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INTRODUCTION: THE INFORMATION UNIVERSITY

School: Deepening coupling of high-tech capital needs and public education at all levels, differentiated by race, class, and gender; managerial classes involved in educational reform and refunding at the cost of remaining progressive educational democratic structures for children and teachers; education for mass ignorance and repression in technocratic and militarized culture; growing science mystery cults in dissenting and radical political movements; continued relative scientific illiteracy among white women and people of colour; growing industrial direction of education (especially higher education) by science-based multinationals (particularly in electronics- and biotechnology-dependent companies); highly educated, numerous elites in a progressively bimodal society. —Donna Haraway

For at least the past decade, the specter of the virtual university has both enchanted and haunted us with its possibilities. While the virtual university is a dream for some and a nightmare for others, the central plot is generally the same for all invested parties. For the academy, business, and government alike, technology is the driving force propelling us toward "the university of the future." Either as protagonist or antagonist, always as agent of change, technology replaces a cumbersome and expensive faculty, save for a few token academic superstars whose work is distilled into raw data, traded for stock options, stamped with corporate logos, stored on massive servers, and downloaded by paying customers accustomed to 24/7 convenient service.

Considering the cultural and material changes brought about by a decade of vast innovations in information technology, it is not difficult to understand the pivotal role technology assumes in this narrative. During the last decade of the millennium, we experienced a massive influx of new hardware, email, courseware, and websites into our daily lives and an accompanying onslaught of images and narratives depicting futuristic technological revolutions. However, a narrow focus on technology serves to mask the reality that processes of informationalization of 'education reduced to content delivery, assessment mandated through the quantification of information, students positioned as information receptacles, and teachers downgraded to information servers' were set in motion long before the advent of the Internet. As Marc Bousquet argues in our opening piece to this section, in many ways the future vision of an information university is already our lived reality. While information technology may have increased the speed and reach of such processes, the informationalization of education and labor is not dependent on new communication technologies. Rather, as many of the contributors to this section will argue, information technology has become the red herring that distracts us from locating and challenging the more deeply entrenched processes by which faculty and students have lost the means to participate in the democratic governance of their universities. In her analysis of Washington State's distance education initiatives, Michelle Rodino contends that

technology was not driving the changes being imagined for this brave new world. Rather technology provided an air of legitimacy and urgency to what was really a campaign to expand the market for the computer and higher education industries, use public funds to subsidize such expansion, and reorganize academic labor.

In the July 19, 2002, *Chronicle of Higher Education*, Dan Carnevale reports that, rather than cutting costs, online education has actually made education more expensive and that, because technology budgets are in the red, colleges and universities in most states are decreasing or halting technology spending. The failure of technology to live up to corporate dreams of a more profitable educational product is just one reason why focusing selectively on technology has been a misguided diversion. More important, such a specific focus fails to capture the many dimensions that account for the informationalization of the university. In "A Cyborg Manifesto," Donna Haraway carefully explicates that the informatics of domination are marked by the "*social relations* mediated and enforced by the new technologies" [my emphasis] (170). And N. Katherine Hayles has more recently reemphasized that "informatics" refers to "the material, technological, economic, and social structures that make the information age possible," including "the late capitalist mode of flexible accumulation" (313). A focus on technology alone fails to account for the ways in which the information university is fully implicated in the social, economic, and political structures that make the information society possible. The information university is the product, not of a proliferation of information technology, but of a precise demarcation of social and labor structures that comprises the global regime of flexible accumulation.

While theorists of the information society have attempted to prove that we have moved from an industrial to an information society by noting changes in the realms of technology, economics, occupations, spatial organization, and culture, Frank Webster argues that the most significant feature of the information society is the way we conceive information in purely quantitative terms. Webster explains that in its contemporary conception, information is decontextualized, evacuated of content, and registered in only the most reductive terms. Either it exists or it does not. In the information university, both education and labor are assessed by the same binary logic, a quantitative reduction that squares neatly with corporate aims and objectives. The tallying of education and labor according to this bottom line economy is *the* significant dimension of the information university. As Webster notes has occurred with information, we have come to assess education and labor in "non-social" terms. In the information university, education is fashioned as information download. Reduced to the streamlining of information, it is unhoused, weightless, and endlessly reproducible. Labor is similarly (dis)organized. Bousquet explains that "informationalization is about delivering labor in the mode of information," "just in time," "on demand," and working "flexibly."

The regime of flexible accumulation is a regime of labor decontextualized. It is labor disconnected from the social, working without benefits or meaningful control over the workplace. Whether a female textile worker sewing outfits for Baby Gap in a country with soaring infant mortality rates or a contingent instructor who teaches college freshmen in a university where she has no office, no participation in departmental governance, no assurance that she will ever teach another class, a flex laborer works without any meaningful sense of place, without connection to a larger network. While these two examples clearly represent extremes on the scale of exploitation, I compare them to illustrate that, despite common approaches, work in the information society is not divided by industrial and knowledge work; rather, it is united by the casualization and feminization of work. And make no mistake, flex labor is women's work. Because women still bear social responsibility for caring for the young, the infirm, and the elderly, they are most frequently forced to seek out contingent flex work that enables them to shoulder their unpaid, domestic labor. In the university, women still outnumber men in holding part-time, contingent positions, while the number of male full professors greatly outnumbers that of women. The role that caring for dependents plays in this disparity is evident in the numbers from a forthcoming study by the University of California at Berkeley, which found that among tenured professors in the humanities and social sciences,

38 percent of women are mothers, compared to 61 percent of men who are fathers (Cohen 25).

The role of the information university in the information society is the production and the ideological justification of the regime of flexible accumulation. Not only does the university lead the country in modeling the use of flexible labor, but it also produces such labor for the market. The information university sets the standard for a global economy dependent upon disposable workers amenable to temporary work, the absence of benefits, and alienation from the workplace. U.S. Department of Education statistics report that 46 percent of postsecondary instructional faculty and staff are part-timers; 45 percent of these part-timers are women, while 38 percent are men (*Condition of Education, 2001*, Ind. 50, Sec.). However, such numbers are deceptive because they fail to include the teeming ranks of graduate students who staff undergraduate classes and whose working conditions clearly define them as contingent laborers. Inclusion of such numbers would push the number of flexible laborers to as high as 65 percent. Nationally, about 19 percent of all workers are employed on a part-time basis, about one-half the official estimate of part-time academic workers ("Current Labor Statistics"). The national estimate for workers who are employed on a contingent basis is about 4 percent ("Contingent and Alternative"). In colleges and universities, 72 percent of faculty and staff work on contingent 'term-to-term' contracts (USDE Supplement to "Part-Time"). The chilling reality signaled by such numbers is not only due to the extent that the university outpaces national workplace averages in its use of part-time and contingent labor, but also to the realization that the number of part-time, contingent faculty and staff is the number of faculty and staff unable to participate in the democratic governance of their universities. Some departments may give their instructors with one to three-year contracts "official" rights to participate in faculty governance or they may put token graduate students and other contingent academic workers on departmental committees, but, as anyone who has worked under these terms well knows, such working conditions provide no security for dissension.

Academic labor debates have generally overlooked the labor of undergraduates and focused on the growing use of contingent instructors, graduate students, and nontenured faculty, but undergraduate students have been equally positioned as flexible labor. A drastic decline in public funding of higher education and a proliferation of university-corporate alliances has resulted in the erosion of the school/work division. Postsecondary education no longer precedes work, but rather accompanies the worker throughout his or her lifetime. During the 1999-2000 school year, 39 percent of all undergraduate students worked an average of 35 or more hours per week, 17 percent worked between 24 and 34 hours per week, and 24 percent worked 20 or fewer hours per week. Only 20 percent of undergraduates did not work at all while in school (*USDE The Condition of Education, 2002*, Ind. 37, Sec. 5).

While compromising the quality of undergraduate education, a student's ability to participate in the political and social life of the university, and a student's freedom to pursue anything other than a fully vocationalized course of study, such working conditions function efficiently in the production of a job market demanded by the global economy. These conditions not only inure students to supplementation and casualization, preparing them for a lifetime of flex work, but they also have the immediate effect of producing the cheap and disposable workforce demanded by our service economy.

In the same way that race, ethnicity, age, and gender mark bodies as differently qualified for certain kinds of work, the signifier "student" codes the laboring body and discounts its labor. Despite the reality that university-corporate alliances, life-long learning initiatives, and the need to continually reeducate and recertify one's self in today's economy have made education a semi-permanent condition for many adults, "student" signifies an untrained, unskilled, pre-employment youth. Although almost half of all college students are working adults, many with dependents, a whole range of cultural signifiers—from *Dateline* spring break exposés to movies like *How High*—continues to represent the student as an undisciplined, dissolute, rebellious youth who needs to achieve a work ethic and personal responsibility in order to become a productive citizen. Our economy depends upon a permanent labor force who will work

without job security, benefits, and a living wage; nonetheless, contingent flex labor is made to look like a kind of apprenticeship populations like minorities, immigrants, and students must pass through in order to gain the skills and experiences that will enable them to reap the greater rewards of knowledge work in the "new economy." Despite evidence that shows how many fewer jobs require a college degree than the number of degree-holders colleges and universities are producing, college still holds the false promise of economic and class mobility.

In addition to indirectly supplying retailers, restaurants, and industry with cheap flex labor, colleges also directly provide flexible labor to corporations in the form of student interns. In his discussion of undergraduate student internships, Rod Ryon contributes an often neglected dimension to our understanding of labor relations in the university. He argues that the "internship legitimizes or teaches the inevitability of contemporary corporate values via an introduction to 'flex labor' in one's 'career choice.'" Further, Ryon points out that internships create a class divide by promoting only the students who can afford the luxury of unpaid work. Rather than interning in corporate offices, the most economically disadvantaged students will more likely find themselves laboring in school-to-work programs, in which universities and corporations partner up to educate and employ the same group of student-workers. Lifelong learning initiatives, internships, and school-to-work programs constitute the material conditions of the information university that rob students of an actively political and social subjectivity, forging instead the subjectivity of laborers whose status as college students means that corporations are able to secure their cheap and easy purchase. While this material arrangement may serve corporate needs in conditioning students to a similarly alienated, depoliticized role in society, it is antithetical to the goals of education for democracy.

In the fully efficient information university, education is fashioned as information download and retrieval, students as information receptacles, and teachers as information servers. Corporations and career administrators have pinned their hopes to the belief that new information technology will make education more profitable by fully Taylorizing the labor of education and expanding the market for an educational product. In the corporate narrative of virtual education, information technology enables the division of education into discrete tasks, making it cheap and replicable. A faculty member provides course content, which is disseminated widely by courseware, and administrated by ranks of contingent instructors. Internet technology puts this courseware within the reach of a vast consumer market, who can access the information anytime, anyplace.

Yet the crucial point is that the processes by which labor is casualized and deskilled and education is decontextualized take place with or without information technology. Further, electronic learning environments, dignified labor conditions, and authentic, contextualized learning can coexist. In their articles, Larry Hanley and Chris Werry outline computer mediated pedagogies that facilitate the construction of knowledge, active student participation, and democratic structures. In his discussion of two very different versions of online education, Hanley argues that

> technology might nurture authentic student learning in several distinct ways. First, technology makes primary and archival materials, the basic stuff of scholarly life, much more widely available through the Internet. Second, new technology can enhance dialogue and communication to build authentic communities of understanding.

Perhaps it goes without saying that such potentialities are dependent upon, as Werry explains, "systems designed to be open, participatory, and democratic; and systems that respond to a variety of social interests, include a strong public service commitment, and safeguard the working conditions of teachers." Mark Mullen discusses the other potentiality of computer mediated education in his analysis of courseware packages that "fit seamlessly with traditional, and largely bankrupt, pedagogical ideas."

With or without new communication technologies, the processes of informationalization 'casualization, deskilling, and decontextualized learning' are set in motion anytime content, pedagogy, assessment, and governance are yielded into the hands of management. A department where top-down management utilizes contingent instructors to implement standardized syllabi, textbooks, and testing is a department already fully informatized. In our primary and secondary schools, processes of informationalization, in the form of "accountability" measures, function independently of new communication technologies to mandate curricula and collect decontextualized information. In their essay, Sandra Mathison and Wayne Ross demonstrate that while accountability measures are veiled in a rhetoric of democracy—the interests and desires of the "the American people"—they tend to shut down democratic processes, putting control of our schools into the hands of the few and pandering to the interests of corporations and their government partners. When decision-making control over content and assessment is taken out the hands of students, parents, and teachers, "citizens are made to be passive spectators, disconnected from one another and alienated from their own desires, learning, and work."

True deliberative democracy depends upon a power that is held in common among the members of its society. In the university, democratic principles, values, and practices depend upon shared governance among faculty, staff, and students, not power wielded from above and labor conditions that alienate both instructors and students from governance and active participation in their university. In our closing essay, Henry Giroux asserts that

> higher education represents the possibility of retaining one important democratic public sphere that offers the conditions for resisting the increasing depoliticization of the citizenry, provides a language to challenge the politics of accommodation that connects education to the logic of privatization, refuses to define students as simply consuming subjects, and actively opposes the view of teaching as market-driven practice and learning as a form of training.

Importantly, he notes that preserving this crucial function of the university depends upon our "challenging the encroachment of corporate power."

Like Giroux, many of the contributors to this section raise questions about how information is structured to achieve certain political, social, and economic ends. Ryon, Werry, Rodino, Mathison and Ross all question the discourse practices that support hierarchy and domination as they consider the role rhetoric plays in maintaining selective political positions on education and labor in the university. Underneath the struggle over educational technology lies a struggle over the meaning of education and the purpose of the university. Contributors to this section recognize that the vectors of power and politics that intersect with technology will dictate whether technology is used to reduce education to information download and further degrade academic labor or to facilitate critical, contextual knowledge construction and empowered students and teachers. As Hanley argues, "Ultimately, the outcome of the struggle over educational technology will depend less on attitudes toward technology than on understanding the relationship between new technologies and academic labor."

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