

**ENHANCING INSTITUTIONAL REVENUES: CONSTRAINTS,
POSSIBILITIES, AND THE QUESTION OF VALUES**

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It would be badly wrongheaded to assert that colleges and universities were until recent years somehow above the unruly fray of commerce. High-minded notions of the public good, with the accompaniment of guidance and support by governmental and spiritual organizations, have indeed long been elements in higher education, indeed of learning more generally, but the first of the modern universities were market-driven in the most basic, foundational sense (Kerr 1993).¹ The organizational form of the modern university, now largely taken for granted, originated not from the highest reaches of government and church, with the inevitable accompaniment of lofty rhetoric, but rather from old-fashioned demand at 'the ground level.' In these early exemplars, adequate revenues from paying customers were essential for survival.

Perhaps inevitably, this simple, ground level marketplace came to be supplanted by larger forces. Church and state gradually came to be more intimately involved in subsidizing the emerging institutions. In the US especially, other actors also became financially involved. Largesse from businesses, charitable organizations, alumni, and friends enabled institutions to persist, prosper, and also to price low, despite rising costs.

Through the 1800s, these diverse non-tuition revenues were directed toward supporting the costs of teaching and learning, i.e., the heart of these early collegiate operations. Revenue complexity grew further in the late 1800s and into the 1900s, however, as external research contracts, university hospitals, museums and athletics each began to involve new campus activities and provide additional sources of funding. By the 1970s, institutional revenues were far more diverse than a century earlier, and observers were noting the advantages of variety. Economist and college president

Howard Bowen (1980) observed that leaders continually seek funding growth because they operate under a 'revenue theory of cost:' new revenues are always being sought in order to pursue excellence, prestige, and influence. Because there is no limit to what might be spent in pursuit of those goals, institutions will always raise and spend all the money they can. Bowen's analysis echoed that of some of his contemporaries: 'a workable twentieth-century definition of institutional autonomy [is] the absence of dependence upon a single or narrow base of support.' (Babbidge and Rosenzweig 1962)

For contemporary institutions, the point is more salient than ever. The financial complexity of the enterprise is greater than ever (Winston 1999). Economic downturn and political change have squeezed revenues from governments (Hovey 1999; Toutkoushian 2001; Schmidt 2004). Students' acceptance of rising prices has somewhat offset this trend, but not entirely and legislators and the public resist sustained, significant rises. In public institutions, policymakers seem to be asking the impossible, expecting improvements and expansion when only maintenance of effort seems financially in reach (Clark 1998) and gaps have emerged in spending relative to private institutions (Alexander 2003; Immerwahr 2002). Making matters worse, labor, construction, plant maintenance and health-care costs have risen dramatically, lessening the likelihood of significant overall cost containment.

Clearly, the context demands new funding sources and institutions appear to be responding. By the fall of 2000, tuition and fees and government appropriations were accounting for only about half of all revenues in public four-year institutions, and auxiliary enterprises, hospitals and non-degree-oriented educational activities were

accounting for a quarter (24.9 per cent) of all revenues (Knapp et al. 2002), a pattern notably different from earlier years. Indeed, in public institutions, revenue mixes are beginning to resemble those of private institutions and it is becoming appropriate to label much of public higher education 'state-assisted' rather than state-supported. Even in private four-year institutions, tuition and fees accounted for only about one-fourth (24.4 per cent) of all revenues in 2000 (Knapp et al. 2002).² Thus, institutions increasingly appear to be accepting the potential benefits of diversifying revenues (Ehrenberg 2000; Breneman 1997; Clark 2002). The more difficult issue is not whether to diversify, but rather how. In the best case, institutional leaders can develop educationally valuable revenue-generating activities integral to campus values and missions. Less edifying are defensible pursuits that simply help institutions survive under austere conditions. Most troubling, of course, are new activities that may threaten core, cherished academic values.

3.1 New revenue streams

Instructional initiatives, research and analysis initiatives, pricing initiatives, reforms in financial decision-making and management, human-resource initiatives, franchising, licensing, sponsorship and partnering arrangements with third parties, initiatives in auxiliary enterprises, facilities and real estate, and development-office initiatives are all aspects of diversifying institutional revenue streams worthy of attention and review here.

Instructional initiatives

New providers, new markets and new technologies are changing the grounds on which faculty and institutions make academic decisions, and sometimes can even endanger the financial resilience of institutions' core academic programming (Eckel 2003). Whether these developments pose threats or opportunities varies by context (Davies 2001), but whichever the case, many institutions have been responding aggressively, targeting such new instructional markets as corporate learners, professional enhancement learners, degree-completion adult learners, pre-college (K-12) learners, remediation and test-preparation learners, and recreational learners (Sekera et al. 1999; Oblinger et al. 2001; Levine 2000a; Kerr 2002). Summer courses, short courses, online courses, credentialing programs in areas demanded by the labor force (e.g., information technology, education, nursing) and offerings abroad (for example, see Primary Research Group 1997; Hinchliff 2000; Wills 2005) are among the offerings being provided to specialized market niches at specialized prices. Often, such offerings are provided with funding by states or in concert with corporate sponsors or for-profit subsidiaries.

For Levine (2000a), the 'sweet spot' for mainstream higher education's financial survival is combining 'brick' and 'click': offering learning opportunities both online and through a traditional physical campus. Critics suggest that the sweet spot will be illusive. Collis (2002) suggests that, for non-elite institutions without superior 'brands,' online education may in fact be a losing proposition (a prediction supported by the very visible failures of several major, highly touted distributed learning initiatives (Oblinger et al.

2001; Hitt and Hartman 2002). Collis also predicts that online corporate training will be a larger and more profitable market than online academic education.

Partnerships can be an especially effective way to balance the risks in instructional innovations (Collis, 2002). Partnerships can provide needed human and financial capital, lessened risk and minimized brand exposure for generating revenues in distributed education, where early outlays for content development, technical infrastructure and marketing can be substantial (Katz et al. 2002).

Research and analysis initiatives

With support from enabling federal legislation, patents and licenses based in university research have risen markedly since the 1980's (Geiger 2002; Press and Washburn 2000; Blumenstyk 2004), especially in such areas as computer technology, medicine and biotechnology (Wellman and Phipps 2001; Etkowitz et al., 1998). Viewing potential returns from patents and licenses and facing rising financial pressures, many universities have reorganized and repackaged their research and analysis efforts (Feller 1997; Karr and Kelley 1996; Kozeracki 1998; Thursby and Thursby 2002; Lewis and Hearn 2003). Specifically, research institutions have moved increasingly toward creating new organizations to generate revenues from research, including for-profit subsidiaries as well as units to nurture start-up firms via consulting and financial support (Leslie and Slaughter 1997; Johnstone 2002; Levine 2000b). In addition, institutions have begun to provide products and fee-for-service offerings for off-campus parties (Wellman and Phipps 2001; Geiger 2002).

Overall, the evidence on mission, governance and cost-effectiveness effects for these efforts is quite mixed (Blumenstyk May 2003). Experiences at Stanford, Berkeley, and a few other elite institutions suggest that technology-transfer initiatives can pay off spectacularly when core expertise and energy are present (Clark 1998; Geiger 2002), but many initiatives fail to break even, much less return net revenue to their home institutions (Shane and Stuart 2002; Powers 2003). Similarly, the evidence for ‘research parks’ affiliated with campuses is quite mixed (Hebel February 2003). This realization has prompted reconsideration, redirection and retrenchment of technology-transfer efforts (Feller 1997; Press & Washburn 2000; Geiger 2002).³ While academic research activity provides undeniable benefits to the public and institutions, its potential for increased financial returns remains ambiguous (Nicklin 1992a; Mansfield 1995).

Pricing initiatives

While some institutions have taken the radical step of lowering prices for their instruction, the general trend in recent years has been toward steep rises in tuition and fees (Jaschik 2005). These increases have been documented and discussed extensively, but two other trends have been less noticed: unbundling and differentiated instructional pricing.

Increasingly, undergraduate education charges have been unbundled into tuition plus specific ‘user fees’ for technology, athletics and other services (Wellman and Phipps 2001). This has allowed some institutions to increase revenues while restraining highly visible tuition rises. The adoption of new user fees makes pricing and costing more

transparent to students and families, and tying pricing to discrete ‘objects’ can also make institutional decision-making more informed and effective, but expanding user fees may or may not raise total or net revenues for an individual institution.

Another pricing approach of increasing institutional interest is tuition differentiation. Tuition may be varied by the offering unit, by the instructional or facilities costs associated with a particular course offering, by the timing of the offering, by the course level, by the physical location of the course, by the student’s major field and degree level, by the number of credits being taken or previously accumulated by the student, and by student residency status (Yanikoski and Wilson 1984; Wetzel 1995). Tuition has long been differentiated for out-of-state students and for students in medicine and law, but institutions are now beginning to experiment with finer distinctions (for example see Hebel 19 September 2003). The online education and distance education markets are prime grounds for such experimentation in tuition and fees (Collis 2002, p. 190).

There is no guarantee that unbundling or tuition differentiation will generate additional revenues and, in particular, additional *net* revenues (i.e., revenues remaining after offsetting costs, such as student-aid awards and tuition discounts; see McPherson and Schapiro 1998; Johnstone 2002). Econometric analysis of the responses of students and families to different prospective pricing and aid configurations can aid in projecting revenue effects of tuition-differentiation initiatives.

Reforms in financial decision making and management

Changes in investment approaches, debt strategies, financial operations and capital spending can improve institutional revenue streams.⁴ Historically, colleges and universities have employed investment approaches that are conservative, relative to other major investors, and done well doing so (Morrell 1997; Spitz 1999), but some have recently become more aggressive, pursuing program trading and participation in foreign, arbitrage and options markets. These arenas require specialized expertise, legal charters, regulatory contexts and limits to leaders' risk tolerance may deter such activities in many institutions (Geiger 2002).

Several other financing innovations can facilitate new revenue generation. Institutions often rely on debt financing when initiating new projects (Standard and Poor 2005) and revenue bonds (which are repaid out of future returns) can be more appropriate than general-obligation bonds when the acquisition of new revenue streams requires significant front-end investments and seed funding is unavailable. The risk in such instruments, however, is that revenue streams may be uncertain for dramatically new initiatives (Wellman and Phipps 2001). Residence halls, for example, have far more predictable returns than, say, an online-education launch.

The intelligent design of internal financial systems can also play a major role in revenue improvement. Revolving and incentive funds can be created to support teaching, research and improvements in physical plant (Wellman and Phipps 2001). Similarly, institutions can encourage entrepreneurial faculty behavior by adopting decentralized

budgeting systems that distribute revenues directly to units that provide lucrative returns for the institution (Priest et al 2002).

Human-resource initiatives

Institutions can refine individual compensation and promotion processes to provide more explicit incentives (for example, salary bonuses) for revenue-generating activities by faculty (Hearn 1999). Conversely, tightening institutional regulations concerning faculty consulting can help ensure that institutions fairly garner revenues associated with faculty work done directly or indirectly under institutional auspices.

Franchising, licensing, sponsorship, and other partnering arrangements with third parties

Collaborations with externally based partners can be fruitful for institutions (NASULGC 1997). For example, alumni and other support organizations may be attracted to tours and camps, conferences, concert series, museum showings and athletic competitions. Vendor partners can potentially bring expert staffing as well as useful discounts and incentives to those activities, thus directly or indirectly raising net revenues (Wellman and Phipps 2001).

Partnerships in instruction can take many forms, including online applications, campus-based portals, online procurement, online course delivery, supplemental content provision, online library services, online textbooks, advising and tutoring (see Katz et al.

2002). Many such partnerships focus on distributed learning and distance education (Levine 2000a).

Sometimes, new revenues may be generated simply by exercising control over the ways third parties use university resources, including the 'brand.' Colleges and universities were slow to realize the revenues potentially generated by enforcing legal rights over distinctive logos and emblems (Grassmuck 1990), but most institutions now closely monitor sales of institutionally themed merchandise in the pursuit of potential revenues from sales.

The goal should be to establish close association between the use of university assets by others and the revenues gained by such use. For example, institutions strive to ensure that food and drink companies, athletic-gear manufacturers and others provide appropriate payments in exchange for exclusive rights to vend on campus, sell themed items or have their names and logos displayed prominently at university athletic events or on university facilities.⁵ Such arrangements can be attractive to corporations and can generate substantial additional revenues (Wertz 1997; Arnone 2003).⁶

Initiatives in auxiliary enterprises, facilities, and real estate

Revenues from auxiliary units such as athletics departments, bookstores, hospitals and dining facilities quite often do not exceed costs (Nicklin 1996; Geiger 2002; Kirp 2003; Zimbalist 1999; Arnone 2003). Upgrading athletic or dining facilities can sometimes increase corporate and consumer demand and thus revenues (Swanquist 1999;

Koger 2001). Relatedly, outsourcing certain auxiliary services can bolster revenue generation (Davies 2005).

Creating new auxiliary services can also pay off. Debit cards for purchasing on-campus products and services are increasingly familiar (see Nicklin 1993), and many institutions are extending use of the cards to off-campus businesses willing to pay a fee for greater access to the spending power of the institution's students, faculty and staff. Debit-card programs encourage spending on campus, provide institutions interest income from funds deposited onto the card accounts and attract fees from outside businesses seeking student and faculty business.

Sometimes, revenues are enhanced simply by new pricing for popular services and products. In major-revenue sports, many NCAA Division I institutions are raising prices for season tickets and 'priority seating,' confident that the demand for such seating is sufficiently strong. Sometimes such price rises are overt, but sometimes they are indirect, promising superior tickets to those making generous institutional or booster-club contributions. Increasingly, institutions are sending their formerly free alumni magazines only to those who have purchased alumni-society memberships or provided gifts, and many such magazines are upgrading features and accepting paying advertisers. Also, alumni organizations within institutions are making arrangements to profit from formerly complimentary linkages to other services, including banking services and home and health insurance (Leder 2002).

Institutions are also garnering additional revenues from classrooms, residence halls, recreational areas and undeveloped land (Kienle 1997; Biddison and Hier 1998).

These assets can be put to use for educational or recreational offerings, retirement communities, cooperative revenue-generating efforts with third parties or third-party leases; in addition, real estate can be sold, rented or used as collateral to secure financing for new entrepreneurial initiatives (for example see Horwitz and Rolett 1991; Nicklin 1996; Wills 2005).⁷ Referring to his institution's decision to rent space to a cell phone company for transmission towers, one financial officer told the Chronicle of Higher Education, 'They install it. You forget about it, and you just get the checks each month.' (June and Fain 2005, p. A21)

Development-office initiatives

Former SUNY chancellor Bruce Johnstone has wryly noted that, 'No source of revenue is quite as benign and reliable as revenue from unrestricted endowment, once the institution has it' (Johnstone 2002, p. 32). Many institutions are aggressively expanding their pursuit of such funding (Hirsch 1999; Strout 2005), but the dramatic growth of the 1990's has ended (Blumenstyk March 2003). Few colleges or universities have alumni willing and able to contribute sizable unrestricted funds and most institutions have to work hard to build a self-sustaining development effort. The costs of that effort, viewed comprehensively and objectively, can be daunting to leaders. An emphasis on private giving can also 'unbalance' institutions, tending to favor certain fields and certain aspects of institutional mission over others (Hirsch 1999). Still, the willingness of alumni and other interested parties in supporting institutions financially cannot be ignored as a potential aid in difficult financial times.

3.2 Making decisions about new revenue streams

Returns from new enterprises can be non-financial as well as financial and can come in the short or long term. The generation of new *net returns* should nevertheless remain the ultimate goal of any revenue-diversification effort, not simply the generation of new revenues. New institutional funding that is fully offset by new, associated costs is acceptable only if there are non-financial returns of note *and* the new net costs are viewed as acceptable from an individual, institutional, or public perspective. New revenues should be pursued only after thorough consideration of the associated costs, including the opportunity costs of forgoing other initiatives. Effective decision-making should consider nonmonetary factors and distinctive to the institution's context. Below are some general considerations and guidelines.

Mission and culture

Struggling liberal-arts institutions may face dramatic internal strains if their most attractive new revenue opportunities emerge out of programming for working adults. This dilemma highlights the importance of values in the pursuit of new financial support. How a new revenue-seeking initiative fits with the pre-existing institutional context must be addressed (Tierney 1999). Is the prospective activity effectively demanded by difficult conditions? If not, and alternative choices are available, then the acceptability of an initiative's likely threats to the institution's core mission and organizational culture must be seriously considered.

Strategic analysis

Beyond mission and culture, institutions considering new revenue-oriented initiatives need to ascertain the substantive quality of an initiative, its short- and long-term financial prospects, the institution's comparative advantage over other existing and potential providers, the risk tolerance of all involved parties, the potential for collaboration with other organizations, the odds that high levels of potential demand may not translate into additional revenues at the margin, and organizational sustainability (Oblinger et al. 2001; Zemsky et al. 2001; Blustain et al. 1998; Katz et al. 2002).

Clearly, it is simplistic for institutions to think in terms of there being a single market for new services. The adult-student market is clearly distinctive from that for 'traditional' students, for example, (Levine 2000a; Zemsky et al. 2005) and both are distinct from the market for high-school students seeking advanced academic preparation. Such distinctions in both buyers and selling units highlight the need for understanding the particulars of potential markets facing new initiatives. A strategic approach that speaks in generalities about 'the market' for a college's services is quite likely to fail.

Implementation

Entrepreneurially oriented institutional leaders often choose to restructure (Davies 2001), but doing so raises a number of questions regarding implementation. Is restructuring necessary to success? Are new, buffering or spin-off organizations advisable?⁸ Are new partnerships needed? Are relationships among existing stakeholders and constituents (for example, funders, government leaders, faculty, staff, students,

families, the press) likely to be affected, and if so, how? Are additional structural changes necessary to address these transitions?

The research evidence suggests that effective implementation requires cultural and organizational conditions necessary to fuel and support entrepreneurial spirit (Leslie et al. 2002; Clark 1998; Davies 2001). Developing and sustaining a culture supportive of change requires leaders who are oriented to problem solving, operate on trust and with openness, are self-critical, are internally responsive and flexible, are thoughtful about staff-development priorities and budgets, are able to identify opportunistic, talented individuals with good ideas, are willing to be simultaneously calculating and daring, and are consultative with key stakeholders (Clark 2002; Davies 2001; Hirsch 1999; Matkin 1997; Newman and Couturier 2001).

Perhaps the most frequent mistake institutions make in implementing new revenue-seeking efforts in the instructional arena is program cannibalization, that is, identifying a seemingly promising new academic market only to learn in the end that the new program simply draws students formerly enrolling in other programs on the same campus (Blustain et al. 1998). Other mistakes include failure to identify wants and needs of customers, failure to establish guidelines for program development, remaining committed to old-style pedagogy and curricular organization, ignoring or downplaying faculty and staff resistance, and assuming that simply providing the program will be enough, absent efforts to market it (Blustain et al. 1998).

Incentives for departments, colleges, staff and line administrative units are all important for successful implementation, but the financial, professional and personal

incentives for *individual* faculty merit special attention (Hearn, Clugston and Heydinger 1993; Hearn 1996; Newman and Couturier 2001). How should institutions structure faculty salaries and resource contexts to create incentives for new revenue generation? In-kind support, development funds, the offering of internal ‘start-up’ or venture-capital pools, structured time for entrepreneurial activity, salary bonuses, and targeted salary and promotion criteria reflective of the entrepreneurial agenda are among the incentive ideas leaders might consider providing faculty (Davies 2001). It is also critical that potential faculty concern over threats to core missions and activities be forthrightly addressed (Johnstone 2002), especially in the humanities and social-science fields where entrepreneurialism may elicit the most anxiety (Clark 2002; Campbell and Slaughter 1999).

Implementation of major new initiatives also requires rethinking academic roles and structures. Should continuing and distance-education units be merged into traditional academic units (Barbulies and Callister 2000)? Should institutions begin hiring more non-tenure track faculty, especially in professional schools (Hearn and Anderson 2001)? Such adaptations may make sense, but can raise internal tensions around faculty activity and reward systems (Tierney 1999; Baldwin and Chronister 2001).

Finances and evaluation

Clearly, colleges and universities need to ensure that unambiguous, enforceable and appropriately structured contracts and control mechanisms are in place for all new

revenue-seeking activities (Teitel 1989; Johnstone 2002). The dollars involved in these efforts are too precious for any other approach.

Similarly, systematic financial forecasting and analysis, including ongoing and tough-minded cost-effectiveness studies, are essential elements of new revenue seeking initiatives (Caruthers and Wentworth 1997; Day 1997; Institute for Higher Education Policy and the National Education Association 2000). Among leadership teams, a firm commitment to withdraw from failing enterprises should be established from the beginning, because the costs of maintaining a losing operation, especially in arenas not central to institutional mission, are substantial.

In many revenue initiatives, short-term losses can offset by longer-term gains, and vice versa. For example, licensing some products and services as associated with the institution may offer short-term financial gain, but may undercut longer-term prospects by diminishing the value of the institution's 'brand' among funders or students (Kaludis and Stine 2000). Conversely, in technology-based initiatives, development costs on the front end can be daunting, but prospects may be strong for net positive returns years after undertaking the initial investment. In sum, time horizons can and should play a significant role in how initiatives are evaluated.

Leaders contemplating new initiatives may tend to be overoptimistic financially, making hard-nosed analysis by non-partisans essential (Nicklin 1992b). Leaders may also tend to underplay the potential nonfinancial costs and benefits of initiatives. Feller (1997) notes, for example, that technology-transfer offices can serve faculty and promote regional economic development as well as generate additional revenues. Similarly,

Tornatzky et al. (2002) found that business-university partnerships provide jobs for graduates and geographically marooned spouses of faculty and staff members, stimulate local research partnerships and encourage lifestyle amenities associated with the technology industry. None of these nonfinancial benefits is easily quantified, but each merits attention. Again, non-partisan analysis of all aspects of an effort, not just the financial, is essential.

3.3 Conclusion

A few years ago, Clark Kerr referred to the naïveté of those who see higher education's current controversy over marketization as something new.

The cherished academic view that higher education started out on the acropolis and was desecrated by descent into the agora led by ungodly commercial interests and scheming public officials and venal academic leaders is just not true. If anything, higher education started in the agora, the market, at the bottom of the hill and ascended to the acropolis at the top of the hill. ... Mostly it has lived in tension, at one and the same time at the bottom of the hill, at the top of the hill, and on the many pathways in between. (Kerr 1993, p. 56)

That tension continues. What is new, and constantly changing, are the approaches to dealing with it.

Recently, there have been proposals for public institutions to acquire greater autonomy from state authority at the expense of losing their regular supply of state funding. One observer titled his essay on the subject 'Give us liberty or give us revenue' (Fish 2003). This challenge posed to public institutions reflects a larger dilemma facing all institutions. That is, the recent reform proposals simply aim to formalize a process already underway informally: as financially pressed governments disengage from their implicit contracts with higher-education institutions public and private, they and thus the citizenry at large must be prepared to accept institutions no longer so integrally tied to the will of the public. While institutions have not been 'bought and paid for,' they have certainly at least paid close attention to their government sponsors and that attention may begin to wander. More profoundly, the citizenry and institutions alike have been participants in something philosophically grander than the individuals and the dollars involved. Now, though, revenue strains raise the potential of directly and indirectly threatening those larger purposes.

There are no simple answers for institutions. Refusing on principle to seek new revenues makes little sense if institutional missions remain sound and if governments and other sponsors are unlikely to return to former funding levels. On the other hand, when pursuing new revenues, institutions must take care not to suggest to sponsors that public investment is becoming less necessary as new revenues are secured (Johnstone 2002). Governmental commitment remains essential to higher education in a democratic society. What is more, aggressively pursuing new revenues may well mean confronting threats to the institution's core traditions and values (Bok 2003; Johnstone 2002). The push for

more reliance on grants and contracts from external organizations, for example, can raise costs on campus, redistribute academic power, shift academic priorities and reduce the sense of community (Slaughter and Leslie 1997; Leslie et al. 2002). Doing business differently will not come easily to most institutions and indeed, it *should not* come easily.

As I have noted elsewhere (Hearn 2003), the pursuit of new revenues at its worst can be mindless and dispiriting. When ideas for new revenue streams are promising in a business sense but threatening in a cultural and organizational sense, and perhaps disserving of the public good, the best choice for institutions may well be to ignore the financial appeal and walk away. But for those rare ideas that are not only promising but also inspired and inspiring, wisdom almost certainly lies in moving forward.

The challenge lies in identifying danger. The risks to essential traditions and values in higher education may lie more in the cumulative effects of seemingly minor, necessary, and attractive adaptations than in obviously radical reforms (Breneman 2002; Clark 2002; Newman 2000). Increasing marketization is probably inevitable in US higher education, but that inevitability does not warrant abandoning vigilance over core values that may be imperiled, such as those favoring faculty and institutional autonomy.

Most of us are familiar with the old folk warning concerning the hot-water frog: dropped in boiling water, a frog will promptly jump out, but dropped in cool water that is being slowly heated to boiling, a frog may well end up being boiled to death. Of course, the consequences of marketization and revenue diversification are not nearly so dire for students, faculty or institutional leaders. Still, as the old tale warns us, careful scrutiny of one's emerging environment is always warranted.

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Notes

1 See Kerr (1993). Historians generally agree that, by the twelfth century, students' and teachers' growing demands for independence from the control of the church and political leaders led to the founding of the two earliest universities (Perkins, 1973). In Italy, an emerging guild of students responded to the dominance of the Catholic Church over what and how they learned by establishing the University of Bologna. These renegade students used their funds to hire tutors at market-rate wages to instruct them in both canon and civil law, unconstrained by the dictates of the Church. In Paris, faculty with similar motivations established the University of Paris and were soon met with ready demand from students disaffected by traditional structures for learning.

2 It should be noted, however, that this proportion was unusually low in part because of unusually high returns from investments that year (31.5 per cent of revenues).

- 3 Traditionally, technology transfer provides returns only when patents and licenses are activated and successful (Geiger, 2002). Therefore, some institutions accept equity holdings in return for their technology transfers to industry (Feller, 1997): because such holdings may be sold, they can represent institutions' only hope for shorter-term returns on frontier technology.
- 4 For example, some institutions have adopted unitized investment pools, which pool funds from multiple sources and are managed under a consistent investment approach.
- 5 A striking recent example: the indoor stadium at Boise State University was recently renamed "Taco Bell Arena," prompting a local observer to question whether the university was "thinking outside the bun or inside the wallet" (Karlin-Resnick, 2004, p. A7).
- 6 Outsourcing may also be viewed as a way to seek new revenues, in that such arrangements can trade one form of revenue gathering (the term-by-term garnering of funds from individual students, for example) in favor of another form of revenue gathering (term-by-term payments from third parties).
- 7 The history of Stanford University (see <http://www.stanford.edu/home/stanford/history/lands.html>) is often cited as the model use of real estate, but there are numerous other success stories.
- 8 For example, a separate full-service technology corporation might take responsibility for business aspects of the commercialization of intellectual property, while a university-owned investment company might manage funds generated by non-traditional activities and giving campaigns.

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