

# CHAPTER 2

## No Ivory Tower: University and Society in the Twenty-First Century

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“Ivory Tower”, especially as applied to universities and academic life more generally is an odd description whose origins are not entirely obvious. The first usage appears to be in the Song of Solomon, an erotic biblical poem, though Jewish tradition sometimes claims that it is intended to describe the love between God and the people of Israel. In the poem we encounter the phrase: “thy neck is like a tower of ivory,” (i.e. slender, round, and straight; cool and smooth)—obviously no relation to education.

In its more modern meaning—as in looking down on the vulgarities of every-day life, cool and elegantly detached, pure and austere—the sources usually refer to the year 1837, when the French literary critic Saint Beuve charged the poet Alfred de Vigny with evading the responsibilities of life by withdrawing to a *tour d’ivoire* (Hendrickson, 1987, p. 281).<sup>2</sup> Still no relation to universities, but the meaning is closer to modern usage.

The first application to universities or scholars appears to have taken place surprisingly recently. In a 1940 political tract, H. G. Wells (1940, p. 133)

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1 I would like to thank Derek Bok, Richard Chait, and Lawrence Summers for many helpful comments. Matthew Hartley, who provided valuable research assistance, also made many helpful comments. None of these gentlemen are in any way responsible for the contents of this essay.

2 The best source on the general and complicated background of the expression is to be found in Erwin Panofsky’s wonderful and erudite commencement address delivered at Harvard University on June 13, 1948. I am grateful to Prof. Bernard Bailyn for calling this source to my attention.

wrote: "We want a Minister of Education who can...electrify and rejuvenate old dons or put them away in ivory towers". No earlier example of the term applied to higher education seems to exist.

At least in modern times, the ivory tower always represented, on the part of our internal and external critics, more imagination than reality, and that must have included H. G. Wells. For example, in the United States it was the Morrill Act of 1862 that became the basis of many public institutions. The Act stressed agriculture and the mechanical arts: very much in the real world. Similarly, the first department of Tokyo University, founded in the 1870's, specialized in agricultural economics. More recently university scientists played major roles during World War II (on all sides), and many postwar "freedom movements" were closely tied to university faculties and students. These are just a few random examples to indicate that inactive "old dons" were not typical university inhabitants.

As defined pejoratively, the ivory tower is a myth, because in modern institutions of higher education there has always existed tension between service to the public and more contemplative scholarship. What the historian Bernard Bailyn (1991) wrote about Harvard a decade ago remains true for many universities in different parts of the world. "Harvard has never been an ivory tower, a closed universe of scholars talking to scholars and students. It has always been, has had to be, open to the world, responsible to its founding and governing community—hence in the service of society—and yet at the same time devoted to the demands of learning for its own sake. That balance between learning and service is the heart of the institution and it has shifted in emphasis from time to time".

## EXTERNAL PERMEABILITY

The emphasis has, in the second half of the twentieth century, shifted sharply towards "service", if that term includes activities not confined to internal university tasks. The degree of university permeability to outside influences has increased tremendously since World War II, and at a rapidly and still rising rate. External influences on the university have multiplied and they are penetrating its activities with increasing frequency. Government and business are the major sources of influence.<sup>3</sup>

The following item from the *Harvard University Gazette* (2000) is a revealing example. The person being interviewed was a young professor who had just been granted tenure in the applied sciences. This is what she said:

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<sup>3</sup> Illustrations will come from the American experience, and many will be taken from Harvard University, but the issues are quite similar in other institutions and other countries.

“When I came here, the obvious goal was to get tenure. If things didn’t work out, I thought, I could always get a job where I worked less and got paid more. That wouldn’t have been bad. Now that the pressure’s off, I’ve started to ask myself: What’s my next goal? I won my black belt in karate a year ago. I’ve got tenure, a wonderful family, and a thriving business. It’s time to figure out what’s next”.

Is there anything the least bit arresting about this statement? It may depend on one’s age, but the seamless combination of a Harvard (or another university’s) professorship and ownership of a thriving private business—this natural pairing—could seem odd to the more traditionally-minded. Of course, the current pairing of entrepreneurial and academic tasks is symptomatic of that fact that some of what we do matters more and more to society. Universities house intellectual assets that society needs; they also train the “workers” most needed by the knowledge economy. That favors some individuals and institutions, who control new techniques or ideas.

Recently, the president of the University of California asserted that fifty percent of U.S. growth since World War II has resulted from investments in R&D, the principal driver being federally funded research in universities (Atkinson, 1999-2000). No wonder that government and business have taken an ever more active interest in research universities. These days, institutions are frequently urged to focus on more relevant research, and to let the market rule. Critics urge universities to emphasize efficiency and bottom lines; sometimes mergers have been suggested, and also the ruthless elimination of “redundant units.” Government and business care, because what institutions do is expensive and may have major economic consequences.

Just as the outside world has shown greater interest in university affairs, so have universities shown greater interest in the outside world. This can produce attitudes that Richard Chait labels “need and greed”.<sup>4</sup> In the United States, both public and private universities operate under continual pressure to raise revenues. Those segments of the institution that are able to generate commercial backing can become “profit centers,” much beloved by hard-pressed and/or ambitious administrations. Chait asks: will these so-called profit centers rule the roost? Will all our intellectual assets be for sale, and what is the fate of those activities that cannot produce revenues? That would surely include the basic sciences, the humanities, and access for underprivileged members of society.

Thus far, a combination of government, private philanthropy, and internal university resources have been the guarantors of these areas, but that could change. Even the basic sciences, that have received the most powerful public

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4 The examples used by Chait are from the text of an unpublished talk: “Higher Education in a Commercial Environment.”

backing since World War II, require continual protection. Vannavar Bush, whose ideas framed postwar U.S. science policy, understood "...that, in the short term, people would never grasp the true value of basic science. If basic science and applied science were to mix completely freely, the latter would inevitably drive out the former. The only way basic science could survive—something Bush wanted to ensure—would be to completely insulate it from that competition, leaving basic scientists to pursue their work in peace" (Mukherjee, 2002). The institutions created for that purpose were the National Institutes of Health and the National Science Foundation.

Much of this reasoning applies to the humanities and to access for underprivileged groups. The point is simple: some core university activities will always require subsidies and protection from the market. Investment in promising "profit centers" should not come at the expense of activities that have no appeal for the private sector.

Issues of commercial sponsorship that have received the most publicity—and deservedly so—concern preferential access to research results, as a condition of financial support. Especially prevalent in the biomedical sciences, this may involve various forms of conflict of interest, censorship, secrecy, delayed publication, etc. Although still not very large, industry is proportionately growing as a source of university research funding, while federal funding is—proportionately—declining. There is no reason to believe that these trends will change soon. In 1999, over seven percent of university medical research was financed by industry. It should reach ten percent very soon.

Increased external permeability is not confined to commercially sponsored research. Some other manifestations include use of company names for professorial chairs and sometimes associated obligations to funders, instruction designed for and confined to specific companies, and donor relations in general. Furthermore, the pressures associated with external permeability are not confined to commercial interests. The fact that government funds the overwhelming amount of scientific research affects how investigators select their career paths and research topics. Government financial aid policies also affect all of higher education. Political pressure groups also influence institutional behavior, especially in public universities, although it is not clear that these have increased in intensity since the 1960's. They are cyclical and ever-present.

It is not astonishing that under current conditions students are taking openly consumerist attitudes, surrounded as they are by increasingly "real world" influences. A humorous example was recently reported in *The New York Times* (Ayres, 2001). At Yale Law School, students during class used their laptops to play solitaire or to surf the web. Not surprisingly, the

professor was somewhat displeased at these signs of boredom. When confronted, the students “said that the professor has an incentive to teach more effectively when he or she must compete against other more interesting claims on student’s attention.” You could not ask for a better example of market influence in the classroom.

Recently, increasing outside interest in university activities (and *vice versa*) has been supplemented by predictions of radical transformation in higher education, based largely on the presumed impact of the IT Revolution. Indeed, some observers predict the university’s inability to adjust to this new world, and see complete failure in its future: the institution as we know it will have to be replaced by something quite different, perhaps unrecognizable.

James Duderstadt, former president of the University of Michigan, sees a future in which a few “academic celebrities” will become the main “content providers” and sell their “learning products” to students nationally and perhaps internationally, thereby eliminating the need for the majority of institutions to offer introductory subjects (Traub, 2000).

Arthur Levine (2000), president of Columbia Teachers College, forecasts a great diversification among providers of higher education. He sees a division into three categories: the “brick” institutions exemplifying all that is old-fashioned; the “brick and click” combining the old with the new distance learning; and finally the pure “click” enterprises that will confine themselves to virtuality. He also welcomes the possibility of much more individual programming, where students (consumers) set the agenda: in effect, “bespoke” educational programs for everyone. In his opinion, degrees will decline in importance and be at least partially replaced by certification for specific competencies.

The prince of darkness has to be Peter Drucker: “Universities won’t survive. Higher education is in deep crisis. Already we are beginning to deliver more lectures off-campus via satellite or two-way video at a fraction of the cost. The college campus won’t survive as a residential institution. Today’s buildings are hopelessly unsuited and totally unneeded” (Lenzner & Johnson, 1997). Dimensions of educational quality or the likelihood that learning is a social activity have not been a major aspect of these visions.

Niels Bohr is supposed to have said that predictions are very difficult, especially those about the future. That can provide a certain amount of consolation. After all, the president of DEC said in 1977 that there is no reason for any individual to have a computer in their home. DEC is gone; computers are in most homes. Nevertheless, a recurring nightmare is suggested by these visions, at least to those with even slightly traditional orientations. The set-

ting is Harvard University—the country’s oldest—twenty-five years from today.<sup>5</sup>

The buildings of the Harvard campus—the venerable Yard—have been largely converted to condos. They have become redundant: faculty and students are scattered all over the world. Widener Library has become a Golden Age center, very much in demand because so many will live for a long time. The books have been burned; everything is on line. The former president’s mansion is the largest McDonald’s in the eastern United States. All of what once was Harvard University is now housed in one corner of the president’s garage: that space is occupied by a big server. Lucrative “profit centers” have replaced non-performing assets.

Harvard e-university has become a branch of Microsoft Universal University. The president of its Harvard subsidiary is an eighteen year old computer “geek” whose education terminated with a certificate from the Nintendo Play Station Institute. All courses are commissioned nationally and internationally: computer sciences are provided by experts in Singapore; instruction in video game theory comes from Japan; and American scholars are responsible for research and teaching in sports medicine and personal injury law. In effect, Harvard has become an interactive cable station...and then the dreamer may wake up in a cold sweat.

To summarize: the ivory tower does not describe the modern research university: learning and service are always present. External influences are becoming more powerful for many different reasons: the power of government, the search by commercial interests for knowledge within the academy, the perpetual need for more resources within the university, and—not least—the opportunity for individual faculty members to make economic gains. Add to that the predictions just mentioned: unavoidable, fundamental, and quite possibly destabilizing restructuring of institutions. Can universities preserve their objectivity as disinterested researchers and social critics if current trends persist? Will our judgment be unduly affected by commercial considerations? Will even the appearance of outside influences—public and private—weaken the university’s reputation for probity and with what consequences? Can anything be done?

The poet’s voice provides the most elegant, yet cynical and dour summation. In a prophetic Phi Beta Kappa poem (*Under Which Lyre*), W. H. Auden (1946) contrasts the sons of Apollo who represent the establishment, officialdom, and external pressure, with the sons of Hermes, seen as contrarians, free spirits, and therefore perfect faculty members of the old school. Auden writes: “And when he [Apollo] occupies a college,”

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5 The setting could just as easily be Stanford, Wisconsin, Tokyo or Oxford.

Truth is replaced by Useful Knowledge  
He pays particular  
Attention to Commercial Thought  
Public Relations, Hygiene, Sport  
In his curricula.

Athletic, extrovert and crude,  
For him to work in solitude  
Is the offence,  
The goal a populous Nirvana  
His shield bears this device: *Mens sana*  
*Qui mal y pense.*

### INTERNAL PERMEABILITY

None of the above is intended to imply that the impact of rising outside influences has mainly negative consequences. Additional resources are made available, valuable opportunities are provided for some professors and students, and the university becomes more directly useful to society. Faculty members who can or hope to take advantage of current trends do not wish to see any interference with the personal benefits potentially offered: to engage in joint ventures, to run businesses, consulting, and the like. They want maximum freedom; in the words of Deng Xiaoping, “To become rich is glorious.” Administrations are equally eager to explore outside opportunities, and neither faculty nor administration have agreed-on senses of limits.

This enthusiasm is, in one sense, paradoxical. Welcoming increased permeability means tearing-down or lowering walls that have surrounded institutions. These have never been particularly effective, but—as already mentioned—the flows of funds and ideas are greater now than ever before in history. The paradoxical point is that what might be called “internal permeability” presents a rather different picture. Disciplinary barriers and defense of departmental turf remains strong, more so in the humanities and social sciences than in the natural sciences. “Interdisciplinary” is not a magic technique guaranteeing valuable and innovative research results, but it is possible to give examples where harm results from internal barriers, and where we would all benefit if the welcoming spirit to the extra-mural world were applied within our own borders. A good example is area studies.

Disciplinary barriers have hampered the progress of area studies, defined as the analysis of foreign culture and history using the tools of social science. Area studies combine knowledge of country, language, and culture with training in a social science discipline. Russian or Chinese or Latin American

studies would be typical subjects. From the point of view of traditional departments, the marriage of “area” and “discipline” has never been very happy, and nowhere is this more evident than in economics—the queen of the social sciences.

Economists have fashioned an austere and rigorous discipline based—somewhat vaguely—on the model of the natural sciences. In their internal pecking order no one stands higher than theorists, today using almost exclusively the sophisticated language of mathematics. This methodology—this adoration of science—means that culture and history play almost no role in analysis. Business cycles are a worthy subject of study, but not Japanese or Argentinean business cycles. After all, one does not study Japanese or American physics; we simply study physics.

Economics has within its ranks very few regional specialists as a result of this internal disciplinary barrier: a very low value is placed on the cultural and historical skills that these scholars have acquired with great difficulty. As the other social sciences move to imitate economics—e.g., the growth of the rational expectations school in political science—this attitude will undoubtedly spread.

Does it matter? One cannot be certain, but the situation observed in recent years where social scientists offer advice to troubled countries while possessing minimal knowledge of local societies, combined with the frequently poor results, provides encouragement to question the intellectual *status quo*. It has to be admitted, however, that the record of those with deeper country knowledge is not obviously better. In any case, the issue is not economics, social science, or even interdisciplinary studies. The question is: why are academics so welcoming to the opportunities offered by the private sector, an activity frequently justified by the promise of expanded intellectual horizons, and so resistant to opportunities offered by their intellectual neighbors? Perhaps it is that *vis-à-vis* outsiders academics can pose as fountainheads of wisdom while hoping to gain money, excitement, and sometimes fame. Colleagues from other departments are more likely to cramp our style, and to offer uncomfortable criticisms with fewer tangible rewards.

Many—including the editors of this volume—believe that the increasing external demands on universities require internal adjustments: institutions must re-organize themselves to carry out new roles, usually of an interdisciplinary character, without sacrificing their values, and that requires lowered internal walls. How can this be achieved? It will not be easy.

## DRAWING LINES

When one mentions disturbing predictions, nightmares, commercialization, and similar unpleasantness, there is an inclination to interpret these con-

cerns as opposition to change; as reactionary; as quaintly old-fashioned. That would be a mistake. Universities have adapted throughout their long histories, otherwise they could not have survived for nearly a thousand years. Further change is and should be coming, but does change mean that anything goes?

There is a famous Chinese curse: may you live in interesting times; and we surely do. Living in interesting times while standing on a “slippery slope” describes the current situation for many universities, and to retain institutional balance requires the capacity to recognize old and also to draw new lines that define acceptable and/or desirable conduct and policy. These are lines that, in principle, we will not cross. Unfortunately, when it comes to institutional standards in higher education, there seem to be very few general principles that enjoy wide acceptance. We tend to believe that the lines we will not cross resemble Justice Potter Stewart’s definition of pornography: “I know it when I see it.” That will not work because the decisions that face universities are much too complicated. To produce a reasonably complete set of lines not to be crossed may not yet be possible, but a few examples may be useful.

The “four essential freedoms of a university” were cited over forty years ago by Justice Felix Frankfurter in the famous *Sweezy v. New Hampshire* case.<sup>6</sup> He wrote: “A university ceases to be true to its own nature if it becomes a tool of church or state or any sectional interest.” Frankfurter then enumerated the four essential freedoms: “to determine for itself on academic grounds who may teach, what may be taught, how it should be taught, and who may be admitted to study.”<sup>7</sup> Subject to legal constraints that may apply especially in public institutions—for example, the state may mandate aspects of admissions policy—this is a declaration of independence for higher education.

Secondly, another reference to Bailyn’s article (1991) of a decade ago entitled “Fixing the Turnips.” He begins with Bertrand Russell’s visit to the University of Wisconsin in the 1930’s. Russell noted, with some disdain, that in Wisconsin “when any farmer’s turnips go wrong, they send a professor to investigate the failure scientifically.” From the perspective of a Cambridge scholar, those were unworthy academic assignments. Bailyn, writing about Harvard, takes a different position: “In recent years we have had a rich and beneficial turn to public service, mainly in the professional schools. We are positioned as never before, in our powerful professional faculties, to fix the turnips when they go wrong, indeed to see to it that they grow properly in the first place. But as we begin a new transition, I hope we can conceive of

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6 Frankfurter was quoting from a statement by a group of senior scholars in South Africa.

7 Italics supplied.

the balance shifting back toward the University's primary faculty—toward the magnet of learning, toward disinterested study, toward intellectual pursuits not for extrinsic purposes but for their own sakes. We are in no danger of forgetting the turnips. *The danger is that the University will become a mere holding company for highly publicized, semi-independent service institutes, its original core faculty still respectable but old-fashioned, diminished, and by-passed in importance.* I hope in the years ahead we will above all honor our first commitment, which an earlier Harvard president, Josiah Quincy, defined simply as “giving a true account of the gift of reason.”<sup>8</sup>

Frankfurter and Bailyn may sound very abstract, but they do provide—indirectly—suggestions for lines that should not be crossed; at the very least they alert us to issues that should be carefully examined if the full implications of actions are to be understood. The relevance of these concerns can be demonstrated by some examples touching on collegiality, commercialization, and conflict of interest.

Increasing commercialization and conflict of interest are twins—Siamese twins—and current problems are especially noticeable in biotechnology and some other fields where technology transfer is promising, although the emphasis remains on promise. The total value of university technology transfer in the year 2000 has been estimated at only about \$750 million, with 40 percent being biomedical and the rest in engineering. Symptoms of pathology are numerous, especially in biomedical research: secrecy, delayed publication, drugs tested by those with commercial interests in the product, etc. For example, studies of cancer drugs funded by pharmaceutical companies were 1/8th as likely to reach unfavorable conclusions as non-profit studies. (In part, this could be the result of selecting only those studies with the greatest commercial promise—but only in part.) Data show that scientists frequently fail to reveal their ties to industry in publications. In one very controversial case, Novartis received a voice inside a Berkeley department concerning the distribution of research funds that the company had donated (Press & Washburn, 2000). Few favor these abuses, much has been written about them, and there is growing agreement that stricter rules are needed. Responsible academic leaders agree that technology transfer and university collaboration with industry is needed and good for all. They also agree that transparency and monitoring should provide context. The dean of the Harvard Medical School, Joseph Martin, has been a leader in the movement to push for stricter rules (Martin, 2001; Moses III & Hamilton, 2002).

It is entirely reasonable for the biomedical sciences to be the center of attention when considering the potential benefits and difficulties of external permeability. In terms of research promise and public support, they rank at or

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8 Italics supplied.

near the very top, and it has been recently suggested by President Lawrence Summers of Harvard and others that the next Silicon Valley will specialize in biomedicine. Even if this proves to be an accurate forecast, it is useful to consider some less obvious and perhaps less prominent issues, because the manner in which the university interacts with the world beyond its walls may eventually affect a much broader range of activities.

As an example, the Harvard Business School offered and may again offer advanced management courses exclusively for certain (large) companies. Perhaps the school was extremely well compensated for these offerings; it is not the most essential issue. The School is wealthy enough not to have to take assignments only for money, but do these exclusive arrangements violate any or all of the “essential freedoms?” Surely big “customers” can influence and perhaps even dictate who teaches; they will insist on, in their estimation, the very best instructors. Customer certainly can influence the curriculum, and will also largely determine who is in the classroom. Do these arrangements represent faculty decisions reached on academic grounds?

It is possible that the school engages in this practice because these programs open company doors and lead to original and valuable case-based research. But a university embodies many features of a public good: it is tax exempt, possibly tax financed, and the beneficiary of gifts representing generations of donors. In principle, its services should be available to all, with selection based above all else on merit. In the United States, flagship institutions have tried for many years to minimize the influence of students’ ability to pay by awarding scholarships and loans. Do company-specific programs represent a retrograde step and a method of “buying your way into Harvard?” Are some students treated better than others? At the very least these are policy issues that deserve university-wide discussion that include ethical considerations.

“Drawing lines” can also become a concern in relations with donors, who—as a group—are becoming increasingly important to universities, and who also represent a growing source of outside influence. Today, even public universities depend heavily on private philanthropy, as the proportion of state support has fallen: state support in the range of 20 to 30 percent of total budget is not unusual. Private universities, of course, have always had to depend on individual non-governmental donations. Donors have their own priorities and agendas and sometimes they clash—or should clash if standards prevail—with internal university policies or plans. This is certainly not a new problem, but it is one that will grow in significance as all research universities become increasingly dependent on philanthropy. It is much more likely that explicit policies and rules will have been directed towards government funding, and perhaps that should be supplemented by more attention paid to acceptable rules for governing private philanthropy. What happened

at Yale is an example of problems that may become more common in the future.

About a decade ago, Yale received a \$20 million gift to fund an undergraduate program in Western Civilization. Aside from the inherent interest in the subject, at a time of great financial need Yale would have been able to support some non-incremental senior chairs and to appoint some new junior faculty members. All of this happened during a hiring freeze. The donation was solicited and accepted by the president and dean with minimal faculty consultation; at least that was the opinion of many faculty members.

Problems emerged very quickly and they were clearly related to political divisions. The president and dean were considered advocates of very conservative views. Many professors believed that a new program should have had prior faculty approval, because under a system of shared governance they should have the authority to determine on academic grounds “what is taught.” The donor became exasperated by internal Yale fights and by ensuing severe delays, and ultimately asked for a voice in the choice of new faculty appointments for the proposed program. The new president of Yale immediately understood that a line had been crossed—who teaches is entirely determined by the university—and amidst much public astonishment the gift was returned.

The point is that this incident is not that unusual. Gifts should be returned when conditions develop that cross a line, and some should not be accepted in the first place, no matter how hungry the beneficiary. A transparent set of internal institutional standards would be very useful because subtle questions—more subtle than at Yale—surface quite easily. For example, what should be done if a donor is willing to give a professorial chair provided an individual of his or her choice becomes the initial occupant *and* assume that individual happens to be one of a number of reasonable choices? Or, assume that the donor is very knowledgeable about the subject of the chair and asks to be a member of the search committee? These examples are real and the answers are not entirely obvious and would be worthy subjects for the development of general policies.

Possible problems also arise every time a chair, a building, or a fellowship is named after a commercial enterprise. Chait’s “need and greed” examples are arresting. Professorial chairs named after companies are now common: examples would be the FEDEX and Yahoo! professorships. What about the Bank of America Dean of the Haas Business School at the University of California at Berkeley or the Colgate-Palmolive Professor of Dentistry at the University of Queensland in Australia? Does using these names imply endorsement of the company, perhaps the University of Queensland’s preference for Colgate over Crest? (After all, what is the incentive for a company to associate its name with a university?) At one time, Harvard did not allow

positions to be named after commercial enterprises—e.g., a Henry Ford II professorship was possible, a Ford Motor Company chair was not permitted—but that policy was abandoned well over a decade ago. Sometimes chairs named after companies carry special obligations *vis-à-vis* that company. At Wayne State University the holder of the K-Mart Chair in marketing has the duty to provide some company training. In the current climate, drug companies might have a particular interest in featuring their names at universities.

Very recently, a former Harvard president asked the following provocative question: should the university accept a gift of \$2 billion if the donor received the right to place a sign on the pedestal of the John Harvard statue that announced “Things go better with Coke.” The answer is obvious, *but why not?* It is an awful lot of money that could be used for socially worthy purposes such as scholarships for needy undergraduates. Might one turn-down \$2 billion but accept \$4 billion?

The answer lies in “giving a true account of the gift of reason.” Advertising promotes many (mostly?) meaningless distinctions. Pepsi and Coke, Crest and Colgate, Ford and Chevrolet, Fidelity and Merrill may represent different consumer preferences, but those of us who travel under the banner of *veritas*—all universities—should avoid lending their collective authority to trivial or, at best, purely commercial distinctions and endorsements. It undermines our capacity for truth and objectivity, or at least the public’s belief in our objectivity, and those are the characteristics that should distinguish universities in society. There are few reasons for a commercial company to put its name on (say) the Yale Bowl except to associate its services or products with the values or influence represented by Yale, enhanced by the growing public stake in higher education. And there is no valid reason for Yale to provide this particular endorsement—rather than to a competitor—save for a certain sum of money.

In an era when questions of this type will arise with increasing frequency, mainly as a consequence of rising external permeability, and when “lines” and “general principles” are few and unclear, the role of the faculty becomes particularly important. Their sense of academic values should be the university’s first line of defense against potential abuses; because of obvious conflicts of interest, the faculty should not be the final line of defense: that role, all too often performed imperfectly, belongs to the president and to trustees. It is the faculty’s responsibility to render judgments on academic grounds and that implies shared governance. It is the foundation of collegiality. A faculty is not an individual; it is a group of colleagues, and that is what gives authority to faculty opinion. Today, however, in many American universities some fifty percent of the faculty are adjuncts, frequently an underpaid, exploited, gypsy proletariat with minimal or no rights. That situation is antithetical to colle-

giality and thus another line has been crossed. At many of our proudest research universities, that same line has been crossed with the overuse of teaching fellows and post-docs. That they are used mainly as apprentice scholars has become a pretense. Just as with adjuncts, it has become a form of cheap labor and destructive of collegial values. Reducing the proportion of adjuncts, teaching fellows, and post-docs means moving back inside the line that delimits our basic values.

Enormous gaps in compensation between fields of specialization—another consequence partly related to increasing external permeability—also weakens shared governance and collegiality. The issue is not only the usual suspects of law, medicine, and business versus everybody else. What happens within the category “everybody else” is equally important. Not only are the average salaries of professors in the humanities and similar fields much lower—similar fields simply means no outside demand for a particular type of scholarship—but the large majority of its constituents has few opportunities for non-academic earnings. We have developed a two sector society: the haves who love market forces and the have-nots whose benefits from these forces are at best indirect and always small. The market creates and exaggerates differences. The “haves” get both higher salaries and outside income. Even if the numbers who benefit from the market are not very large, and that represents conventional wisdom although accurate facts are hard to obtain, the resulting psychological divide (read envy) does affect collegiality.

In general we deal with this problem by refusing to talk about it, and that is not surprising given its complexity and sensitivity. How can market forces be ignored without preventing a decline in faculty quality? How can market forces not be resisted if they undermine principles of collegiality that are fundamental to peer relationships? It could be claimed that collegiality in the American research university is already a lost cause. Research institutions are too large and too diverse, and it is simply not realistic to seek common ground between a business school and a divinity school or between a classics and a biochemistry department. And yet, a university should reflect some common values and standards, otherwise the future may lie in “...a mere holding company...for semi-independent service institutes...” that will be indistinguishable from commercially-based research centers. “Semi-independence” would endanger the special investigator freedom—“science driven by curiosity”—supplemented by superbly able graduate students, that characterizes university-based research and that has proved so innovative (Mukherjee, 2002). This applies not only to the sciences.

There is no wholly satisfactory answer. It is clear that market forces cannot be ignored in the American setting where competition between universities is an important element in raising quality. Competition may, in considerable measure, account for the internationally high standing of American higher

education. Market forces have to be reflected in compensation and total faculty income. Yet there are ways to mitigate resulting distortions: higher subsidies for some activities and perhaps a tax on wealthy enclaves as a means of some income redistribution. It is a palliative, but valuable just the same.

Many different situations have been mentioned where old “lines” need to be remembered and new ones need to be created. There is a great deal of diversity among the problems, but there is a common denominator: university connection to the world beyond its walls creates the challenge to traditional values and practices. A balance of activities in a research university that is not sufficiently reflective of its fundamental purposes is one of the dangers. Bertrand Russell was wrong. We should fix the turnips and make sure that they grow correctly in the first place. One of our prime social purposes is, in Derek Bok’s (1991) words, “to contribute the knowledge that will help society discover how to overcome its pressing problems.” But neither lure of gain nor public clamor should allow the university to neglect “disinterested study...and intellectual pursuits not for extrinsic purposes but for their own sakes.” Among other things, this means that the university’s role as a preserver of culture is not just tolerated: it is generously nourished. There is room for optimism. In 1911, Max Weber warned that universities are becoming “state capitalist enterprises managed for purposes external to learning for its own sake and freedom of enquiry is beginning to give way to the production of knowledge useful to the state for technological and economic reasons....” That did not happen in democratic societies and if the external and internal changes are carefully considered, it will not happen in the future (Heyde, 2001).

## FUTURE TASKS

Two tasks face institutions in light of the environment envisioned in this volume: first lowering internal barriers, and second the control of external permeabilities. The latter has already been discussed from many points of view. Essentially following the model of discussions within the biomedical sciences is a good first step: moving towards stricter rules with enforcement and transparency. In addition it would be useful to conceive the consequences of external permeability more broadly, with some attempt to implement changes that result from that broader scope.

Lowering internal barriers has received less attention even though they undoubtedly have a great effect on intellectual outcomes. A general policy prescription is impossible because institutional traditions vary so much, but an example may be helpful. Because of the author’s experience, Harvard will, once again, provide the illustration.

Harvard is famous—infamous would be a more accurate term—for the autonomy with which its faculties or schools operate. The slogan “each tub on its own bottom” describes the management philosophy: each faculty responsible for its own expenditures, revenues, and endowments, with the central administration largely unable and temperamentally unwilling to shift resources from one faculty to another. At Harvard even the academic calendars differ by faculty!

This particular style has historically led to some very positive results: management more powerful and efficient at the faculty level, and entrepreneurship strongly encouraged because one cannot count on rescue from the center. However, the “tub system” does create obstacles for activities that need to reach across faculties and departments. If interfaculty and interdisciplinary needs are becoming more urgent, the Harvard structure could be—already may be—counter-productive. About a decade ago, this became a matter of concern and, without in any way abandoning advantages of tub-style management, steps were taken to draw the university closer together. The method was to select a number of broad research and teaching topics that obviously were beyond the intellectual capacity of any one faculty, and then to organize programs, with seed money, at the level of the central administration, responsible not to faculty deans but to the provost and president.

Four topics were selected: children studies; mind, brain, and behavior; environmental studies; and health care policy. The topics varied greatly in style and character. Environmental studies became a new interdisciplinary undergraduate major. Health care policy became a Ph.D. program. The initiative for children focused on interdisciplinary courses and research. Mind, brain and behavior was the originator of cutting-edge research. These were beginnings and some were more successful than others, but all drew on the intellectual capital of the entire university, and each interfaculty initiative became a place where one’s tub identity ceased to be the most important name-tag.

Traditions vary from university to university. At some, interdisciplinary teaching and research will come more naturally than at others, but creating special facilitating structures will be needed in all universities.

We end as we started, with the ivory tower. As a general description of the modern university it was always flawed. As a description of the life-style of individual scholars, the term becomes much more valid. The art historian Erwin Panofsky (1948) in his defense of “tower dwellers” recognizes that they cannot be as active “as those who live on the outside.” But perhaps from their high perch they can see farther and “signal along the line from summit to summit...In so doing they will automatically contribute to the making of our world.” A pure mathematician friend of Panofsky’s (1948) said to him

with some concern: no one can prevent mathematics from being occasionally applied!

Therefore it is a great mistake to think of ivory tower in a pejorative sense as accurately applying to those university activities that appear of little immediate or practical importance: typically the humanities, history, and some basic sciences. The great triumphs and disasters of the twentieth century were less the product of technology transfer, applied sciences, or business schools, than the consequence of positive or deeply distorted human values.

To say it again, universities are among the oldest continuing institutions in the world, and that would not have been possible if they did not adapt to world conditions; and so it will be in the future. Periods of rapid change such as the present make it mandatory for institutions to operate within reliable internal rules, which have been referred to as lines that should not be crossed. The identification and development of these lines is an urgent task for faculty and administration. The difficulties of creating new norms are magnified by the competitive environment in which higher education operates. The price of virtue can be made prohibitive, especially for institutions whose resources are extremely limited. This is surely a case where the rich should lead by example. Yet if the dangers are understood, perhaps collective action that would not damage institutional interests would become a possibility.

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