



Institutions in Crisis

Teaching Notes

A SYNERGISTIC UNION OR SELLING OUT?

University-Industry Relations, Biotechnology,
and the UC-Berkeley/Novartis Partnership

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In November 1998, the University of California-Berkeley signed a five-year, \$25 million research agreement with Novartis Agricultural Discovery Institute, a subdivision of the pharmaceutical and agribusiness giant Novartis, Inc. The arrangement would give Berkeley's Department of Plant and Microbial Biology access to research funds as well as to Novartis' genetic sequencing databases. In return, Novartis held first rights to patent discoveries made over the five-year period. To the department's researchers, the deal was a bigger and better version of arrangements with which science faculty had long been familiar. Critics, however, accused UC-Berkeley of compromising academic freedom and scientific integrity. Was the university fulfilling its historic mission, pursuing knowledge and discovery while serving the citizens of California? Or was it "selling out" its independence and objectivity to big business?

This case considers the Berkeley-Novartis agreement in light of the modern research university's struggle to balance competition for resources against traditional expectations regarding higher education's appropriate role in society. The case also illustrates how the unique organizational features of universities impact and react to shifts in organizational mission and changes in the distribution of resources.

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Target Audience

Organizational studies
Organizational ethics
Higher education administration
Sociology

Learning Objectives

1. Challenge students to unearth the institutional purpose(s) of organizations (and federated parts of diverse organizations) and to connect conditions in the organizational environment to differences in understanding of purpose.
2. Gain insight into the unique organizational structures in higher education and how these structures accommodate differing understandings of mission and purpose.
3. Explore the impact of changing resource conditions and the policy environment on university research.

Questions for class discussion

1. Topic: The competitive context of higher education and implications for academic disciplines in the modern university.

The introductory section of the case implies a set of tensions between expectations concerning the role of public universities in society and the need for universities to operate in a competitive marketplace. Discuss how these tensions lead to:

- a. PMB's search for an industry partner
- b. the reaction of some faculty outside of PMB to the collaboration
- c. the reaction of the public, as represented in this case by Senator Tom Hayden and pie-throwing protestors, the latter of whom were members of national groups opposed to genetically modified agricultural products

2. Topic: Accountability and the coexistence of differing bases of accountability.

"Accountability" refers to the obligation to explain, justify, and answer questions about how resources have been used and to what effect.¹ Within an organization, accountability relates to who is to be held accountable, for what, to whom, through what means, and with what consequences. An organizational system of accountability can strengthen institutional legitimacy by providing evidence to those within and outside of the organization that resources are being distributed in line with an understanding of institutional purpose. For example, federal grants for scientific research contain financial reporting requirements that hold academic departments accountable to the terms of the grants, and universities provide financial aid for underprivileged students to justify and thus account for federal and state tax preferences that benefit higher education.

To whom or to what are universities, individual academic departments, and individual faculty members held accountable? Does the basis of accountability differ across these entities, and with what implications?

¹ Trow, Martin. 1996. "Trust, Markets & Accountability in Higher Education: A Comparative Perspective." *Research and Occasional Paper Series: CSHE.1.96*. University of California Berkeley: Center for Studies in Higher Education.

What measurements of accountability are typically used in industry? Compare these to the measurements of accountability in higher education.

Do you see a tension between different bases of accountability in this case? How did this influence the accomplishment of institutional mission?

Notes for the instructor: “Accountability” typically refers to quantifiable measures of efficacy. Offices of technology transfer, for example, rely on the annual number of licenses issued (to companies for the rights to use university-patented knowledge or technologies) as a measure of their efficacy. Sponsored projects offices rely on the monetary value of grants. The standard of measurement in industry is also typically monetary. In contrast, public social benefits, like those expected to accrue to higher education, can be much more difficult to measure.

3. Topic: Governance in higher education

Governance refers to the explicit and implicit arrangements by which decision-making authority and responsibility within an organization are allocated among the parties who participate in the organization.² Governance arrangements determine how resources are distributed across the university. The practice of “shared governance” in universities, in which authority and responsibility is shared between faculty, administrators, and trustees, characterizes the complex managerial character of higher education and distinguishes the management of colleges and universities from for-profit business organizations. The balance of authority and responsibility between the three decision-making groups shifts in response to changes in the resource environment or in the re-allocation of decision-making power among existing groups as the composition of these groups changes or new groups emerge.

Faculty members expect to have a voice (i.e., to participate in governance) in decisions that affect not only their individual work but the overall direction of their department and the university as a whole. The perceived value of an individual scientist’s research depends to some degree on the perceived legitimacy of their departmental and university colleagues, including ones that the individual scientist may never meet. The status and prestige associated with an individual researcher, department, or university combine to establish the reputation of all those connected to the university. The same can be said of a scholar’s disciplinary area—the conduct of others who work in that area, even if spatially distant—reflects on the discipline as a whole. It is based on disciplinary and university reputation that students choose particular majors and which universities to attend, that promising scholars choose where to work, and that government and foundations choose which research projects to fund.

Consider the following in class discussion:

How were issues of university governance implicated in the sense of crisis surrounding the Berkeley/Novartis agreement?

How might things have turned out differently if CNR and other Berkeley faculty had had more input into the agreement?

What about if they had had less input?

Consider how the federated nature of higher education (i.e., the separation and relative independence among schools and departments within the university) make governance more or less effective in achieving mission and purpose. Does it make it more or less efficient? Discuss how being “effective” can be different than being “efficient.”

² Hirsch, Werner and Luc Weber, Eds. *Governance in Higher Education: The University in a State of Flux*.

Did the emergence of biotechnology as a science and profit-making endeavor influence shifts in governance arrangements within Berkeley? Within biology departments? Within higher education as a whole?

4. Topic: Conflicts of interest

Related to accountability is the issue of conflicts of interest. A conflict of interest is a situation in which financial or other personal considerations have the potential to compromise or bias professional judgment and objectivity. Consider the two following examples of conflicts of interest that arose in the wake of the Berkeley-Novartis collaboration:

a. Ignacio Chapela, an associate professor in the Department of Environmental Science, Policy, and Management and the most ardent and outspoken critic of the partnership, was considered for tenure in 2003. He was unanimously recommended for tenure by his department's tenure review committee and by a review committee appointed by the Berkeley Academic Senate. He was ultimately denied tenure, however, and he sued the university claiming that his opposition to the Berkeley-Novartis agreement was the reason for the rejection. Ultimately, he was granted tenure and retroactive salary in 2005.

Does the presence of industry partnerships create conditions that make this kind of situation more likely? Is there any way to prevent such occurrences?

b. A member of the PMB faculty, Brian Staskawicz, expected to apply and receive funding from the Berkeley-Novartis agreement. Staskawicz had been serving on a National Academy of Sciences committee organized to examine and make recommendations on the regulation of genetically engineered crops that produce their own pesticides. Because of the potential conflict of interest, Staskawicz resigned from the panel.

Does the public lose when experts in their field must decline to work on important policy issues because of the scientists' funding relationships with industry?

Even though Staskawicz resigned, he was not required by law or university policy to do so. Should legislation be in place to prevent the potential for conflicts of interest such as this one?

5. Topic: Public and private models of science.

In an article tracing the growing salience of intellectual property rights in scientific research, Rhoten and Powell (2007)³ compare two models of scientific "production." The first is "proprietary science," based on the belief that scientific production and innovation are best brought about by financial incentives, including the privatization of discovery. The second is the "scientific commons model," based on the idea that scientific knowledge is a public good and should remain in the public commons and that this promotes scientific innovation.

Is U.S. university science based on a proprietary or scientific commons model? What about industry science? Is one model "better" than the other? What measurement of "good" do you base this upon? To whom does the "good" accrue?

How has government policy influenced the dominance of one model over another?

Was this the intention of the legislation? Do you see any unintended consequences, positive or negative?

³ Rhoten, Diana, and Walter W. Powell. 2007. "The Frontiers of Intellectual Property: Expanded Protection versus New Models of Open Science." *Annual Review of Law and Social Science* 3:345-373.

6. Topic: Institutional mission and purpose.

“Institutional purpose” refers to the individual and collective understanding of the appropriate role of a particular institution in society. “Appropriate” in this sense is clearly linked to institutional ethics—an understanding that the set of practices and social roles that constitute the institution are contributing to the greater good of society. With the tremendous growth in higher education over the last half-century, the institution of higher education has become more things to more people—it is expected to train youth in the classics as well as in practical skills for employment, to conduct both basic and applied research, and to be sensitive to social and economic conditions. Contestation over the purpose of higher education in society occurs routinely and manifests in discussions of, for example, the proper relationship between academic departments and industry.

Discuss the differing conceptions of institutional purpose that can be held simultaneously at a university and how these conceptions differ across academic units and administrative offices (for example, in this case: PMB, CNR, Technology Transfer Office, chancellor’s administrative office, state legislators in their role as public trustees).

Consider how the boundary-crossing between academia and industry can shift understandings of mission and purpose. For example, consider the advantages and disadvantages (to individuals, to society) if the basis for faculty status is derived less from research published in peer-reviewed academic journals and more from research privatized into money-generating patents. Also consider how institutional change due to boundary-crossing can be experienced as a slow drift rather than as an abrupt shift. Should the university or the state have some kind of mechanism in place to gauge possible drift in the mission of universities? Does the state legislature or another public body function as this mechanism?