percent of students [were] graduating with 'unmanageable levels of student loan debt'" (54); for African American and Hispanic students, the levels are 55 and 58 percent, respectively. To keep things at even this low level of control, four-fifths of all undergraduates work in college, one-third of this group full-time, the other two-thirds an average of twenty-five hours a week. Additional reports suggest that educational debt levels have reached the point where they are forcing graduates out of public service and into income-maximizing posts in the private sector, regardless of the actual goals or values of the graduates, to say nothing of social needs.[12] As funding levels drop, many states are seeing declines in college participation rates; in 2000, the United States was ranked thirteenth in college participation rates among industrialized nations.[13]

The victims of the university's tuition and admissions strategies include not only students and the public, but the university itself. Department of Education statistics covering the same time frame—the mid-1970s to the mid-1990s—show that a 400 percent increase in charges for tuition, room, and board translated into "a modest 32 percent increase in current-fund expenditures per student" (cited in Gould, 63). What is the source of this enormous gap between the increase in the university's gross income and student expenditures? Apparently, only a fraction went into administrative growth while a bit more went into research. "The major area of expenditure growth was in financial aid (scholarships and fellowships) to students, which increased fivefold in public universities and sevenfold in private universities" (ibid.). Universities have been boosting tuition and also boosting financial aid, resulting in an increasing number of students attending college at a discount. "For every dollar colleges have tacked on to tuition since 1990, they have kept just 46 cents" (62).[14] The combination of high tuition and high financial aid may allow universities to use well-off students to subsidize poorer ones. But the high tuition/high aid model is also used to chase the small pool of highly qualified and affluent students who are given aid on the basis of "merit" rather than "need." "Thus," Gould concludes, "we have the curious situation in which most families—probably three-quarters of those with children attending or seeking to attend college—have to borrow money to send their children to institutions that are in turn struggling to keep their discount levels at 30 percent" (69).

Gould concludes that the ultimate culprit is the market model of unregulated competition for the "best" students and other scarce commodities. "So long as we insist on promoting higher education as a relatively unregulated market system, modeled on the corporate marketplace, the rich will get richer and the poor poorer, a number of schools will die off or reduce their quality, and there will be fewer places for the growing number of students" (77).

Taking Kirp and Gould together, we can draw a remarkable interim conclusion. Commercialization endangers the academic mission of the university *and* it endangers the financial health that commercialization was supposed to improve. If this is true, then commercialization is in effect a way to exploit and control the university rather than a way to support it.

The Dangers of Financial Interest

This brings us to Derek Bok, president emeritus of a school unlikely to succumb in any Darwinian market struggle, Harvard University, but who is nonetheless as worried an observer as the other two. He begins *Universities in the Marketplace* by noting that commerce was once "largely confined to the periphery of campus life: to athletic programs and, in a few institutions, to correspondence schools and extension programs. Today, opportunities to make money from intellectual work are pursued throughout the university by professors of computer science, biochemistry, corporate finance, and numerous other departments."[15] Bok gives great credit to market forces—at times bending over backward to show his respect—and also claims that there is little hard evidence that financial interests have changed academic standards or the direction of research (60–62). And yet he shares the consensus view that a clear distinction must be made between commercial and educational goals. Education has always been concerned with "helping to develop virtue and build character" and to develop a practical ethics. The reason why Princeton should not put a banner that says "Things Go Better with Coke" on Nassau Hall is that selling goods plainly conflicts with pursuing education: "Such a message would be damaging to students and demoralizing for many members of the faculty who believe that their academic careers and the institution where they work stand for aims and ideals that transcend money" (173).[16]

Bok offers an especially good account of the market's impact on scientific research. While corporate support remains under 10 percent of the total support for academic research, it has a glamour, an intensity, and a potential for personal gain that magnifies its influence. Faculty who have corporate support are more than twice as likely "to be influenced by commercial considerations in choosing their research topics" (61). Business makes its largest profits from proprietary knowledge, meaning knowledge that only the owning firm can legally use and that only that firm may know about in detail. The advantage of this kind of knowledge is that it allows a firm to offer a unique product that lacks competitors, enabling it in turn to dominate or monopolize the product's market. Given the attractions of proprietary knowledge, corporate partners routinely request publication delays and confidentiality with university personnel that can suppress the open circulation of research knowledge (74–75). In addition, research tools and materials in the biological sciences are the corporate property of individual firms, and these firms have sometimes required researchers to sign secrecy and patent agreements that give the owners of materials "reach-through" rights to any intellectual property created with those materials. Since federal legislation requires university employees to assign title to any inventions over to their (nonprofit) university employer, such transfer agreements can create serious and expensive legal conflicts.

Given the potential returns, universities may come to act much like corporations. Even as they are expected to set an example for their faculty employees and enforce federal law, universities may steer research toward money rather than long-term basic research. In one particularly pointed passage, Bok writes,

> Columbia, Duke, and several other medical schools have formed consortia to bid for contracts from pharmaceutical firms to test new drugs. In many cases, the principal purpose is not to secure opportunities for cutting-edge research, but rather to earn money that can be used for other purposes. Schools that benefit in this way clearly have a financial stake in retaining the business of the companies whose products they test. To that extent, they have an incentive to avoid results that will disappoint their corporate sponsors. Nevertheless, like individual investigators, medical schools seem unwilling to admit that their financial interests could possibly affect the results of research performed within their walls. (71)

Here Bok summarizes the logic of the financial incentives that shape the business of science. Each actor behaves rationally, and usually with good intentions, but the system's alleged invisible hand leads, not necessarily but quite possibly, to misdirected, unnecessary, or even tainted research. As Bok notes rather witheringly,

> scientists with corporate ties naturally deny that financial interests will have any effect on their scientific work. Nevertheless, a number of investigators have shown that researchers reporting on the efficacy of drugs produced by companies in which they have an interest are more likely to report favorable results than scientists without such ties. Other studies have shown that clinical trials funded by drug companies are far less likely than independently funded trials to arrive at unfavorable conclusions. (68)

These studies are not widely known even among academic scientists, nor are they warmly received.[17] But they are now routinely detecting major statistical anomalies in privately funded research.

Bok returns several times to the practices of medical schools, where the potential for abuse may be the most advanced. The American health industry is troubled, to put it mildly, by mediocre public health results bought at enormous cost compared with other industrialized countries.[18] Medicine lies at the heart of the "social trusteeship" model of professionalism, a tradition stretching back to the Hippocratic oath, but it may be the profession that has been the most completely suffused with commercial factors. The ethical stakes are very high, for in contrast to other commercialized fields like engineering and law, medical faculty work directly with human subjects. Bok mentions perhaps the best-known recent case, that of Jesse Gelsinger, a patient at the University of Pennsylvania who died during a gene therapy trial conducted by an institute whose director had a large and undisclosed financial stake in the company that funded the research (68). Bok shows that this kind of practice reflects the wall-to-wall presence of drug and other health corporations in medical education. "Fortunately," he observes, "universities have not yet allowed companies to tout their products in campus classrooms" (173). *Not yet* is the operative phrase, and once again Bok's overview is worth quoting at length.

> At the periphery of the educational process, however, advertisers wait like predators circling a herd of cattle and occasionally manage to pick off some careless member that strays too far from the group.
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> The clearest example has occurred in medical schools where large pharmaceutical firms and medical supply companies have become very wealthy at a time when traditional sources of funding for medical education have tended to dry up. These trends have created a vacuum major corporations are all too willing to fill. By now, corporate representatives commonly recommend speakers paid for at company expense and help shape the content and format of continuing education courses by giving ample subsidies that help medical schools operate their programs at a profit. These practices are clearly worrisome. Although the lecturers subsidized by industrial sponsors may be accomplished faculty members and the quality of the programs is often high, speakers paid for by a pharmaceutical firm and selected from an approved company list cannot be assumed to be as objective and disinterested as university instructors ought to be. (173–74)

Commercial considerations can in this way modify the professional judgment of practicing physicians. Bok notes that commerce has also influenced the shape of medical research and scientific knowledge. "Pharmaceutical companies naturally tend to support programs on diseases commonly treated with expensive drugs. Although the presentations may not tout any particular product, they do promote the use of an entire class of drugs. Moreover, subsidized programs seldom emphasize preventative measures and other alternatives to drug treatments. In these ways, the subsidized programs can be slanted not by what they put in, but by what they leave out" (175).

In spite of these serious problems, the economic environment discourages reforms. Though medical schools can always create their own more balanced programs, "subsidized programs tend to win out. This is particularly likely when schools treat continuing medical education as a profit center to finance other faculty activities" (ibid.). Reforms are made even less likely by the philosophical obstinacy of many science faculty and administrators. Even measured criticisms like Bok's, backed by statistical evidence derived from large samples, may be met with blanket assertions that financial incentives could not, and do not, affect the scientific method.

This outmoded objectivism was the real beneficiary of the "science wars" in which this journal was a participant. Alan Sokal and his allies may have believed that they were defending the scientific modalities of the progressive enlightenment. But the more important effect of their success was to discredit the kind of historical and contextual arguments, whether coming from epistemological radicals or from concerned university presidents, that could demonstrate the impact of financial interests on scientific knowledge. These important books by Kirp, Gould, and Bok, along with others, are forced to proceed without the benefit of public respect for qualitative and contextual analysis. They have nonetheless successfully described a wounded if not deceased body and, in the form of financial interests, a smoking gun.

A Detente with Commerce

We now arrive at the larger question of how best to respond to the chronic, escalating crisis in university affairs. These books imply that the best opening move is to focus on major problem areas. Medical schools, business schools, and undergraduate admissions are near the top of the list. A fourth trouble spot is for-profit distance learning, though this is more thoroughly treated by other authors, most critically by David Noble. A fifth is the explosive growth of the adjunct and part-time teaching force, though this is also more thoroughly treated by other authors, notably by many contributors to *Social Text* over the past ten years.

The second move is regulatory, and it is interesting to note that the author with the warmest words for market mechanisms, Derek Bok, also suggests the most direct crackdown on market abuses. He would require researchers to disclose the financial interests that support their work, whether they take the form of the direct industry funding of clinical trials, an equity stake in a company whose product is under scrutiny, or something similar. Financial disclosure policies are becoming more common in professional journals, and though this trend will probably continue, such policies are resisted by many faculty.

Bok also notes a limitation to the disclosure rule: “Repeated disclosure of financial conflicts may deepen the public’s suspicions about the objectivity of academic research and thereby place universities and their scientists and scholars under a cloud” (147). He thus takes the opportunity to suggest something stronger: “Universities should flatly prohibit their scientists from performing research on human subjects if the work is supported by companies in which the researchers have significant financial interests, whether from consulting arrangements, gifts, retainers, or stockholdings” (145). Reformers will need to bear in mind that such reforms can disadvantage academic scientists, as university researchers earn medium middle-class salaries to do the fundamental creative work on projects that enrich the Bill Gates and Larry Ellisons with whom they might be prohibited from partnering. But any regulations would, in Bok’s model, involve a large component of faculty peer review and would require cooperation among a number of universities, perhaps coordinated by a federal agency like the National Institutes of Health (NIH).

These are important suggestions. But at this point we reach the end of these authors’ recommendations for direct reform. In fact, all are pessimistic about the possibility of getting reforms to go even this far. Part of the problem is that these authors do not see sufficiently powerful interests pushing such reforms. To the contrary, the effect of these books is to bust from the ranks of reformers the two traditional proponents of the progressive university. First, students cannot be relied on to preserve intellectual goals, since most have learned to be career-building consumers of prestige, access, and functional training. Second, faculty—at least those with influence in science, technology, and medicine—turn out to be not so much champions of scholarly values as eager, even arrogant commercializers, constantly pressuring administrators and staff to bend the rules that protect the university’s interests. The faculty most affected by reforms have consistently opposed them: to use one of Bok’s examples, the NIH diluted its new disclosure rules in 1989 when faculty strenuously objected, and few major research universities have successfully pushed prohibitions of financial interests in human subject research through their academic senates. The situation is complicated by the fact that such regulations can conflict with researchers’ academic freedom (and with a right to privacy concerning their personal financial affairs). Reforms also increase faculty members’ obligations to the university as their main employer, which may have the ironic effect of making the university more like a high-tech corporation. All three authors have good reason to assume that no simple faculty consensus will emerge in favor of reforms. Pressure for reform will most likely divide a campus's faculty between those with market potential and those without.[19]

In the absence of an established reform constituency, Kirp, Gould, and Bok fall back on a conceptual solution, which is to draw a foundational contrast between commercial and academic values. They call on us to be aware of commercialization and, without rejecting commerce categorically or blindly denying its public benefits, to support the educational mission. This makes a good deal of sense, of course, and virtually everyone in education agrees that education is special, including, in my experience, the nonacademic university staff members who actually promote and manage industry partnerships.[20] Something similar goes for many industry participants, who look to the university for types of collaboration and invention that they can't find in their product-oriented corporate labs. The general concept of university-industry difference is a centerpiece of the reform consensus I've been discussing, and it works on both sides of the university-industry relationship.

But can we indeed define the university's goals through this contrast between education and commerce? Can we say that educational activities must be protected from commerce because they are always damaged by it? These books make a clear answer harder than ever. Kirp, for example, has a fascinating chapter on Dickinson College, whose new president starts to remake this liberal arts college by hiring an "enrollment manager" with the power to trespass on faculty terrain like the curriculum if it damages the financial picture, and by hiring a marketing consultant, who redefines the college's image with whatever he finds out from focus groups. But in fact these commercial barbarians decide that the college's values are Freedom + Guidance = [Personal] Growth, which could best be expressed in the slogan Reflecting America, Engaging the World. Though possessed of dubious literary sensibility, the new regime decides to reforge "the link between liberal learning and the world outside Carlisle," to start programs to send their students all over the country and the world, and to develop "citizen-leaders" by "crossing borders" and becoming more representative of the U.S. population (56–59). The least one can say is that the marketing pros ended up sounding a lot like a multicultural version of the godfather of progressive education theory, John Dewey, for they appear to reject the classical bourgeois contrast between liberal and practical knowledge, and to have set the college on a more progressive liberal arts trajectory than it had pursued before.

Kirp also has a pair of chapters on New York University and its apparently successful efforts, as one professor puts it, to "spend [its] way into high society."[21] Kirp shows that these advocates of the "star search" strategy have plenty of stars to be crass about. He also observes that the bulk purchases of stars means the great exploitation of adjuncts: "Twenty-seven hundred adjuncts, almost the same in number as the tenure-ladder faculty, teach 70 percent of the undergraduate classes, a figure considerably higher than at comparable universities" (69). Undergraduates recruited to study with stars are subjected to a bait and switch in which their actual instructors turn out to be usually dedicated but always overworked "permatemps," as their counterparts came to be known under eerily similar circumstances at Microsoft.

NYU's administrators and trustees are primarily responsible for this situation, but so are its humanist faculty. The stars of the philosophy department, for example, implemented this system in which term after term much of their traditional undergraduate teaching is done by relatively powerless students and lecturers. Here the senior faculty sound like an oblivious academic gentry, far more concerned with their institutional feuds than with the exploitation of younger philosophers in their own departments. They seem consumed by a self-interest so narrow as to endanger the continuation of their own profession. The humanists in the chapter on the University of Chicago are similarly dogmatic and disappointing.

While "academia" falters, "commerce" glitters. The dean of the NYU law school is the author of something called "A Commercialist Manifesto," whose slogan is, "We are a business, deal with it. . . . Go to the market and create greatness" (cited in Kirp, 98). These are words that he has lived by, and at previous jobs, Kirp reports, this dean ended a free law clinic's pro bono policies and tried to name a large state's leading public law school after a successful trial lawyer in exchange for $10 million. And yet, for Kirp, this dean's effect on NYU is largely positive. "An entrepreneurship that defies the conventions of legal education," he notes, "isn't necessarily antithetical to academic excellence" (109). The dean himself comes off as a liberal humanist. We don't care only about our ranking, he says, for we try to "create a niche outside the hierarchy, as the place where you do cool things" (ibid.). My goal, he says, is "making the world a better place through law. This capacity to look for ideas, to find contingently right answers—that's what the money goes to support." We might note the additional irony that Kirp has no stories of abusive labor practices at NYU's law school. The field closer to the market is on the surface farther from academic labor exploitation. For the humanities, the case is the reverse, with an apparently corrosive effect on the social intelligence of its faculty.

We don't need to take all of these statements at face value in order to identify our problem. Commercial and educational goals are not simple opposites. They overlap and are often functionally intertwined. This is not a new issue: as Gould observes, even at their origin in antiquity the liberal arts "were emphasized not so much to nurture curiosity and imaginative thinking as to promote enlightened service to the state" (148). Capitalism, as I noted at the start, is a dynamic process that depends as much on invention as on coercive power. As the market came to loom as large as the state, the university became a place of refuge from capitalist determinism *and* the place that continuously blends capitalism and education, and that in the process reproduces the latest form of capitalism through a common interest in the latest breakthrough. There is certainly no invisible hand that transforms self-interest into the common good, but two alternative statements—self-interest never advances the common good, and the absence of financial self-interest does advance the common good—are also untrue. Commerce, these books suggest, may be a crucial progressive ally for higher education and may even produce knowledge, practices, and relationships that lead beyond capitalist economic and social relations as they currently exist.

The reform consensus thus leads toward a case-by-case evaluation of how education gets and spends money. It resembles most current university policy in seeking not to eliminate conflicts between educational and financial interests but to manage them. The reform consensus could be labeled a kind of pro-education pragmatism: pragmatic in a willingness to engage open-mindedly with the commercial environment, and pro-education in demanding education's power of self-regulation. The university in this framework seeks a cooperative self-determination, partnering with industry on the basis of mutual recognition and the negotiation of ongoing differences.

Overestimating Capitalism

It is at this point, however, that the limits of the reform consensus become apparent. It should not be rejected, as I've said, because of its acceptance of hybrids of capitalist and noncapitalist structures—because, that is, it fails to be clearly pro- or anticapitalist. This hybridity is the consensus position's major strength. If academics want higher education to keep its relative autonomy from industry, we will need not a more thorough shunning of capitalism but a more systematic and unflinching engagement with it, including with our own capitalist interests. If industry managers want to preserve their golden goose, not to mention a healthy society, they need to acknowledge the noncapitalist academic activities that create so much value for them.

But the reform consensus does have two major weaknesses. It over-states the internal coherence of capitalism itself, and it understates the strengths of the university and of the kinds of noneconomic acts and interests that go on inside and outside its gates. As part of this underestimation of the noneconomic, the consensus tends to sideline the humanities, even though these fields serve as the academic representatives of the public life that transcends economic notions of development.

On the first matter, the vision of the capitalist train roaring down the tracks, its invincible momentum has been greatly exaggerated. The triumphs of the 1990s' Anglo-American model coincided with many reversals and significant intellectual disarray. One dimension of the trouble can be called the crisis of global development. I can only scratch the surface here, but we should bear in mind the remarkable fact that in a period in which the United States restored its preeminence in the world economy and spread its version of capitalism far and wide, much of the world economy got worse. This is particularly true in regions where the United States has had the most influence: the fiscal and human disasters of Russia and Argentina are the disasters of model neoliberal pupils, ones whose governments willingly sold public assets to private investors, slashed public services, and dismantled many elements of political sovereignty in the name of economic interdependence.[22] Although even the briefest demonstration is beyond my scope here, we can see a disturbing pattern in which American-style policies produce social deterioration as the price of capital investment. The most successful industrializing countries have been those in Asia whose governments manage their economies in at least partial defiance of the "Washington consensus."[23] The social failures of market success have produced serious rifts between kindred agents of neoliberal thought, instanced by the widely publicized conflict between the World Bank and the International Monetary Fund, and other rifts within the transatlantic policy world, where the relative harmony of the Clinton era has crumbled during the era of Bush II.[24]

Market policies have had a similar effect in industrialized countries like the United States. Long-term growth rates have never returned to the levels of the 1945–75 "golden age" when the United States enjoyed a one-time economic supremacy over its war-battered rivals and a "big government" enthusiasm for social investment.[25] During the 1990s, by contrast, income and wealth inequality have soared: American tax and income policy in effect intensified the new economy boom by allowing it to take place almost entirely in the top fifth of the population measured by income.[26] Some portion of this growth comes from the steady lengthening of the work year for Americans, and some comes from a reduced share of the national product going to labor, among other factors that cannot be attributed to market efficiencies.[27] There have been no attempts at a comprehensive public explanation of the end of the boom or of ongoing wage stagnation and work insecurity, or at adjusting the model to respond to known failures, or at reversing deterioration in public goods such as educational and medical care. We are left with unexplained contradictions between different elements of the overall picture. It is clear that unregulated markets are not the most effective engine of social or even economic development, but market determinism has become a way to avoid difficult questions about developmental failure.

The books by Kirp, Gould, and Bok are part of an American culture that has not yet experienced a general public debate about the weaknesses of its reigning form of economics. Though these authors would not turn education over to the market, the market in their accounts remains whole and unchallenged, something that must be evaded or restricted rather than changed. Even Gould, who shows how market competition has damaged its own agents, does not call for the rigorous demystification that would lead to the *conceptual* independence of educational goals from market forces. We can readily imagine this stronger remedy, in which markets would provide supply and demand information—as a neutral technical service provider—rather than serve as the ordering principle of the overall economy and society. We can imagine that the university would be seen as a social partner that would define, affect, and sometimes control markets. At the moment, such developments would cut against the recent intellectual evolution of the social class the university creates and rests upon, the professional-managerial class (PMC).[28] Though this group harbored many dissidents from the general trend, its large majority has deserted its progressive tradition, and a main result has been to concede the sovereignty of commerce over the social sphere.

Without a revitalization of economic thought, the university will be compelled to respond to a more powerful business world largely through adaptation. The reform consensus can sustain reform only if it disputes the political economy that excludes noneconomic activity. The consensus will need to describe systematically the ways that the university is not, at bottom, a market institution, even if it works with those that are.

Underestimating the Unprofitable

Here we encounter the second weakness of the reform consensus. It has difficulty imagining *progressive* historical agency outside market activity and inside *non*-market spaces, including PMC spaces like the university. To the contrary, the PMC has spent much of the past thirty years producing almost entirely negative images of agency "from below": the Stalinist proletariat; the uncompetitive blue-collar workforce; the culturally unfit underclass; the racial "disuniters"; the legions of foreign fanatics tethered to the "olive tree" and refusing modernity itself.[29] In the late 1970s the PMC abandoned industrial workers, inventing the economic knowledges that proved them obsolete. Ironically, as the PMC was denying progressive agency to nonmanagerial and nontechnical workers, it was denying its own nonmarket agency as well. When the main emblem of personal development was once again the making of money, few were left to defend the autonomy of social development from economic goals. The members of the PMC who stuck with the social trusteeship professions—social work, teaching, nursing, and the like—were rewarded with financial decline. Those professionals who moved closer to the market—attorneys, engineers, physicians—experienced the most lucrative years in the history of their fields.[30] Social and personal development were for losers, economically speaking. The PMC's economism required the abandonment of its own labor traditions, rooted as they had been in an understanding of the social value of intellectual effort that doesn't pay.

Even specifically economic value depends in fact on uneconomic work. In an article published in 1959, the economist Richard R. Nelson argued that profit incentives could never support all of the scientific research that had social value. A for-profit firm would undertake research only if its returns could be expected to exceed its costs. This meant that a given firm would readily support applied research, where the basic principles were known, the problem was clearly defined, and a successful application was likely. Such calculations did not apply to basic research, Nelson observed, for basic research is by definition that in which "the degree of uncertainty about the results of specific research projects increases, and the goals become less clearly defined."[31] If a firm could not calculate with meaningful certainty that research returns would be greater than research costs, it had no rational reason to undertake the work.

Nelson's central insight was that the uncertainty of basic research is proportional to its potential future value. This is because the largest long-term value comes from breakthrough discoveries that affect knowledge well beyond the boundaries of a particular application.[32] These discoveries are by their nature unforeseen, and their degree of uncertainty is nearly total. The most important basic research is thus the riskiest research, and also the least "rational" to pursue, and hence the least likely to be pursued by a prudent firm: rational calculation will tell firms to avoid undertaking the expensive, risky research that produces the greatest long-term social gain, gains that mostly go to other people and other firms. Nelson, though clearly an advocate of what he calls "our enterprise economy," pointed out that in fact private gain can *decrease* social gain.[33] On the other hand, the pursuit of the public good can increase both public and market value.

In cases like Nelson's, PMC culture understands the general benefit of exactly that work that the market does not value. When this culture devalues nonmarket activity, it makes an economic as well as an ethical error. The reform consensus I have been discussing values nonmarket activity in an abstract and ethical way. It does not make nonmarket activity coeval with, or in fact prior to, market enterprise in the concrete and everyday making of the world.

Another symptom of this undervaluation of nonmarket activity is the nearly total absence of humanities research from these books. Bok does not mention humanities disciplines. Gould belongs to one of them, but discusses the humanities more as a Deweyan framework for general education than as a body of positive knowledge. Kirp discusses the NYU philosophers who receive star salaries and a group of classicists who hope to "build the market" for their work through a Web consortium. But these examples are not encouraging, and his own view is probably the one that emerges in an aside, where he refers to English professors who "know in a thousand ways that in many schools they have become bit players, and who also know how to get their own back in gothic tales and novels of manners" (219). There is apparently general agreement that the liberal arts fields have entered a permanent twilight.

What makes this twilight seem so inevitable? The most important source is not any intrinsic obsolescence of the fields themselves, but a middle-class economic determinism that says that insofar as the humanities are disfavored by economic forces—the speeding freight train—then they will die. The economic verdict on the liberal arts has certainly been negative. The academic humanities form a paradigm of the collapse of a social trusteeship profession, in which life for each succeeding generation is worse than the one before. The job market for its PhDs began to have openings for only a fraction of qualified degree holders nearly thirty-five years ago, and it has never improved.[34] Fields like English now employ the highest percentage of temporary employees in any academic specialty. The steady decline in interest among university presses in publishing literary criticism suggests the accelerating replacement of humanities research by a service-relationship paradigm, in which the vast majority of literature faculty—perhaps three-quarters—will teach basic thinking and writing skills on an adjunct, piecework, and untenured basis.[35] These dismal facts have an origin, however, and it is not "the market" in an abstract sense but the countless decisions made by administrators and legislators and citizens guided, in a classical circular logic, by a limited market definition of the economic. The outcome of the story—accelerating technosciences, derailed social and cultural study—is predetermined by the cultural bias that affects most of us who tell it. This doesn't make a change of course any easier, but it should give us an interest in systematically dismantling the self-fulfilling prophecy of the death of nonmarket fields.

Of course, I didn't expect Kirp, Gould, and Bok to discuss non-PMC or anticapitalist models of sustainable development. But I am sorry they didn't say more about nonmarket forms of development as formulated in the American university. The humanities and social sciences are thriving intellectually, and much of their progress involves specifying the enormous role of cultural, psychological, and social forces in the construction of local and global systems. If any view must be called obsolete, it is the economic and technological determinism that ignores most of the spectrum of inputs into human advancement that come from entire populations. Suffice to say that the vision of the world as a marketplace is not only flawed, but it is only one of a number of complex and interlocking visions. Strengthening the university's social position will require a clearer and more public sense of the enormous contributions of nonmarket activity to an ostensibly all-market society.

Post-Jurassic Possibilities

It is worth pointing out these two complementary weaknesses in the consensus framework because they impair the power of many of its best ideas. An example is Bok's understanding of eliminating financial interest from certain kinds of research. If the nonmarket purposes of research are not fully established, and rational-choice market models are still assumed, then such regulations will be bitterly resisted as unfair restrictions on both intellectual and economic liberty.

But bringing together such purposes can on the other hand help strengthen the framework. The first, Bok's, is the regulation of new kinds of academic marketing. A second comes from Gould, who makes several excellent suggestions by using familiar humanistic terms such as critical thinking and democratic education. Their common element can be called teaching for participation, teaching the skills—including the psychological ones—that enable participation in the ongoing creation and reformation of society. I would shift Gould's point somewhat and also make it less temperately. The most important single impact of college on the individual is on the individual's sense of his or her capacity to participate, which depends on his or her sense of agency in the world. Higher education is at bottom education for freedom, for freedom of expression and creation, for the emancipation of the individual to find his or her own direction. It is at the same time education in the principle of emancipation as expressed to and for others in that person's lifetime of work.[36] Even if we define the university's function instrumentally, as the development of "human capital," such development requires the power of self-direction: the development of human capital means the *emancipation* of human capital. In more familiar terms, we can call this the emancipation of labor. Marxists, capitalists, technologists, abolitionists, decolonizers, and liberators of all kinds are supposed to agree that the purpose of economic development is the labor-saving device broadly conceived. The more controversial point is that the labor-saving device frees labor to decide for itself what it will do. This is the university's ethical and economic foundation. The academic humanism on which Gould draws can and should be pushed to advance its vision of the emancipation of labor.

A third ingredient is what Kirp calls the university's gift economy, or, in other terms, its commons. Here we encounter one of the most crucial failures of neoliberal economic theory, which has been unable to accept that the commons is the source of the most significant new economic value or to figure out how to protect it. Economic theory has instead focused on privatizing the kind of shared public resources the commons represents on the grounds that only the promise of private gain spurs productivity. Research on innovation continues to suggest both the futility of using market signals to guide innovation and the ways innovation depends on public information, free access, and unrestricted collaborative interaction. Innovation requires that the individual be able to act independently of the desires of vested interests. Innovation requires being able to change what was previously embedded. Innovation means having enough authority to need no other authority. Innovation means being able to act "without the permission of anyone else."[37]

The defense of the commons will not depend on getting the right ratio of state to market, but on advancing the commons as an alternative to both. As Lawrence Lessig writes, "The issue for us will not be which system of exclusive control—the government or the market—should govern a given resource. The question for us comes before: not whether the market or the state but, for any given resource, whether that resource should be *controlled* or *free*."[38] Human development depends on enormous amounts of free resources. The core of the market's failure is the failure to deliver a commons that enables the shared use of free resources for every kind of development that its participants imagine.

It is at this point that we should remember the problem of financial interests, which, as I've said, are not intrinsically but may in practice be opposed to educational goals. Current university policy is to manage rather

Change will depend on facing the Jurassic Question: does our economic modernity contain primordial elements that keep it from moving ahead?

than eliminate conflicts of interest. This management should be systematically redesigned around the principle of maximizing the commons. Financial interests should be evaluated on the basis of whether they contribute to the knowledge commons or not. Revenues that are returned to research, royalties that support departments and labs and institutions—this kind of ultimately for-profit activity can be seen favoring that commons rather than damaging it. A version of this principle operates in most university formulas for royalty distribution: half may go to the inventor(s), a third to the university, and the rest to the lab or department in which the work was done. The principle of the commons may in some cases reduce or eliminate the personal return while supporting the institutional royalties. It would be interesting to know whether this arrangement would reduce the skew toward positive results in trials of a sponsor's product. The principle of the commons would not reward the proprietary research that uses collaborative work in part funded by the public to create a product monopoly. It would, on the other hand, distribute royalties to private as well as public sponsors according to their contribution to the final product. Firms that bring capital and labor to the arduous and sometimes lengthy process of product development would be rewarded, but proportionately to their investment. Though the language of the commons can serve as a veil for the privatizing of collaboratively created intellectual property, this shouldn't discourage us from the careful empirical work of discriminating among different probable economic outcomes.[39] The real battle is not about whether the university will produce commercial or noncommercial knowledge as such, but whether its knowledge will favor, roughly speaking, the commons or monopoly.

Kirp, Gould, and Bok offer at least three excellent ideas for improving the university—regulating financial interests, affirming the value of participation and emancipation, and developing the knowledge commons. I will conclude, however, by invoking the overall framework again. Real change will depend on facing what I think of as the Jurassic Question: does our economic modernity contain primordial elements that keep it from moving ahead? There is, after all, something ancient about reigning economic theory, derived as it is from the terms merchants used to critique the Crown in the 1700s. There is something unaccountably barbaric about economic modernization in most parts of the world, something insane about the conjunction of advanced technology and endless violence in the international order. I also wonder, as part of all this, whether there isn't something Jurassic about our technology, about the spirit of our technology, about our relationship to it.[40] I'm thinking in particular about our tendency to separate technology from the social and cultural systems in which it exists. Bruno Latour argued that the unreality of this modernist separation means that "we have never been modern." I would ask in a compatible vein whether the university has for too long been aligning itself with Jurassic techniques that have kept us premodern. The Jurassic appears in those forms of modernity that, like the neoliberal market ideal, claim to have rendered obsolete political and cultural modes of thought and action. It is the attempt to supersede the *old* social world that resists scientific knowledge—to go beyond the bygone arts of government, history, or psychology—that makes real modernity impossible, makes it Jurassic. I have emphasized the need to develop a framework that includes nonmarket life because I think that the university will be Jurassic unless it embraces *all* of the generative forces of society—including those taking political and cultural forms—rather than primarily the high-tech section that seems most advanced to us today.

Everybody has a big role to play. The humanities fields have a role in describing how a commons actually works—how it is created by informal knowledge and constant sociability and unquantifiable experience and everything we know as art and vision and passion, and obsessive attention to getting things right. The professions have a role to play in maintaining their traditions of intellectual rigor, codification, public presence, and peer review while recovering the craft traditions that hold market outcomes to professional standards. The university, across all its disciplines, has a role to play in maintaining its commitment to truth in a world of knowledge for hire, and in honoring the dissenters, heretics, radicals, eccentrics, and troublemakers who have long practiced human development for all.

Notes

1. Prior to the passage of the Patent and Trademark Act Amendments of 1980, as Bayh-Dole is formally known, title to all inventions produced by federally funded research was held automatically by the government.

2. One of the major participants in the discussions, Richard C. Atkinson, president emeritus of the University of California, describes the motive behind changing the patent law. "It was clear to us in the late seventies that the process of transforming ideas into applications was not working as well as it should. We assembled a number of working groups at NSF [the National Science Foundation] to see what could be done to improve matters. A particularly thorny issue was the federal policy requiring that patents generated from government-supported research at universities reside with the government. This was a clear impediment to transfer. What is the incentive to move ideas into the marketplace if government reaps the rewards? But could the federal government actually give up intellectual property rights? No one knew for sure, but we began to draft legislation in the late seventies. By 1982, Congress had passed the Bayh-Dole Act, which transferred patent rights to universities" (Atkinson, "Visions and Values:

The Research University in Transition," in *The University of California's Relationships with Industry in Research and Technology Transfer*, proceedings of the president's retreat, University of California, Los Angeles, 1997, 20). On the other side, Ralph Nader testified before Congress in 1984 that easier corporate access to university research would damage academic and democratic values. "The corporate model concentrates power, restricts the production and application of knowledge, and increases uniform behavior, self-censorship and when needed—outright suppression" (cited in Leonard Minsky, "Dead Souls: The Aftermath of Bayh-Dole," *Campus, Inc.: Corporate Power in the Ivory Tower* [Amherst, Mass.: Prometheus, 2000], 97). Similar thoughts came from Admiral Hyman Rickover, spearhead of the nuclear navy and veteran of decades of industry contracting, here speaking in 1982: "In 1980 the Congress reversed this long-standing government policy by giving universities and small business title to inventions developed at government expense. I testified against that because I recognized what would happen and it has happened. Now patent lobbyists are pressing Congress to extend that giveaway practice to large contractors. This would generate more business for patent lawyers, but, in the process, will promote even greater concentration of economic power in the hands of the large corporations which already get the lion's share of the government's research and development budget" (cited in Minsky, "Dead Souls," 96).

3. Derek C. Bok, *Beyond the Ivory Tower: Social Responsibilities of the Modern University* (Cambridge: Harvard University Press, 1982).

4. A. Bartlett Giamatti, *A Free and Ordered Space: The Real World of the University* (New York: Norton, 1988), 41. As for entrepreneurial faculty, Giamatti wrote, "I doubt that a faculty member can ordinarily devote the time and energy the university requires and also pursue a substantial involvement in any such outside company. Such involvement necessarily demands great concentration and commitment, particularly at the outset or if business goes badly. . . . The burden of maintaining a teaching program and two separate research programs, where the results of one research program are to be widely disseminated and the results of the other may be required to be kept secret in the pursuit of economic success, is more than even the most responsible faculty member can be expected to bear" (264–65).

5. Sheila Slaughter and Larry L. Leslie, *Academic Capitalism: Politics, Policies, and the Entrepreneurial University* (Baltimore, Md.: Johns Hopkins University Press, 1997), 7–8.

6. Clark Kerr, *The Uses of the University* (Cambridge: Harvard University Press, 1963), 122. "The basic reality, for the university," he wrote, "is the widespread recognition that new knowledge is the most important factor in economic and social growth. We are just now perceiving that the university's invisible product, knowledge, may be the most powerful single element in our culture, affecting the rise and fall of professions and even of social classes, of regions and even of nations" (v–vi). Kerr claimed that liberal knowledge had been eclipsed by German industrial research even as John Henry Newman was renewing Humboldt's call for knowledge for its own sake in 1852. In other words, the entire run of the research university was devoted to society's technological improvement. Kerr was relying on the pioneering research of the Princeton economist Fritz Machlup in *The Production and Distribution of Knowledge in the United States* (Princeton, N.J.: Princeton University Press, 1962). Machlup estimated that by the late 1950s "the production, distribution, and consumption of 'knowledge' in all its forms"

accounted for "twenty-nine percent of gross national product. . . . and 'knowledge production' is growing at about twice the rate of the rest of the economy" (Kerr, *Uses of the University*, 88). These arguments would become better known in such venues as Alvin Toffler's *Future Shock* (1970) and Daniel Bell's *The Coming of Post-Industrial Society: A Venture in Economic Forecasting* (1973).

7. Jean-François Lyotard, *The Postmodern Condition: A Report on Knowledge* (1979; Minneapolis: University of Minnesota Press, 1984). Recent statements about business's threat to the university include Eyal Press and Jennifer Washburn, "The Kept University," *Atlantic Monthly*, March 2000; Stanley Aronowitz, *The Knowledge Factory: Dismantling the Corporate University and Creating True Higher Learning* (Boston: Beacon, 2000); Henry A. Giroux and Kostas Myrsiades, eds., *Beyond the Corporate University: Culture and Pedagogy in the New Millennium* (Lanham, Md.: Rowman and Littlefield, 2001); David F. Noble, *Digital Diploma Mills: The Automation of Higher Education* (Toronto: Between the Lines, 2002); Benjamin Johnson, Patrick Kavanagh, and Kevin Mattson, ed., *Steal This University: The Rise of the Corporate University and the Academic Labor Movement* (New York: Routledge, 2003).

In another genre, some of the conservative critics of the liberal university spoke not only for traditional canons and values but for the free play of intellect. The most thoughtful and influential example is Allan Bloom, *The Closing of the American Mind* (New York: Simon and Schuster, 1987). Bloom's work was a kind of Maginot line, aiming all of its guns at liberal humanists and supposed ultrademocrats and none at the business-minded attacks on the sort of "useless" knowledge Bloom lived for.

8. Other recent books include my *Ivy and Industry: Business and the Making of the American University, 1880–1980* (Durham, N.C.: Duke University Press, 2003); and Sheldon Krimsky, *Science in the Private Interest: Has the Lure of Profits Corrupted Biomedical Research*? (Boulder, Colo.: Rowman and Littlefield, 2003), which reached me too late to be included in this review.

9. An example of this mistaken binary opposition is the one David Harvey attributes to Balzac: "He demonstrates the utter emptiness of values based on the monetary calculus, the fictions of the fictitious forms of capital such as credit and interest that drive the realities of social relations and urban processes, the constant speculation on the desires of others that wreaks such destructive consequences" (Harvey, *Paris, Capital of Modernity* [New York: Routledge, 2003], 57). A contemporary critique of the capitalist knowledge society cannot accurately or effectively proceed on the basis of the dichotomies creation/destruction, human/inhuman, presence/absence, life/death, in which capitalism is a self-consistent entity representing the pure form of the lesser half of these pairs. I mention this because Balzacian critique is a frequent default position among academics who dislike business influence but who lack knowledge about the elaborate negotiations involved in university-industry relations and about the very mixed composition of the university itself. Balzac offers the classic bourgeois critique of the bourgeoisie, the "biting the hand that feeds you" that does not expect or in most cases even desire meaningful change.

10. David L. Kirp, *Shakespeare, Einstein, and the Bottom Line* (Cambridge: Harvard University Press, 2003).

11. Eric Gould, *The University in a Corporate Culture* (New Haven, Conn.: Yale University Press, 2003).

12. See, for example, Jonathan D. Glater, "Young Lawyers, Swamped by

Student Debts, Flee Public Jobs," *International Herald-Tribune*, 13 September 2003: "Law students, the study found, are now leaving school with an average debt of $77,300—more than twice what they borrowed just 10 years ago. Since 1985, tuition at law schools has tripled and in some cases quadrupled; in the same period, public interest salaries have not even doubled. The story is harsher if inflation is taken into account. According to the National Association for Law Placement, the earnings of lawyers in private practice have risen by 70 percent since 1985—starting lawyers at many big New York firms now make $125,000—while those of public interest lawyers have increased 12.5 percent and of government lawyers just 3.5 percent."

13. Alice Gomstyn, "Nation Faces a College-Access Crisis, Education-Policy Group Warns," *Chronicle of Higher Education*, 2 October 2003, chronicle.com/prm/daily/2003/10/2003100203n.htm. On U.S. participation rates, see one of the reports that Gomstyn cites, *Closing the College Participation Gap*, Center for Community College Policy, www.communitycollegepolicy.org/html/top.asp?page=/html/Issues/Issue.asp?issueID=1.

14. These statistics (p. 62) do not square with those just cited from p. 63. The overall financial picture would be clearer if the various studies used more stable terms of comparison.

15. Derek C. Bok, *Universities in the Marketplace: The Commercialization of Higher Education* (Princeton, N.J.: Princeton University Press, 2003), 3.

16. Bok writes, "If this [example] seems far-fetched, consider the [Coca-Cola] company's effort to organize Coke in Education Day at high schools, complete with a prize for the best plan for marketing Coke-sponsored discount cards, lectures on economics by Coca-Cola officials, technical assistance to home economics students baking Coca-Cola cakes, not to mention help for chemistry classes analyzing Coca-Cola's sugar content, and even an aerial photograph of the entire student body holding up the letters C-O-K-E" (172).

17. In addition to the studies cited by Bok, especially chap. 4, nn. 27 and 28, see Mildred K. Cho and Lisa A. Bero, "The Quality of Drug Studies," Symposium Proceedings, *Annals of Internal Medicine* 124 (March 1996): 485–89; more recently, see J. D. Bekelman, Y. Li, and C. P. Gross, "Scope and Impact of Financial Conflicts of Interest in Biomedical Research: A Systematic Review," *Journal of the American Medical Association (JAMA)* 19 (21 May 2003): 2502–3. Journalistic interest has begun to grow. See Neil Munro, "Doctor Who?" *Washington Monthly* (November 2002); and David Willman, "Stealth Merger: Drug Companies and Government Medical Research," *Los Angeles Times*, 7 December 2003, A1, A32–A35.

18. There are various troubling indicators. The *World Health Report 2000* found that the United States spends a higher portion of its gross domestic product on health than any other country but ranks 37 out of 191 countries in terms of performance (the report is available at the World Health Organization's Web site, www.who.int/whr/2002/en/). Similarly, the United States has abnormally high rates of people without medical insurance compared with other wealthy nations—over 15 percent in 2001 and ranging from 8 percent in Minnesota to over 24 percent in Texas (Robert Pear, "Big Increase Seen in People Lacking Health Insurance," *New York Times*, 30 September 2003).

19. Bok advocates full faculty participation in shared governance of the overall university and rejects claims that faculty participation means managerial inefficiency (e.g., 192). And yet when Bok finally allows himself to express exaspera-

tion, it is directed at faculty, and particularly at faculty entrepreneurs: "When campus authorities let values erode, their moral authority shrinks. Faculty members become less mindful of their responsibilities, less collegial in their relationships, less inclined to take on tasks beyond the minimum required. Individual professors are emboldened to pursue private ventures at a cost to the common enterprise. Inequities and inequalities grow more pronounced, and weaker groups feel impelled to organize collectively to protect themselves. As internal norms give way, formal rules are required to ensure that the work of the institution gets done. If the university will not act, out of fear of offending the faculty, the government will eventually intervene to protect legitimate interests. Bit by bit, therefore, commercialization threatens to change the character of the university in ways that limit its freedom, sap its effectiveness, and lower its standing in the society" (207). Commercialization specifically threatens the university when it weakens the faculty's commitment to the commons, a point to which I return below.

20. These authors neglect staff such as licensing officers, who form an important and particularly informed potential constituency for reform.

21. As this journal is edited at New York University, I should note that my comments here are entirely my own and are informed neither by firsthand knowledge nor by consultation with any NYU personnel.

22. After five years of economic recovery, Russia's gross domestic product is still only 70 percent of what it had been at the end of the Soviet period (Andrew Jack and Stefan Wagstyl, "In 1998 Russia Was Nearly Bankrupt," *Financial Times*, 18 August 2003, 13). By 2002, Argentina's economic collapse caused it to suffer from a 53 percent poverty rate and an official unemployment rate of 22 percent (Hector Tobar, "The Good Life Is No More for Argentina," *Los Angeles Times*, 18 February 2003). To save the model, commentators generally blame Argentina's crisis on its own excess spending. But Dean Baker reports, "Excluding interest payments, Argentina's spending, measured as a share of GDP, remained constant from 1994 until its economic collapse in 2001. Its crisis resulted from higher interest rates, which were in turn largely attributable to crises elsewhere in the developing world. The government also lost a large amount of revenue when it partially privatized its Social Security system in 1994. Had it not privatized its system, Argentina would have had a balanced budget in 2001" (Baker, "Economic Reporting Review," Center for Economic and Policy Research, www.cepr.net/Economic_Reporting_Review/July_28_03.htm [accessed 12 October 2003]).

23. "In the U.S. sphere, Mexico has done very poorly—either in spite of, or because of, its expanding ties to NAFTA partners—with per capita GDP growth averaging less than 1.0 percent a year over the last decade. This is very slow by historical standards, e.g., compared to Mexico's 3.9 percent annual per capita GDP growth from 1960 to 1980" (Baker, "Economic Reporting Review," Center for Economic and Policy Research, www.cepr.net/Economic_Reporting_Review/July_22_02.htm [accessed 22 July 2002]). On the other hand, Malaysia's defiance probably helped its recovery. On 1 September 1998, in response to ongoing instability in capital flows, the Bank Negara of Malaysia issued a document entitled "Measures to Regain Monetary Independence," describing various capital controls that the government would impose (downloaded at www.bnm.gov.my/pa/1998/0901.htm; accessed 2 September 1998). Growth rates in 1996, the last year before the financial crunch in Asia, were as follows: Singapore, 7.0 percent; China, 9.7 percent; South Korea, 7.1 percent; Thailand, 6.7 percent; Malaysia, 8.4 per-

cent; Philippines, 4.8 percent; United States, 2.4 percent. For a brief statement of global trends in income inequality, see Giovanni Arigghi, “Lineages of Empire,” in *Debating Empire*, ed. Gopal Balakrisnnan (London: Verson, 2003): 32–33.

24. For a discussion of the divisions within the Washington consensus by one of the participants at the World Bank, see Joseph E. Stiglitz, *Globalization and Its Discontents* (New York: Norton, 2002).

25. “Comparisons of net domestic product (NDP), the Commerce Department’s measure of usable output,” show the nineties with a 2.78 percent average annual growth rate, which “is virtually identical to the 2.74 percent rate of the eighties, and well below the 4.36 and 3.13 percent growth rates of the sixties and seventies, respectively” (Baker, “Economic Reporting Review,” Center for Economic and Policy Research, www.cepr.net/Economic_Reporting_Review/dec_3_01.htm [accessed 3 December 2003]).

26. For example, a study done for the *New York Times* by the sociologist Andrew Beveridge found that the 1990s saw a “decline in the average income of families in the middle, the ever-changing group comprising the 60 percent of all people who at any given time fall in the center of the income spectrum” (Janny Scott, “In ’90s Economy, Middle Class Stayed Put, Analysis Suggests,” *New York Times*, 31 August 2001). The Census Bureau’s Historical Income Tables are available at www.census.gov/hhes/income/histinc/histinctb.html. Longtime income observer Doug Henwood reports, “Inequality of family incomes in 1998, as measured by the Gini index . . . was at its highest ever since the Census Bureau started publishing annual figures in 1947” (Henwood, “Boom for Whom,” *Left Business Observer* 93 [2000]). This and similar reports (issues 61, 65, 66, 69, 80, and 86) suggest that only the top quintile by income advanced significantly in the 1990s; the other four-fifths stayed where they were or declined. See also Robert Greenstein and Isaac Shapiro, “The New Definitive CBO Data on Income Trends,” Center on Budget and Policy Priorities, www.cbpp.org/9-23-03tax.htm (accessed 23 September 2003).

27. Between 1973 and 1996, the American work year increased 19 percent while Germany’s fell 19 percent, France’s fell 23 percent, and even Japan’s fell 8 percent. Larger increases were experienced in Thailand (13 percent), Singapore (37 percent), and South Korea (38 percent) (Nicholas Crafts, IMF Staff Papers, June 1999, cited in Doug Henwood, “Work Effort,” *Left Business Observer* 91 [1999]: 1). Another comparative finding: “When compared with workers in Western Europe, the average American will work 350 hours more per year, the equivalent of nine extra weeks. Furthermore, a study by the International Labor Organization reports that in 2000, the average U.S. worker put in 199 more hours than in 1973” (Mark Engler, “You May Justifiably Want to Take Friday Off,” *Newsday*, 22 October 2003). A survey based on major world cities suggests that in 2003 Americans worked between 1,800 and 2,000 hours a year, Mexicans and Pakistanis about 2,300, Germans and most northern Europeans between 1,600 and 1,700 (“Paresse, je vous aime” [“Idleness, I Love You”], *Le Point*, 12 September 2003, 81, based on a UBS Bank study, “Prix et salaries” [“Prices and Salaries”], 2003). Such numbers are controversial, but they suggest that Americans now have a work year somewhere between that of the global North and South.

28. Barbara Ehrenreich and John Ehrenreich, “The Professional-Managerial Class,” in *Between Labor and Capital*, ed. Pat Walker (Boston: South End, 1979), 5–45. I use PMC for both *professional-managerial class* and Barbara Ehrenreich’s revised term, *professional middle class*.

29. On the latter dichotomy, see Thomas Friedman, *The Lexus and the Olive Tree* (New York: Farrar, Straus and Giroux, 2000). For a similar, influential reading, see Bernard Lewis, *What Went Wrong? Western Impact and Middle Eastern Response* (New York: Oxford University Press, 2001). For the paperback edition, Lewis's subtitle was changed to a good summary of his thesis: *The Clash between Islam and Modernity in the Middle East*.

30. On the split in the professional cadres, see Steven Brint, *In an Age of Experts: The Changing Role of Professionals in Politics and Public Life* (Princeton, N.J.: Princeton University Press, 1994). Robert Reich naturalized this split in *The Work of Nations* (New York: Vintage, 1991). The economic consequences were described in Robert H. Frank and Philip J. Cook, *The Winner-Take-All Society: Why the Few at the Top Get So Much More Than the Rest of Us* (New York: Penguin, 1996).

31. Richard R. Nelson, "The Simple Economics of Basic Scientific Research," *Journal of Political Economy* 67 (1959): 300. See the similar argument in Kenneth J. Arrow, "Economic Welfare and the Allocation of Resources for Invention," in *The Rate and Direction of Inventive Activity: Economic and Social Factors: A Conference of the Universities–National Bureau Committee for Economic Research and the Committee on Economic Growth of the Social Science Research Council* (Princeton, N.J.: Princeton University Press, 1962), 609–24. Arrow concludes, "We expect a free enterprise economy to underinvest in invention and research (as compared with an ideal) because it is risky, because the product can be appropriated only to a limited extent, and because of increasing returns in use. This underinvestment will be greater for more basic research. Further, to the extent that a firm succeeds in engrossing the economic value of its inventive activity, there will be an underutilization of that information as compared with an ideal allocation" (619).

32. In Nelson's terms, "Applied research is relatively unlikely to result in significant breakthroughs in scientific knowledge save by accident, for, if significant breakthroughs are needed before a particular problem can be solved, the expected costs of achieving this breakthrough by a direct research effort are likely to be extremely high; hence applied research on the problem will not be undertaken, and invention will not be attempted. It is basic research, not applied research, from which significant advances have usually resulted" ("Simple Economics of Basic Scientific Research," 301).

33. Again in Nelson's terms, "The incentives generated in a profit economy for firms to keep research findings secret produce results that are, in a static sense, economically inefficient" ("Simple Economics of Basic Scientific Research," 306). The paragraphs on Nelson are drawn from my *Ivy and Industry*, chap. 8.

34. See David Laurence, "The 1999 MLA Survey of Staffing in English and Foreign Language Departments," *Profession 2001* (New York: Modern Languages Association, 2001): 211–24.

35. For additional evidence of defensive retrenchment, see Stephen Greenblatt, "A Letter to MLA Members," *Chronicle of Higher Education*, 2 July 2002, chronicle.com/jobs/2002/07/2002070202c.htm.

36. An especially good, concise description of the interplay among truth, emancipation, and determinism in the modern history of knowledge is Lyotard, *Postmodern Condition*.

37. Lawrence Lessig, *The Future of Ideas: The Fate of the Commons in a Connected World* (New York: Random House, 2001), 40. This book is a particularly forceful defense of the commons from *within* market thought, modified as noted

below. Similar (and similarly compelling) arguments for nonmarket activity appear in a book that draws on a different (Marxist) intellectual and political tradition, André Gorz, *L'immatériel: Connaissance, valeur, et capital* (*The Intangible: Knowledge, Value, and Capital*) (Paris: Galilée, 2003). For influential discussions by management consultants of the gap between market signals and technological innovation, see Clayton M. Christensen, *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail* (Boston: Harvard Business School Press, 1997); and Geoffrey Moore, *Living on the Fault Line: Managing for Shareholder Value in Any Economy* (New York: Harper Business, 2002).

38. Lessig, *Future of Ideas*, 12. Lessig clearly understands that markets are also control systems and cannot be contrasted with "regulation." This is a rare insight within the PMC as I have described it here.

39. For an ambiguous case, see the discussion of the Microelectronics Advanced Research Corporation in California in chap. 11 of Kirp's *Shakespeare, Einstein, and the Bottom Line*. This empirical work is already part of the writing of research agreements and a vast array of other documents, generally performed in university offices of technology licensing, offices that are not well understood by either faculty or the public.

40. The phrase comes from David Wilson's Museum of Jurassic Technology (www.mjt.org/). The best account of the museum is Lawrence Weschler, *Mr. Wilson's Cabinet of Wonder* (New York: Vintage, 1996).