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The Autonomy Question and the Changing Conditions of Social Scientific Work

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Diana Forsythe's life was emblematic of the rapidly changing conditions of the work for anthropologists, and social scientists more generally, during recent decades. In her first fieldwork project in Scotland, she retained some of the traditional autonomy of the ethnographer that she lost during her years as an anthropologist living on soft money in AI labs. She was acutely aware of how the conditions of work restricted her ability to write and publish on some topics in the AI world, particularly the rampant sexism that she experienced and analyzed.[1]

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The traditional and contemporary fieldwork narratives that Diana describes in the article "Ethics and Politics of Studying Up" exist on a continuum, and probably most ethnographic projects share elements of the two ideal types. Diana's experience as an anthropologist living on soft money in her informants' laboratories involved some extreme examples of loss of autonomy; the most salient example that comes to mind is the dispute over ownership of her fieldnotes. Other incidents were probably more widely shared among anthropologists of science and technology. For example, many anthropologists who study science and technology face the prospect of evaluation by informants or by members of the informants' communities, thus creating the conditions for less autonomous production than for those anthropologists whose informants do not have access to the means of evaluation. Because loss of autonomy in this sense coincides with a necessarily more responsible, or at least responsive, relationship to one's informants, it might be interpreted as producing more "ethical" ethnographic analyses. However, when one's informants exert a control that leads to censorship or self-censorship, the ethical questions run the other way. As Diana recognized, the changing conditions of ethnographic work have complex implications that still need to be explored completely.

The question of autonomy that Diana raises is occurring throughout the professions, and it can be extended even into the world of a tenured position at a private university. As an anthropologist who occupies such a position, I wish to draw on my own decade-long experience to suggest some other ways in which the autonomy of the conditions of social scientific work is under adjustment, even for those of us who occupy much more protected positions than did Diana. The material presented focuses on general trends and tendencies that I have seen, either full-blown or in incipient form, in my own academic institution. Because I am in an interdisciplinary social science department, rather than an anthropology department, most of the comments will be directed toward the changing work conditions for social scientists in general.

The Liberal Arts in the Era of Flexible Academic Production

The term "flexible production" is now widely understood and accepted as a principle for manufacturing that has displaced the rigid, less adaptive style of Fordist assembly-line production (Harvey 1989). In the academic world, the increasingly market-driven nature of academic production bears some similarities to the new industrial regimes of flexible production. In the United States, the extremely selective elite universities and colleges may remain relatively impervious to such transformations. However, many universities and colleges, including some private universities with relatively strong reputations, are examining ways to increase enrollments, particularly by means that would not require increasing tuition discounts or lowering student quality (e.g., average SAT scores).

The analysis developed here is based on my decade of experience at Rensselaer Polytechnic Institute. The university offers undergraduate and graduate programs in five schools (engineering, science, architecture, management, and humanities and social sciences), and many of its programs are nationally recognized. The undergraduate and graduate programs in the flagship school, engineering, rank within the top ten or twenty schools in the country. However, the overall prestige of the university is lower; for example, a *U.S. News and World Report* survey ranks it closer to bottom of the second tier of national universities, that is, at a rank close to fifty (Elfin 1997). During the 1990s, the university was facing escalating costs, but it had few viable options for increasing revenue. Federal funding in science and engineering was stabilized or in reduction, and tuition was already high, as were discounts, so the option of raising tuition significantly was not very viable. Unlike more prestigious universities, Rensselaer had a relatively high acceptance rate, so there was not a large, qualified applicant pool that could be tapped. Consequently, the university developed a goal of seeking "new revenue streams" (a term used locally) by offering innovative programs that would attract high numbers of high-quality students. Several of the new programs are in the information technology area, such as Electronic Media, Arts, and Communication; Information Technology; and Bioinformatics. Computer science has become the single most popular major for entering students. Because Rensselaer is on the leading edge of developing a market-driven curriculum, the observations based on this case are useful as a kind of microscope for the changes underway in other institutions.[2] Observations made here reflect events up to 1999-00, when a new administration was scheduled to take office. Some of the institutional changes described here represent trends and tendencies rather than actual developments.

"Revenue-based budgeting" is the term used to describe the overall financial framework in which the development of new programs is motivated. The budgetary framework has been introduced at several major American universities, and many other colleges and universities operate under similar frameworks that are much less formalized. Revenue-based budgeting treats academic units—either schools or departments—as profit centers, even though, strictly speaking, they are part of a nonprofit institution, so the term "profit" is not necessarily used in formal discussions. In the case of Rensselaer, the school is the cost and revenue center, but the example here will use the department as the unit of analysis. An example of an algorithm for tuition revenue (based on a simplified, average net tuition bill of $10,000 per student per year and eight courses per year) is as follows: a department may count as revenue 20% of discounted average (or net) tuition for each major (let's say $2,000 per year) and 10% of net discounted tuition for each student enrolled in a regular, four-credit course (say $1,000 per year). For example, if a student is a major in department X and takes eight courses in department X, the department may count all $10,000 of the student's net tuition revenue. The department is also allowed to count as revenue any income from grants, less overhead charges. All expenses for the department—salaries, equipment, infrastructure, travel, and building rent—must be paid from the total revenue (net grant revenue plus net tuition revenue). Furthermore, the revenue must also leave room for a "margin," that is, a specified amount that covers administrative and general overhead costs of the non-revenue-producing units in the university. If the department generates a surplus, in theory it is allowed to invest that money in new programs and personnel.

Many colleges and universities operate with a modified system that allows deans or provosts to adjust departmental size in response to changes in enrollments. The most common way for the adjustments to occur is for a vacated tenure-line to return to the dean, who decides whether it should be reallocated to the same department or allocated to another department. The system allows administrators to make gradual adjustments to enrollments and to negotiate institutional views on curriculum needs with those of a department. For example, if an anthropology department has a long-term trend of declining enrollments and a computer science department has the opposite trend, then a dean of arts and sciences can move the vacant anthropology department line to the computer science department. The system grants the administrator a great deal of power, but it also allows departments to base arguments not only on revenue but also on issues such as program coherence. In other words, program coherence becomes a factor in a complex calculation about the reallocation of a position that cannot be reduced to a budgetary algorithm.

Revenue-based budgeting therefore represents a formalization and, to some extent, a simplification of procedures that are already in place in most universities, and in this sense it can be considered a "modernization" of the modern university bureaucracy. The system can reduce some of the clientelist politics of the academy, because the framework transforms (for example) departments into entrepreneurial units and provides a universalistic standard (revenue less margin and costs) for allocating resources across departments. It allows departments to pursue entrepreneurial strategies of growth, and it provides a way for ambitious departments to build their faculty and reputation. For the humanities and social sciences in a technological university, it can be

beneficial, because the average cost of educating a humanities and social sciences student is lower than that for a science or engineering student (due mainly to lab costs). Yet, not all of the implications of revenue-based budgeting are positive.

One of the implications of revenue-based budgeting is the tendency for the emergence of what I call just-in-time curriculum, that is, the launching and marketing of new programs before the curriculum is completely in place. A group of faculty gets approval for a new program name that, in fact, is a dual degree or combination of courses from existing departments, plus some potential new courses that are not yet developed. Once the student bodies start flowing in, the faculty then develop the courses and round out the curriculum to meet the new demand. Presumably, if the program fails, it will be canceled and amends will be made for existing students. If the program is successful, approval from the state for a new major that matches the title of the program may follow, and the necessity of using old degree programs may be dropped.

Because the new programs tend to cobble together courses across departments, they encourage interdisciplinarity, which faculty generally see as a favorable development. However, the interdisciplinarity is market-driven; that is, it is responsive to student demand, which in turn is partially shaped by industry demand. Therefore, some interdisciplinary programs are likely to grow rapidly (at Rensselaer they have tended to be combinations around the information technology theme), whereas others are less likely to grow (such as women's studies). The situation might be reversed in other universities, depending on student demand. However, the overall tendency is for interdisciplinary projects to be channeled in directions that are guided by market-driven selection pressures. (Here my experience contrasts with other discussions that suggest revenue-based budgeting simply opposes cross-disciplinary cooperation, e.g., Leik 1998). The market-driven, commodity form of curriculum displaces the faculty-driven, values-oriented form of curriculum. The marketability of new curricula or programs tends to become the dominant justification criterion. Other criteria, such as importance according to professional and civic values, tend to become secondary. Furthermore, the relations between traditional disciplines and the new interdisciplinary programs can become inverted. Where revenue is the primary justification, the goal of the preservation and socialization of a disciplinary canon of research must be justified by student demand. If there is no demand for discipline X, it is doomed to shrinking budgets and eventual elimination or absorption into more successful programs. In such a context, selection pressures will operate on the discipline to develop marketable subfields at the expense of others. For example, one would expect anthropology departments to develop subfields that respond to student demand, such as medical anthropology (for premeds), anthropology of women and gender, and various area/ethnic studies courses; or to local industrial demand, such as historical archaeology programs that contribute to the local tourism industry.

A second implication is the incentive for what I call "gut warfare." (A "gut" is a nickname for an easy course.) The market-driven nature of curriculum production corresponds with a whole rhetoric of the student-as-customer and a push for high-enrollment courses (Leik 1998). Certainly, the folklore of the academy is replete with stories of tenured drones: professors who neither update their course materials nor attempt to innovate in their teaching style. Policies oriented toward student satisfaction can be valuable to put pressure on the drones. However, the atmosphere of revenue-based budgeting also encourages interdepartmental competition at the level of individual courses (particularly large-enrollment revenue generators), even as it encourages interdepartmental cooperation at the level of new programs. Gut warfare between departments or even faculty members is not a necessary outcome of revenue-based budgeting, and I have found it very difficult to document in my own institution. Grade inflation is now generally documented to correlate inversely with rank, so that untenured and adjunct faculty tend to give higher grades (Moore and Trahan 1998). However, my own experience is that gut warfare does not have to take the form of grade inflation or workload reduction. It can also take more sophisticated forms, such as the reduction of grade insecurity by converting to contract-based grading.

The revenue-based goal of keeping enrollments up, combined with the rhetoric of students-as-customer, can lead to a dumbing-down of the curriculum and a tendency for courses to become infotainment. Students who seek to build their marketability based on a technical education will tend to ignore ("blow off") their humanities and social sciences courses, and to select the entertaining courses and guts. However, I have also witnessed a countervailing pressure that operates against this mentality. Both parents and future employers want students to take humanities and social sciences courses that provide needed job market skills, such as writing and research ability and knowledge of the policy and social contexts of their technical career areas. Consequently, there are also incentives for the humanities and social sciences curricula to become very serious to students who are concerned with landing a good job after graduation. With those concerns in mind, students will select majors and minors that provide a "value-added" dimension (another local term) to the dominant technical degree. In this context, dual degrees that partner with technical degrees can become successful revenue generators.

A third implication of revenue-based budgeting is that eventually it can result in the tendency for administrators, particularly department chairs, to think about the individual professor as a profit center, no matter how many promises are made to keep the profit center at a higher administrative level. It is easy to develop an average revenue figure that each tenure-line faculty member should generate—through teaching X students per year, bringing in X amount of money in grants, or some combination. Profitable professors are very desirable, particularly if their revenue comes from teaching, because if they leave, a replacement for them can be justified based on the teaching revenues they generate, and that replacement can come in at a less expensive junior level. However, if the professors bring in the money through grants, the department or school is forced to replace them at the senior level, which may meet with resistance from administra-

tors who are always cautious about long-term commitments of resources. In fact, by hiring at the junior level, a university has a much more flexible workforce, because for a six-year grace period it is possible to test the faculty members' ability to adapt to new curriculum demands.

The burden of the professorial profit-center can be reduced by outsourcing courses to non-tenure-line faculty. The most profitable way of employing adjuncts is to have them teach introductory courses that have high enrollments and, preferably, have words like "sex," "drugs," or "war" in the title. While the whole prospect of employing adjuncts is the subject of much hand-wringing, the outsourcing of the curriculum can be made somewhat less unethical by hiring one's own graduate students into the positions and giving them job experience. In either case, adjuncts or lecturers can be put into high-enrollment lower-level courses, which have high revenue and low salary costs. Furthermore, there is a tendency for a third category of faculty to emerge: permanent faculty who are untenured and can be removed when the market demands of flexible academic production shift. Tenure-line faculty are increasingly reserved for more advanced courses, such as graduate seminars, or they may be on course release due to grants and administrative work. As the percentage of tenured faculty in the American professoriate continues to decline, the unionization movement for non-tenure-line faculty and graduate students intensifies.[3] The few remaining tenure-line faculty increasingly become administrators who must juggle the demands of undergraduate advising, graduate exam and dissertation committees, program development and marketing, professional evaluation work, professional association work, hiring and supervising TA's and adjuncts, sponsored research obligations, faculty senates, curriculum committees, evaluation committees, and other major responsibilities.

A fourth implication of revenue-based budgeting is the pressure on the grant side toward the formation of interdisciplinary research centers and team-based projects that are able to sustain ongoing research revenue streams. The projects have the benefit of supporting graduate students and providing course release time for research. Team-based or center-driven research can also create research foci that attract higher quality faculty, students, postdocs, and visitors. Although there are benefits, the opportunities for collaboration inevitably involve negotiating one's individual research agenda with the group. Furthermore, there is increasing pressure for social scientists and humanists to seek new funding sources that include university-industry partnerships. The trend toward team-oriented, center-focused research with increasing industry-university partnerships is now documented as a general pattern in the United States and other countries (Gibbons, Limoges, Nowotny, Schwartzman, Scott, and Trow 1994; Slaughter and Rhoads 1996).

Industrial and market pressure therefore operates on the curriculum and campus culture in two major ways: pressure toward making the humanities and social sciences count in a professional or vocational sense, and pressure on research toward industry-university partnerships. Together, the new instrumentalism of the curriculum and the commercialization

of research create a strongly pro-business environment that clashes with the old liberal arts culture oriented toward civic responsibilities and public good. In an atmosphere that fosters corporate training and industry research partnerships, professors who attack other professors for their "anticorporate," "old-fashioned," or even "pro-union" views will tend to be rewarded or at least not reprimanded. In other words, the new political economy of the corporate-oriented university favors a pro-business culture that will lead to breaks in the code of professorial civility along right-left, efficiency-equity, or private profit-public good lines. While such breaks occur for other reasons in other university settings, there is a general structural reason for the emerging intensity of such political conflict, at least in universities that exhibit the features described here.

In the efforts to enhance revenue and develop corporate partnerships, administrators also examine the possibilities of distance learning. Because corporate workforces represent a large potential market for distance learning projects, the ties are again strengthened between the university and the corporate-business sector. The new technologies are attractive to some professors, partly because distance learning is usually linked to enhanced income. However, there are reports that workloads associated with such courses are higher, and faculty must be careful that participation in such courses does not entail losing control over the contents of one's course material under work-for-hire provisions. Professors are also encouraged to use new information technologies in the classroom, and issues of ownership emerge when course materials are posted on the web and the university claims copyright ownership over any web-based "publications."[4] The use of web-based technologies in the classroom can excite student participation and lead to new levels of student-student interaction (as well as higher enrollments), and students also feel that they are gaining valuable job-related skills. However, in the process, the concept of "interactive learning" can be removed from the field of rational-critical discourse—a faculty member or section leader sitting with a small group of students and discussing readings—and placed in the field of instrumentalist problems that students attempt to solve. While the new teaching environment promises new interactions in comparison with old lecture and section formats, it can replace the "professor-teacher" with the "facilitator"—the person who moves among computer stations to help students solve problems.

In this context, the ideal of the liberal arts, of educating students to become citizens in a democratic society, competes alongside the ideal of vocational training, of providing students with marketable skills that will land them a job when they finish college. Students and parents want to make sure that their investment in a college education creates job opportunities for their child, so they are justifiably concerned with practical skill acquisition. Yet, the increased value placed on skill acquisition can render the liberal arts a supplement to the diet of vocational training. Even if faculty are tenured, they are still adjuncts to the central curricular orientation. Furthermore, the mission of the university as a guardian of public interest is rechannelled into an ersatz

notion of public good that is fully compatible with and aligned with large capital.

Autonomy Under the Conditions of Privatization

The changes that higher education (or, as my colleague Langdon Winner likes to say, "hire education"; see Winner 1998) is undergoing are well-known and the topic of continuing news coverage in the pages of media such as the *Chronicle of Higher Education* and *Academe*. The professoriate has clearly witnessed an erosion of autonomy in the senses outlined above. While the level of loss of autonomy that tenure-line faculty experience is much less than that described by Forsythe for an anthropologist who lives on soft money in a hard-money lab, the hardness of hard money is nevertheless becoming increasingly soft, with some exceptions at the top of the higher education prestige hierarchy.

What kinds of strategies are available for faculty to manage such developments? A literature is beginning to develop on institutional strategies and responses that can occur through the mobilization of national associations and via direct involvement in the political process (e.g., Wood 1998). This section will consider a few, ideal-typical options at the individual level. First, there is the strategy of the work slow-down, a time-honored tradition in labor politics. One tends to find this strategy among the most senior faculty who are near retirement age. They simply want to teach the same courses they have always taught, and they engage in various strategies to duck out of committee work and faculty governance. As a short-term strategy for someone who is close to retirement, it can be very reasonable from an individual viewpoint. However, as a collective strategy it is self-defeating.

An opposite option is to become a local activist (usually after tenure). In this situation, the faculty member becomes active in various governance committees and attempts to balance market-driven concerns with democratic, liberal arts values. This option makes for popularity among most of one's colleagues, but it can make very outspoken faculty members targets from higher levels of administration. If one's activism is more of the polite form, one can run the risk of co-optation and an increasing tendency to place the professor-activist in an administrative role. Any propensity for administrative work, even if guided by reformist intentions, may be rewarded with more of it.

A third approach is a variant on the second. The "mole" moves along with the new market-driven curriculum reforms, but attempts to develop the liberal arts ideal within the new technology-driven, vocational, skills-oriented curriculum. This position has some of the benefits and rewards of what Downey has called "hiring in" and "partner theorizing" (Downey and Lucena 1997). In team-taught courses and curriculum development meetings, one will encounter hostility and resistance from faculty who do not want any "liberal" ideas brought into their courses. "Liberal" in this sense does not necessarily mean liberal in the political sense; it can mean any attempt to bring in questions of social meaning and value. Still, by constantly raising such oppositional perspectives, it is possible to educate one's colleagues—administrators and faculty—to see the value of including discussions of ethics, values, policy, and social

science issues in curriculum and courses that are dominated by vocational concerns. Anthropologists can play a particularly valuable role by constantly reminding colleagues and students how generalizations that appear to be universal are in fact quite limited culturally.

A fourth strategy is to participate in the changes as an observer, that is, to turn the processes into a topic for research. However, as Forsythe warned, it is dangerous to write about one's employers. In the context of a technological or scientific curriculum, almost any kind of ethnographic or social scientific analysis will be taken as criticism, because one is puncturing the local ideology of objectivity and efficiency. As many anthropologists of technoscience have observed, scientists, engineers, and doctors like to think about themselves as having no culture. When the ethnographer comes in and reveals that they do have a culture, and that there are other ways of organizing their work, the analysis is not likely to be appreciated and sanctions may be applied to stop it.

A final strategy is to focus on academic reputation issues. From this perspective, there is still a more protected world at some of the elite colleges and universities. Nationally ranked departments can justify exceptions to revenue-based algorithms because prestige is a key element in the name-brand of the degree that is being sold to incoming students. Whereas building interdisciplinary departments and programs makes it possible for less elite institutions of higher learning to carve out a specialized niche that has national or international recognition, the interdisciplinarity of the programs makes it difficult for them to play the rankings in their favor, precisely because there are usually no rankings of innovative new programs. Even if there were, the rankings would be among a small cohort of programs so that a ranking of "top five" would be meaningless. Thus, whereas the disciplines discipline and the interdisciplinary fields offer the liberties of curricular and research innovations, the disciplines also protect the autonomy of those who come under their mantles, even if they are second-rate departments at top-flight universities. In contrast, the interdisciplines leave even top-flight programs at second-rate universities more exposed to the market and the continuing brutalities of budgetary justification.

Concluding Comments

The question of the autonomy of faculty in universities cannot be discussed adequately without some historical contextualization. There is now substantial documentation that the sciences in American universities have been strongly influenced by the military-industrial funding patterns that developed significantly during World War II and the Cold War, but were emerging even earlier (e.g., Forman 1987, Leslie 1993, Smit 1994, and, for cancer research, Hess 1997 and Moss 1996). Although the U.S. Department of Defense expenditures constitute a relatively small proportion of funded research for the social sciences in comparison with some engineering fields (Smit 1994: 608), military-industrial funding has tended to shape the contours of the social sciences, in some fields more than others. Among the social science fields that were influenced by military-industrial funding are area studies and development studies (and through them,

anthropology, among other fields), international relations, psychometry, mass communication research, and cybernetic/functionalist theory (respectively, Escobar 1995, Soley 1998, Heims 1991).

Although military-industrial funding dramatically shaped the contours of scientific research during and after World War II, it would be a mistake to posit a utopian period of university-based scientific autonomy during the period prior to World War II. Robert Merton's famous essay on the ethos of science, which defended the autonomy of science as a contributing force to democracy, was written against the background experiences of Nazi and Soviet science (Merton 1973, orig. 1942). Likewise, during the interwar period social sciences such as social anthropology were shaped by, even as they reacted to, the worlds of religious and political colonialism (Stocking 1991, 1992). Moving back to the early twentieth century and the late nineteenth century, the new land-grant and technological universities were explicitly oriented toward producing research of value to agriculture and industry (Busch and Lacy 1983, Noble 1977). Although some scientists attempted to articulate an ideal of university-based pure science (Daniels 1967), the calls for purity were relatively unimportant to most contemporaries among nineteenth-century scientists, who had long accepted consultant relations with industry (Lucier 2000). Finally, if one steps even farther back into the early nineteenth century and the eighteenth century, universities were increasingly under the dominion of religion, a condition which continues in the United States today for many small, private colleges and even a few major universities.

Although one might conclude that "we were never autonomous," or mostly never very autonomous, there are still ways in which forms of faculty nonautonomy have changed during the late twentieth century. For the social sciences a major change is the commodification of the curriculum. There is no doubt that a college degree has long been a commodity and, in the competitive American system, a degree can be obtained at a price that corresponds roughly to prestige level. However, there is a change to the extent that specific programs at relatively prestigious universities are now being marketed to target student consumers as commodities in themselves. In other words, there is a difference between obtaining a liberal arts degree from a top-notch university, for which the exact subfield (history, literature, etc.) is less important than the university name, and a professional or vocational degree from a recognized but not top-notch university. In the former case, the commodity being sold is the name of the university first, based on its ranking and prestige, and the liberal arts degree second. The faculty are left to control the curriculum because its commodity status is relatively unimportant as long as the ranking of the university is maintained. In the latter case, the university name brand shrinks in importance with respect to content of the degree, and the liberal arts component tends to be built on as a supplementary or value-added package for the vocational degree. As the commodity value of the degree program increases in importance and the commodity value of the university name brand declines, pressures emerge for

flexible academic production and administrative control, or at least shaping, of the curriculum. Furthermore, flexible academic production clearly creates pressures for the elimination or reduction of tenure, unless the university is among the top-ranked schools where the ranking of the departments contributes to the university name brand as the dominant commodity.

The second major way in which the lack of autonomy is different today is the emergence of new pressures on research funding. In many of the natural science fields, military and industrial funding is the norm and, as Cold War budgets were cut, it was only the mix between private and public funding sources that changed. In the social sciences, however, the increasing commodification of degree programs as professional or vocational programs leads to an institutional demand for social science faculty who do research in areas connected to the new degrees (such as information technology policy, history of bioinformatics, anthropology and the health sciences). There is an increasing demand for faculty who are willing to participate in interdisciplinary projects that bridge their social science homes with applied sciences in marketable fields such as information technology, engineering, management, and biomedicine. Consequently, interdisciplinary curriculum programs with the social sciences as the supplementary, value-added component tend to coincide with interdisciplinary research projects that place social scientists in the same supplementary role. As funding for such projects comes increasingly from university-industry partnerships, pressures are created to transfer intellectual property rights from the individual researcher to the university or corporate sponsor (Etzkowitz and Webster 1994). The social scientist's role as a spokesperson for public interests in a decrepit or defunct public sphere can then be silenced by the new intellectual property agreements.

In countries where military dictators seize power and close down elected, constitutional bodies, the first institutions to be purged are usually the press and the universities. As sanctuaries for the processes of democracy as dissent, both institutions have a special role in the preservation of democratic order, for they provide fora for oppositional voices to call into question the legitimated alignments of private interest with public good. In the advanced capitalist societies today, it is no longer necessary to engage in anything as crude as mass purges, physical torture, or firing squads. Rather, in the case of the press, it was only necessary to purchase the major means of mass communication and silence the rest with SLAPP suits (strategic lawsuits against public participation, Pring and Canan 1996). In the case of universities in the United States, which on paper remain nonprofit organizations dedicated to the goal of education of the next generation of citizens, the tightening noose of corporate control has been much more subtle. This revolution was not televised, nor will it be. ■

Notes

1. Much of my free time during the second half of 1998 was spent on the bittersweet project of bringing Diana's papers together into a volume: bitter because of the terrible sadness I experienced in rereading her work and our correspondence, and sweet because sometimes when I was alone in my office working with her papers I liked to imagine her sitting beside me. I performed the editorial work under the guidance of a committee of Diana's friends and colleagues, and with the support of her widower Bern Shen. The volume is currently under review for publication with a university press. The essay "Ethics and Politics of Studying Up" falls about half-way in the collection of her papers and publications of the 1990s. In a sense it represents a turning-point from her detailed, published analyses of AI culture—its concepts of knowledge and work, for example—and her more reflexive and to-be-published essays on her own position in the fields of both AI and anthropology. For many of us, reading the development of her thought through her essays written during the 1990s will only heighten the sense of loss of not only a great friend and colleague, but an extremely creative and rapidly developing intellect. The freedom of her last essays corresponds to some extent with her move out of the AI laboratories and back to academia, but even with the move she did not have the luxury of a tenure-track or tenured position.

2. A forthcoming book by some of my colleagues (Croissant and Restivo ms.) promises to explore related issues in more detail. See also the July-August 1999 issue of *Academe* (85:4), which explores similar changes in universities throughout the world.

3. The number of part-time faculty in American higher education has grown from 22% in 1970-71 to 42% in 1992. From 1987 to 1992, part-time faculty grew at a rate of 47.7%, whereas full-time faculty grew at a rate of only 2.6%. While in 1992 full-time faculty (528,100) still outnumbered part-time faculty (376,400), nearly 34% of the new cohort of full-time faculty were not in tenure-track positions (Schuster 1998). In the U.S., the Yeshiva ruling prevents uniohization of faculty in most private universities because they are interpreted as both professionals and managers (Malamud 1998, Weidhom 1998).

4. On the problems with intellectual property in the context of new information technologies, see Gorman (1998) and Heins (1998). Noble (1998) suggests that the incursions into course content as intellectual property are, at least at present, occurring mostly in extension programs that hire non-tenure line faculty, but those programs may be a beach-head for future expansion.

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BOOK REVIEWS

Sister Jamaica: A Study of Women, Work and Household in Kingston. A. Lynn Bolles. Lanham, MD: University Press of America, 1996.

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Lynn Bolles in the 1970s was a student of Helen Safa. In the early 1970s an interesting and important shift began to take place in the work of some feminist scholars, among them Safa. Bringing together their interests in class and feminism, they started to focus upon the situations of poor women—for example, welfare recipients in this country, struggling rural women abroad, urban working-class women (see Reiter 1975, Safa 1976, and Stack 1974). Their pioneering work constituted a much needed departure from the then prevailing middle-class perspective of feminist scholarship and emphasized the strategies of poor and working-class women creatively managing to keep themselves and their families together on grossly inadequate resources.

By the middle of the decade many more studies appeared that posed similar questions, but now largely to the situations of working-class women, specifically women working in factories. These studies were further propelled by the expansion of off-shore production, with its overwhelming increase of women working in factories in the Third World, as well as by the impact of this "globalization" on women working in factories at "home." The resulting scholarship was one of the most important contributions of contemporary feminist thought to our understanding of the modern world. By 1980 significant and exciting work was being done about the life situations of women in factories, engaging the older questions, but also addressing newer ones such as union organizing, "contract" labor in the informal or underground sectors of the economy, and the increasingly important globalization of production. The involved scholars came together, formed networks, and published collections. Lynn Bolles was part of this group (for example, Bolles 1983).

Sister Jamaica: A Study of Women, Work and Households in Kingston is exactly what its subtitle tells us. Under a three-tiered rubric of international constraints, national constraints, and the household and workplace situations of the women, Bolles describes the lives and creative efforts of these women to keep life and family together. To do this she divides the book into sections on the household, the factory work, and the all-important "making-do."

Bolles studied and learned from factory workers in Kingston, Jamaica, in 1978-79, where she herself worked in a factory for several months. She interviewed 127 women, working in 16 firms—one government owned, several multinationals, some joint venture and some local. Pay was highest in the government-owned printing firm and descended in the order listed. Industries were varied, including food processing, garment, and "finishing," the latter meaning repackaging bulk, semi-finished materials from the U.S., such as shampoo. All 16 factories were unionized, and Bolles received considerable cooperation with her work from the unions.

At the time of the study, these women were among the better off of unskilled women workers, due to better pay and working conditions in union plants and in industries involved in production for the export market. Differences were greatest in comparison to the informal sector and work in rural areas. Nonetheless, "money was hard to find" and the work was not necessarily pleasant. Bolles further points out the workers' successful efforts to humanize the workplace through friendships and supportive relationships with one another, a practice that one finds noted with great frequency in the literature on women and work. This certainly was true on the factory floor where I briefly worked in Silicon Valley, even toward me on my very first night. Finally, Bolles tells us about the ambivalent gender relations for women in the trade unions—better working lives and pay, to be sure; frequent election as delegates; demands usually listened to by union organizers, although in part for political reasons; but all this in the context of personal condescension.

Despite this wealth of information, this reader would have liked to have known more, for example, about the day-to-day life on the factory floor, and also about women's role in the organizing of these unionized firms. The section carries on smoothly, however, to higher levels of generalization. Bolles moves from production decisions ultimately deriving from the needs of the "global assembly line," mediated significantly through the IMF, through national concessions to international manufacturing firms and also to national elites who clearly benefited from these arrangements. The section ends with creative responses of women bearing the responsibility for daily domestic life and survival in an environment of increasing polarization and inequality in the society at large. Foreign interests had again made possible the classic situation of the rich getting richer and the poor poorer.