

copied from record to tape to CD to DVD to MP3 or MP4. Extension of copyright is one thing; protection is something entirely different. The professions, including the professoriate, have yet to come to terms with new demands on public knowledge or digital works. Hyperauthorship, or the proliferation of subauthorship, is one indicator of the crisis of digital works (Cronin, 2001). For instance, an often-cited 1997 article in *Nature* has 151 authors drawn from a network of laboratories and universities. Another indicator is piracy and remixing of courses, music, movies, software, etc.; a phenomenon of what Kavita Philip (2005) calls the "technological author." Copyright protection hardly addresses assumptions of authorship or rights to digital works, and the technological author interrupts conventional forms of resistance to the automation of academic labor. So, while "copyright is the sine qua non of the digital diploma mill" (Noble, 2002, p. 38), it is misleading to conclude that IP interests in the automation of professions are simply matters of conflict between administration and faculty over rights or control of work products.

Noble theorized and documented the genesis of the digital diploma mill, locating it in the tradition of the correspondence school and the political economy of automation. Responses to this thesis were charged (Winner, 1998), with the bulk coming to the defense of distance education, "online learning" or screen-to-screen (S2S) virtual classrooms with comparisons to "face-to-face" (F2F) brick and mortar classrooms (e.g., Brier & Rosenzweig, 2002; NEA, 2000, p. 20; Schneiderman, 1998; White, 1999). Meta-analyses were generated to argue that students' mental productivity or academic performance in S2S was equal or even superior to F2F courses (e.g., Bernard & Abram, et al, 2004). Some philosophers entered the conversation with suggestions that F2F ontology was superior to telepresence (e.g., Dreyfus, 2001). Others argued that S2S education could be humanized if only attachments to the "sacred" space of the F2F classroom could be overcome (Jaffe, 1998) or alternative practices of computer-mediated communication (CMC) were adopted (e.g., Burbules & Callister, 2000, pp. 153-82; Feenberg, 1999; Hamilton & Feenberg,

2005; Werry, 2001). However, most responses avoided Noble's thesis that digital diploma mills introduced or fused particularly distasteful aspects of the white-collar factory into the heart and soul of higher education (e.g., capital accumulation, displacement of labor, low wages, opaque bureaucracy, overpriced commodities, profit maximization, unaccountable management). The problem is not the alienation, performance or satisfaction of the S2S student *qua* customer; rather, the issues involve interrelations among capital, labor, management, concentration of power, and the intensification of globalization, underwriting erosions of academic freedom and faculty governance. Noble described the general structure of digital diploma mills but did not have the benefit of a case study for details. This article provides detailed insights into the machinations of a digital diploma mill and, like Noble, explains its operation through the political economy of automation. What is an automated course author? How do digital diploma mills work?

UBC's Master of Educational Technology Program

The global education market is estimated at \$2 trillion with the US's share at \$750 billion (LearnFrame, 2000, p. 54; Thinkwell, 2001). The Canadian education market was \$70 billion in 2002, with \$30 billion going to postsecondary education (Statistics Canada, 2003). Postsecondary education in the US accounts for \$237 billion or one-third of the total US market (LearnFrame, 2000, p. 54). While the definition of for-profit education is changing (de Castell, Bryson & Jenson, 2002; Ross, 2000; Ruch, 2001; Werry, 2001), publicly held or traded for-profit education companies in the US had a market value of \$70 billion in 2002, which is about one-third of the total industry (Galan, 2001; Goldman Sachs, 2000; Higher ed Inc., 2005; Newman & Couturier, 2002; Sandler, 2002, p. 13; Stokes, 2000). Postsecondary S2S education in the US was \$5 billion in 2004, reflecting 9-20% mean increases in annual revenues as reported by 71 colleges and universities (Primary Research Group, 2004). These increases reflect 20% mean growth rates of enrollment in S2S courses for the past three years (Allen & Seaman, 2005;

Blumenstyk, 2005). Multi-university alliances, such as the SUNY Learning Network and Illinois Virtual Campus report 20% increases in annual enrollments over extended periods (e.g., 7-10 years) (Bonk, 2004, pp. 20-21). The Canadian Virtual University has reported similar increases (Lorenzo, 2004), and although there are seven times as many S2S providers in the US (3,190 in the US, 450 in Canada), Canada has the highest number of providers per capita in the world (Aurini & Davies, 2004; Frank, 2001; Mills, 2001; Wende, 2002, p. 10). WebCT, courseware developed at the University of British Columbia (UBC) in the mid 1990s and now a \$130 million company, generates about \$15 million each year in revenues. Over 10 million students at 2500 universities and for-profit institutions now use WebCT. Pure and simple, e-learning is e-commerce.

Romantic histories of online education in BC date its origins to 1919 and a small island off the west coast, where a lighthouse keeper requested that the Provincial Department of Education use the postal service to forward curriculum materials to assist his wife in teaching their small children (Ruggles et al, 1982, p. 16; see also CADE, 1999; Mills, 2001). The first opportunities for postsecondary education began in 1917 with vocational courses for returning soldiers, and correspondence education expanded to secondary C&I by 1929. UBC's Department of Extension was established in 1936, and in 1949 this department was given the charge of UBC's for-credit correspondence education. The Department of Extension was changed to the Centre for Continuing Education in 1973 [renamed Continuing Studies (CS) in 1993] and in 1975 a Guided Independent Study division was created to oversee for-credit correspondence. This division became Distance Education and Technology (DE&T), a division in CS, in the mid 1990s.

DE&T manages most of the S2S courses at UBC, and is currently an institutional service unit of UBC's Office of Learning Technologies (OLT). Nearly 6,500 students enrolled in DE&T courses in 2004-2005, an 85% increase since the mid 1990s (DE&T, 2003). A vast majority are undergraduates (93%), with a balance of graduate (4%) and certificate students (3%). DE&T grew by 9% per annum for the past nine

years while UBC total enrollments increased by 3.2% each year (Bourlova, 2005, pp. 18-20). The fastest growing enrollments are in S2S courses, which now account for about 30% of all DE&T enrollments. Although 102 of 140 courses offered through DE&T are S2S, enrollments in multiple sections of popular print-based courses (i.e., English, history, philosophy) dictate that DE&T primarily remains a mail-order correspondence education unit.

Cost recovery units within faculties and departments offer about 15% of the S2S courses at UBC while DE&T accounts for 85%. The Faculty of Education, established at UBC in 1956, has a history of continuing education and developed its own Field Development Office in 1975. In 1987, this became the Distance Education Office (DEO), which by the early 1990s had 2,500 students taking its undergraduate correspondence courses each year. The DEO was changed to the Office of Continuing Professional Education (OCPE) in 1996 and to External Programs and Learning Technologies (EPLT) in 2003. About this time, EPLT began to place courses online and, providing many of the same services as DE&T, now offers 36 S2S courses enrolling ~550 students. Nevertheless, save for investments in U21 Global, UBC is a fairly small-time player in the S2S market.¹

In 1997, DE&T inaugurated a post-graduate certificate (15 credits) program between UBC's Department of Educational Studies (EDST) and Tec de Monterey, and within a few years, began to explore the logistics of a graduate degree program. The *Business Plan* for the Master of Educational Technology (MET) program was drafted by DE&T Director Tony Bates (with Jeff Miller) and introduced to the Faculty of Education (FoE) in April 2001 (Bates & Miller, 2001). A few universities in Canada and the US and the Open University in the UK were minor competitors for such a program, and the proposed MET degree designation was a novel addition to UBC's offerings of master's degrees. At the time, when

¹ For a backdrop to this specific to the commercialization of UBC R&D, see Petrina & Weir, this issue of *Workplace*. For U21, see Walker, this issue of *Workplace*.

Dr. Bates was asked if technology was fundamentally changing the university, he responded "yes— but... there will always be a role for the F2F campus element" (quoted in Charbonneau, 2001, p. 22). Dr. Bates had laid out the basic principles for budgeting and staffing S2S programs in his popular book, *Technology, Open Learning and Distance Education*, published in 1995.

The MET *Business Plan* spelled out details for a 30 credit, course-based master's program, with a core requirement of four courses in both English and Spanish, and the remaining six elective courses in either language depending on the university. Students would pay tuition of \$12,500 (CD) for the program. Within a fully cost-recoverable model, the program, assuming 40 students per course, would yield "a comfortable annual profit of \$220,000 per year, by year 7" (i.e., 58% return on expenditure) (p. 15). Sixty students per course would increase profits to \$440,000 per year (i.e., 94% return on expenditure). A \$15,000 production cost, including faculty FTE, for each course was allocated to the budget (p. 12). "Tutor fees" would be \$220 per student, "with a tutor to student ratio of 1:20, or \$4,400 for a class of 20 students." Estimating the work necessary for a thirteen-week course, they "assumed that this will entail approximately 100 hours work... or 12.5 days" (p. 13). The piecemeal instructor wage was derived from a DE&T figure Dr. Bates established for DE&T tutors in the late 1990s (Bartolic-Zlomislic & Bates, 1999a, 1999b; Bates, 1995). To centralize control, the program would be housed within the OCPE (EPLT in 2003), a service unit, rather than a department or centre within the FoE.

The draft *Agreement Between UBC and Tec de Monterey* defined the governance of the MET program and terms with which IPRs for the courses would be governed. A Governing Council consisting of two members appointed by the dean of each institution would oversee "overall academic integrity and coherence of the program," "new course development," approval of "proposed content of all Program courses prior to their development," course fees, grade scales, transfer credits (p. 7). The four core courses would be jointly owned while the individual institutions would be sole owners of

the electives. The core stipulation of the IP clause was that each institution "warrants that it has, or will obtain the rights necessary to enter into and perform this agreement" (p. 9). In effect, each institution was promising to obtain and deliver from designers (i.e., faculty members) copyrights for all courses in the program. UBC's Policy 88, governing IPRs for patents and licensing, nevertheless contradicted this promise by reiterating first author rights from the *Canadian Copyright Act*. Herein, UBC was assuming that faculty members would give up IPRs for their courses, surrender academic freedom, and disregard their "academic exception" to "works made for hire" or "work made in the course of employment" conditions in *US Copyright Law* and the *Canadian Copyright Act*.

The MET program proceeded through curriculum approval procedures in the FoE in the fall of 2001 and to the UBC Senate for final approval on 27 February 2002. A marketing plan was launched and admissions opened in the spring of 2002 for the first two courses (ETEC 510 & ETEC 540) to be offered in the fall. Also in the spring, DE&T instructional designers began circulating a course contract to faculty members who agreed to design and automate S2S courses as part of their normal workload (1.5 FTE to design & automate, 1.5 FTE to teach). The *MET Letter of Agreement for the Production, Development and Delivery of an Online Course* was an artifact of prior DE&T practices, where, unbeknownst to most on campus, including the MET Coordinator, faculty members were required to reassign IPRs for course curriculum to UBC and surrender certain aspects of academic freedom and working conditions (e.g., review of the curriculum, course maintenance, dispute resolution over IP). Now, the contract was a condition for MET course assignments. Faculty who agreed to design and automate a MET course were confronted with the following contract language:

7. Intellectual Property

The University of British Columbia is the owner and holds copyright in perpetuity on all materials developed and produced specifically for the project. Reproduction of any of these project materials, in whole or in

part, without written permission of the Associate Vice-President Academic, or his/her designate, is forbidden. However, the author retains the right to utilize information presented in the materials and to pursue its publication in other forms. The University of British Columbia, in consultation with the author(s), has the right to make any arrangements it deems advisable concerning the use of all project materials for which it holds copyright. Computer software invented for use in this project, and which can be used again as a "shell," will fall under University Policy #88, Patents and Licensing. (MET IP contract, April 2002)

The first group of six designers signed off on their courses (ETEC 510 & ETEC 511). Skeptical about the IP clause, faculty members began to question certain clauses. On 30 April, the MET Coordinator forwarded a memo to MET course designers:

As a result of some inquiries from Steve Petrina over the interpretation of the IP clause in the standard DE&T contract for the MET program I consulted with the UBC lawyer.... [who] developed some language to clarify this. Essentially the way he has done this is to say that the authors will give up copyright over everything to the university but that the university will then license back the use of these materials to the authors.... If you have any concerns, please get back to me ASAP. It is essential that we get these contracts signed so that everyone is clear on the expectations and timelines. (Gaskell, 2002a, p. 1)

"As I get closer to online course development," the MET Coordinator (Gaskell, 2002b, p. 1) wrote a few days later, "the issues of copyright seem to get trickier. My effort to clarify what I thought was a reasonable request has produced language that is threatening to alienate the people I need to develop courses.... It is in the interests of the profs to delay creating the online courses. It is not in the interest of the MET program.... We need to create an environment in which profs feel supported in their efforts to build online courses and are not constantly

worried about their work being alienated from them. Lawyers need to worry about worst-case scenarios because that is what they end up dealing with. Often times, though, this approach warps normal relationships." As the MET Coordinator indicated, the confidence of some participating faculty members was eroding before the first MET course was offered.

With minimal faculty input and time to respond through the summer, the MET Coordinator and university lawyers contrived a new *MET Letter of Agreement* containing a classic move to unbundle IPRs by distinguishing "author materials" from "course materials:"

7. Intellectual Property

Original materials used in this course that attract copyright protection in Canada may be:

- created solely by an Author ("**Author Materials**"); or
- created jointly by an Author and individuals at the academic or service units of the University working to develop and deliver MET ("**Course Materials**").

For greater clarity, Author Materials include:

- works created by an Author before this course was contemplated; and
- works created by an Author specifically for this course, but without significant input from individuals at the academic or service units of the University working to develop and deliver MET.

For example, Author Materials include, without limitation, course outlines, case studies and student exercises. Each Author owns copyright in Author Materials. Each Author agrees that Author Materials may be used, in perpetuity:

- By the University and/or by Tec de Monterrey in connection with their joint MET; and
- By the University in connection with other courses to be offered in either electronic or paper media. If the University uses Author Materials in connection with courses to be offered by a third party outside of the University, then the University will:

- use reasonable efforts to consult with Author of those materials before such use; and
- negotiate in good faith with the Author of those materials to determine that Author's appropriate entitlement to any resulting revenues received by the University.

The University owns copyright in Course Materials. The University agrees that those elements of Course Materials that comprise "content" (including without limitation the syllabus, but excluding the "look and feel") may be used, in perpetuity, by an Author who contributed to the creation of those materials, for the purposes of teaching and/or publication.

The University owns copyright in the MET courses as a collective work. (MET IP contract, September 2002)

As indicated, this version of the MET course contract altered the DET course contract in an attempt to "unbundle" copyright in the courses, giving the university certain rights and the authors the remaining rights. Of course, this again was an unreasonable demand on the MET course designers, forcing them to assign three of the five basic rights to each of the courses. A copyright is actually a bundle of five basic and overlapping rights, typically indivisible unless reassigned or transferred by the author:

Copyright— A Bundle of Rights

- **Reproduction**— the right to create identical or near identical copies of the work.
- **Adaptation**— the right to create derivative works, such as abridgements, translations or versions in a range of media (book to movie to video to CD to on-line game)
- **Distribution**— the right to make the first sale of each authorized copy of the work.
- **Performance**— the right to present, recite, play, act or publicly perform the work.
- **Display**— the right to publicly show the work, by means of film, radio, TV, WWW or other device.

UBC's strategy of unbundling, endorsed by a consortium of universities in 1997, meant gaining control over display, distribution and reproduction rights for the MET courses (Consortium for Educational Technology for University Systems, 1997). Unbundling necessarily introduces contracts into the course design and automation process.

Generally, only during the past decade of a digital transformation of for-profit S2S education and the mass distribution of courseware did course copyright and governance become a legal issue in higher education (Noble, 2002; Ross, 2000). In Canada and the United States, the creator of a work is automatically conferred a copyright for the work, whether academic, artistic or literary. Excluding the possibility of "works made for hire" or "work made in the course of employment" contracts, copyright for academic works, such as courses and course materials, created within the normal scope or conditions of university employment belongs to the author. Administrators attempt to place university teachers under for hire conditions with incentives such as buyouts and stipends for designing courses. Yet, for hire conditions are *not* so easily demonstrated under the law and the simple existence of an employment relationship does not create for hire conditions (Holmes & Levin, 2000; Townshend, 2003). All products created in the course of employment are not the property of an employer. Hence, the reassignment of copyright to the university depends on a mutual recognition of for hire conditions and a written agreement. In addition, unions and faculty associations can bargain and negotiate IP rights to address "'work made in the course of employment" on behalf of its collective membership.²

The fact that a researcher, whether as author or editor, is able to enter into such a

² Lawyers typically refer to the influential Reid case's 13 factors to determine whether a "work made for hire" condition exists. *Community for Creative Non-Violence v. Reid*, 490 US 730, 751 (1989); See Holmes & Levin (2000) and Townshend (2003). For copyright law clauses, see US *Copyright Law of 1976*, Title 17, Section 101; Canada *Copyright Act*, Chapter C-42, 13(3).

contract as a free agent speaks to the public trust invested in academic work— perhaps most notably celebrated with the concept academic freedom— but a public trust which a course IP contract, such as the MET course contract, voids by positioning the author as working for a publisher. An organization's employees are typically engaged in just such works made for hire— think of Microsoft programmers— but academics have long been entrusted with the copyright for their intellectual products, such as research articles. Traditionally, a moral or tacit contract— the "faculty exception," "teacher exception" or "academic exception"— granted course oversight to instructors who created the course materials. Although a legal case could be made from this historical precedent, the academic exception has withstood challenges in the courts in recent times.³ It recognizes that a scholar's research is self-directed, owing more to free inquiry and the public good than to the direct financial wellbeing of the institution employing the researcher (Frank, 2001; McSherry, 2001; Townshend, 2003; Triggs, this issue of *Workplace*).

On the interrelationships among academic freedom, courses and IPRs, legal scholar Donna Demac (1999) concluded: "If universities owned the scholarly output of faculty members, they could potentially interfere in freedom of expression. Academics must have a high degree of independence in order to teach and do research effectively" (p. 2). Academic freedom refers to the freedom to teach without interference or censorship. This involves a free

³ I am grateful to John Willinsky for editing an earlier draft of this section. On the academic exception, see Triggs, this issue of *Workplace*; Euben (2000), Frankel (2002, p. 14), Holmes & Levin (2000), Laughlin (2000), McSherry, (2001, pp. 101-143), and especially Townshend (2003), and court cases *Hays v. Sony Corp. of America*, 847 F.2d 412 (7th Cir. 1988); *Dolmage v. Erskine* [2003] OJ No. 161 (Ontario Superior Court of Justice- Small Claims Court). 101-143. On a freedom of speech interpretation of university assertion of research copyright ownership, placing an undue chill on faculty freedom to explore, discuss, and share ideas, see Meyer (1998).

expression of views and choices of course content, methods, and materials "without censorship or reference or adherence to prescribed doctrine."⁴ This implies oversight, which comes with responsibilities and rights. Who ought to govern S2S and F2F courses? Or specifically, who has rights to course materials? These questions refer to both moral (academic freedom) and legal rights. Demac continued, "as universities see a growing profit potential in digital course material, educators worry about losing control of both their work and the revenues that could derive from its sale. In other words, the dispute touches on two compelling issues: academic freedom and money" (p. 2).

Bryson v. MET

In September 2002, *after* Associate Professor Mary Bryson was assigned to design (1.5 FTE) and teach (1.5 FTE) an MET course (ETEC 512) as part of her regular teaching load, she was shown the MET course contract. She took issue with the contract, noting problems of signing a legally binding document that: (a) makes a distinction between "author" and "course" materials that is not made in designing F2F courses, (b) assigns copyright of course materials to UBC, (c) was not normally a prerequisite to either course design or teaching, and (d) was not bargained by the UBC Faculty Association (FA). Bryson sought assistance from the FA to deal with the implications of the MET contract. On 24 October 2002, the FA advised all faculty members to *not* sign course contracts. By this time, other faculty, including those feeling pressured and insecure with either sessional or untenured status, signed contracts. The course Dr. Petrina was designing (ETEC 531) was moved to 2004 so there was no compulsion to resign or sign. The first MET courses (ETEC 510 & ETEC 540) were placed online and offered in the fall of 2002. Since she

⁴ Queens University Faculty Association and Queens University. (2002). *Collective Agreement, 11 May 2002 – 30 April 2005*. Kingston, ON: Authors. For a history of academic freedom and legal matters, see Bruneau & Turk (2004), Cameron (1996), Horn (2004), Rochford (2003), and Tierney & Lechuga (2005).

did not sign the contract for ETEC 512, on 27 November 2002 MET administrators removed Dr. Bryson from the assignment leaving her to fill her workload with a F2F course. On 11 December, the FA filed grievances against UBC.

Two grievances were brought to the BC Labour Relations Board (LRB). The first and major grievance concerned the fact that in the course design and automation for the MET program, UBC negotiated directly with individual faculty members rather than with the union as exclusive bargaining agent. The second grievance dealt with the charge that "in retaliation for Dr. Bryson's refusal to enter into an individual agreement" with UBC, she was dismissed from the assignment (Dorsey, 2004, pp. 1-2). Arbitration hearings were held on 27-28 October 2003, 15-16 January and 2 February 2004 under the jurisprudence of James Dorsey, QC, a senior, independent Arbitrator appointed by the BC LRB.

On the morning of October 27, the arbitration teams squared off. On one side was the MET Coordinator, now Associate Dean of EPLT, the DE&T Director, and four lawyers, including the Director of Faculty Relations, Director of the University-Industry Liaison Office (UILO), and co-counsel for UBC.⁵ On the other side were three faculty members, including Dr. Bryson, the Executive Director and Membership Services Officers of the FA, the FA President, FA Labor lawyer and co-counsel. In his opening statement, the UBC's counsel went on the offensive by arguing that IP was not a term or condition of employment for faculty members—the FA did not have exclusive bargaining agency over individual course contracts. The strategy was to limit the scope of the FA's bargaining rights by pointing out that the FA had not bargained IPRs in any collective agreements up to this point. "There is nothing in the *Collective Agreement* about IPRs at all," he stated. Hence, course contracts were well within the scope of the university's residual manager's right; the MET Coordinator, upon negotiating individual course contracts, was merely involved in "routine administration" of the *Collective Agreement* (Roper & McFarlane, 2004a, p. 1).

⁵ On the UBC UILO, see Petrina & Weir, this issue of *Workplace*.

He turned to *Brown and Beatty* to note that "arbitrators have held that management may in the absence of any express terms in the agreement to the contrary, unilaterally install time clocks, a card-swipe policy, numbering tags, electronic surveillance..." (p. 12). The FA lawyer provided the caveat that UBC did not simply institute a new policy (or revision of Policy 88), which was a viable option for administrators; instead they negotiated with individuals (Black & Blendell, 2004a, 2004b 2004c).

UBC's counsel reasoned that UBC was a "multifaceted organization" and in this case was "acting as *qua* publisher, not *qua* employer." He pointed out that the university is a publisher—"UBC Press is an arm of the university"—"and in that capacity deals directly with faculty about their IPRs. It does not negotiate with the FA about those rights" (Roper & McFarlane, 2004a, p. 4). When faculty members deal with a publisher, they are acting "not as *qua* employee of the university, but as independent faculty member." Putting a course online was the equivalent of publishing a "compendium of materials that can be used anywhere in the world, theoretically." The UBC lawyer continued with this line of reasoning: "UBC is publishing a program, a program that is developed by teams of contributors. This is no different than a publisher publishing a book with chapter contributions from various authors or teams of authors" (p. 9). The opening strategy was to break the notion of collective agency by portraying faculty members as either independent authors and contractors *or* production workers on the university's assembly line. Invoking the "work made in the course of employment" clause of Canada's *Copyright Act*, he concluded that each faculty member is an individual "widget maker," and without an agreement to the contrary, "there is no extension to ownership over the widget."⁶ In effect,

The University's primary submission is that when it dealt with faculty with respect to their IPRs, it was doing so not as employer

⁶ The sections on the arbitration are based on field notes and Black & Blendell, (2004a) and Roper & McFarlane (2004a).

dealing with conditions of employment but rather as the provider (or publisher) of the MET program in conjunction with Tec de Monterrey. It was dealing with rights related to work product, not terms or conditions of employment relating to the creation of the work product. (Roper & McFarlane, 2004a, p. 3)

The FA's counsel countered by asserting that UBC breached the *Collective Agreement* by engaging individual faculty members in direct contract negotiations in contravention of the fact that the FA has exclusive authority to bargain collectively on behalf of all its members. As remedy for this breach, he reasoned, a fair ruling would prevent UBC from imposing or negotiating individual course contracts, which contained terms and conditions of employment. "We submit," he argued, that the UBC lawyer's characterization of the university's "relationship with Dr. Bryson and the other Faculty Members as that of 'Publisher' to 'Author' is misguided. Indeed, we would submit that it is a characterization concocted by the University, well after the events in question" (Black & Blendell, 2004a, p. 33). The MET program, he continued, is offered by the FoE: "It is not a DE&T program, nor is it a program offered by UBC Press." "Nowhere in any of the proposals for the program is there any mention that the University would engage Faculty Members to author courses for it to 'publish'" (p. 33). The relationships outlined by the UBC lawyer fundamentally distorted the nature of academic labor and misrepresented the interconnections among academic freedom and oversight over the "work product" of faculty members. Simply put, the FA lawyer argued, "IPRs are terms and conditions of employment." UBC's counsel, he argued,

implied that the scope of a union's bargaining agency excludes IPRs. We strongly disagree. We submit that IPRs, and copyright in particular, are no different than other terms and conditions of employment in that regard.... Our submission is based on the practice of the Canadian university sector, as well as statute and case law. (Black & Blendell, 2004a, p. 37).

Moving to the issue of Dr. Bryson's refusal to sign a course contract as a term and condition of her workload and her subsequent union activity, the FA lawyer argued that the MET Coordinator's action in effectively firing her from the assignment was discrimination. "When Dr. Bryson refused to sign the *Letter of Agreement*, and took her concerns to the Association," he maintained, UBC retaliated "by removing her from the MET project. While the University may try to provide a reasonable explanation for its decision, we submit that its true motive was a discriminatory one" (Black & Blendell, 2004a, p. 56). Indeed, the MET Coordinator's insistence that faculty members sign the *MET Letter of Agreement* "discriminates against those Faculty Members who heed the advice of the FA not to sign the agreement." The MET course contract "thus arguably rewards those Faculty Members who do not adhere to the Association's advice, and punishes those who do" (p. 63).

The Arbitrator heard examination and cross-examination evidence from eight administrators and faculty members and viewed hundreds of exhibits over four days (27-28 October 2003, 15-16 January 2004) and heard closing arguments on 2 February. Closing arguments reiterated the opening statements, with the addition of summaries of the witness testimony. The arbitration decision was released on 18 February 2004, ruling in favor of the FA on all counts, reiterating the role of the FA as sole bargaining agent for faculty at UBC and finding that UBC improperly negotiated contracts as a term and condition of course design. Second, Dorsey found that "when Dr. Bryson was removed by Dr. Gaskell in November 2002 from the assignment... the decision to remove her was punishment for her refusal to agree to work under terms different from those in the collective agreement" (Dorsey, 2004, p. 96). Dorsey explained the intricate web of social relations created within the MET contract system:

The outcome changed copyright ownership. It created a limitation on academic freedom. It granted the employer a previously non-existing right under the collective agreement

or prior DE&T agreements to act "in its discretion" to "decide which of the materials contributed by the Author it will use." It created a new remuneration for teaching work by introducing potential future payments to be negotiated and other unspecified compensation (Section 7.2 and 11). It introduced methods of evaluation that might conflict with the evaluation process and methods in the collective agreement. It introduced a dispute resolution process alien to the collective agreement and *Labour Relations Code*. (p. 93)

In its entirety, Dorsey's report is a landmark award for academic labor. "We are thrilled by the decision," exclaimed the Canadian Association of University Teachers (CAUT) President Victor Catano. "The decision identifies copyright ownership as an inherent right of faculty, ties that ownership to academic freedom, affirms the role of associations in negotiating intellectual property rights with university administrations and upholds in no uncertain terms the right of faculty to defend the collective agreement. This is a remarkable achievement" (quoted in *CAUT Bulletin* Editors, 2004, p. A1). Rights, the CAUT (2001, p. 3) affirms, "protect academic freedom."

In addition to the "Teacher's Exception," the *Bryson v. MET* arbitration award is the best legal ruling university teachers have to tie academic freedom to IPRs and oversight over courses (see Triggs, this issue of *Workplace*). Ruling in favor of course ownership for academics, Dorsey concluded: "In the university employment context, because of the importance of the expression of ideas to academic freedom and the presumptive first ownership of copyright in faculty, issues related to copyright are part of the core relationship between the employer and employee. They are part of the conditions of employment" (p. 88).

Catano noted that the coercion and troubles Dr. Bryson confronted "are becoming increasingly common at universities and colleges in Canada as pressure grows from administrators, politicians and business people to treat scholarly work as industrial product. We are challenging this trend at the bargaining table and in the political arena. This decision gives our

efforts an important legal boost" (quoted in *CAUT Bulletin* Editors, 2004, p. A6). Anticipating an appeal by UBC, Dr. Bryson's reaction was measured: "The litigation process is inherently demanding... If this decision can be used as part of a broader campaign to defend academic freedom, then the trouble has been worth it" (p. A6).

From Appeal to Digital Diploma Mill

Within three weeks of the *Bryson v. MET* award, UBC's legal counsel submitted an appeal to the BC LRB. With contracts for eight MET courses already signed and four courses in the works, the Faculty of Education was reluctant to comply with the award. Thirteen faculty members and DE&T instructional designers had signed contracts by this time but a few questioned their legality given Dorsey's decision that the means with which signatures were acquired contravened the *Collective Agreement*. The FA took a position that as a result of Dorsey's ruling, "any existing MET contracts between UBC and individual members must be considered null and void" (Wieland, 2004, p. 2). With promises made to Tec de Monterey in the institutions' agreement, FoE administrators were intent on delivering IPRs for new courses under development. In the FoE Dean's Advisory Committee (DAC) meeting on 17 March, an allusion was made to "non-precedent setting agreements with the FA in order to meet the needs of the MET program" (DAC, 2004a, p. 3). UBC preferred a quick solution to the IPRs for MET courses, but the FA noted that IPRs were interconnected with other terms and conditions in the MET contract, such as academic freedom, dispute resolution, performance evaluation, and remuneration (Wieland, 2004). With an appeal issued, there was no chance of productive, collective negotiations. The FA was willing to negotiate once the appeal was withdrawn or put in abeyance. As the FA lawyer wrote in response to the appeal, UBC "cannot, and must not, simply disregard an order of this Board because it believes it will ultimately be successful on a reconsideration application" (Black & Blendell, 2004b, p. 4).

The FoE, however, faulted the FA for dragging its heels and otherwise forged ahead on

several fronts. DAC Minutes were circulated with an advisory to move ahead with MET course design: "The Faculty Association has refused to discuss any way of proceeding with the development of MET courses as long as the university continues its appeal but as the Faculty can't wait six to twelve months for this to be clarified so the Faculty is moving ahead with the development of the courses that are allocated for next year" (DAC, 2004b, pp. 6-7). In the works was a new graduate program, with the Hong Kong Institute of Education (HKIE), patterned on the MET program. Two MET courses for which UBC had acquired contracts were transferred into the UBC-HKIE program. For one of the courses (ETEC 532), the original designers were neither consulted nor invited to teach. A core course from the Department of Curriculum Studies (CUST) was scheduled for redesign and automation against pronounced resistance from faculty members (CUST Minutes, 2004). New online courses were scheduled, with the workloads for design and teaching given to assistant professors and DE&T instructional designers. EPLT hired its own instructional designer, who began to redesign the FoE's print-based correspondence courses. Meanwhile, UBC placed the appeal in abeyance in September 2004, but after stalled negotiations with the FA, followed through with the appeal in mid February 2005. The case was drawn back into the legal system with UBC's counsel requesting a new Arbitrator, claiming that Dorsey provided a biased, unfair hearing.

A new Arbitrator was appointed to hear the BC LRB appeal over three days in June 2005 (6-7 and 20 June). Teams similar to those assembled for the arbitration squared off at the appeal hearing, but this time without testimony coming from witnesses. UBC's lawyer opened by pointing out that Dorsey erred in extending the scope of the FA's exclusive bargaining agency to IPRs. He reiterated over and over that the FA "has never bargained IPRs... has not, by choice, negotiated IPRs." This went to the heart of Dorsey's decision that IPRs, as terms and conditions of employment, are well within the bargaining rights of the FA, whether or not it chooses to exercise this particular right at the bargaining table. Issues of work product, the UBC lawyer emphasized, are beyond the union's

bargaining agency. Acknowledging that conditions of work, or inputs (e.g., wages, benefits, credentials), were within the scope of the FA's bargaining authority, he stressed that the work product was not (Roper & McFarlane, 2004b, 2004c). Backed up by a weighty arbitration award, the FA lawyer merely worked to contradict the components of the appeal.

LRB Vice Chair G. J. Mullaly (2006) delivered an appeal decision on 28 February 2006. He upheld the Dorsey arbitration award on all counts, reinforcing, in legal terms, the stipulation of copyright as a term and condition of employment, the right of faculty associations or unions to bargain IP on behalf of their members, the intricate interdependencies between the academic exception and academic freedom, and the right of faculty members to refuse direct negotiations with administrators over terms and conditions of employment. Mullaly asserted that implied agreements and custom, such as the academic exception in this case, are as effective as written contracts. This again was an extremely significant decision for academics.

Of course, legal proceedings drawn out to this magnitude over academic freedom, course IPRs, and conditions of work and work product do not create a white-collar factory, per se. However, the power relations invariably marking these types of proceedings derive from conditions conducive to the maintenance of digital diploma mills. As an artifact of conflict among capital, labor and management, the MET program is a textbook example of the automation of higher education. The automation of C&I involves, among other processes, alienation, deskilling (semi-skilling), displacement of labor by capital, endless iteration and customization, operator overload, systemic surveillance, and standardization.⁷ These types of processes are

⁷ What actually gets automated? A course, for all intents and purposes, among other things, consists of material artifacts created for its operation (e.g., examples, exams, lecture notes, media, readings, syllabus). First, the exchange or transmission of these artifacts, transformed into digital data, is automated. Courseware automates the exchange of images, texts and sounds for continuous consumption

common to automation, be it of manufacturing, banking, C&I, design, health care, or library and office work, albeit to different degrees and economies of scale. The MET program provides a model for exploring these processes in the automation of C&I in higher education.

A large percentage— 82% of MET courses (53 out of 65 sections)— are taught by sessionals or adjunct, part-time (PT) labor. The MET course sections are capped at 24 students, with most sections running with about 20 students. Labor is displaced in this case. In the aggregate across 22 sections per year, MET operates with a higher students per instructor ratio than is sustainable in F2F graduate programs. Full time professorial labor is displaced, with the MET program operating with many fewer FT faculty (i.e., 18% of the total) than found in F2F graduate programs. One might argue that this is more a function of a bureaucratic division of labor specific to

and reproduction at the push of a button, 24x7. Second, a wide range of administrative (e.g., grouping, marking) and C&I knowledge and skills (e.g., emphasizing, pacing, presentation, responding, scoping, sequencing) used everyday by teachers are automated. Through WebCT or similar courseware (e.g., Blackboard), the automation of these skills regrettably (and invariably) facilitates surveillance. WebCT and other courseware are not empty media or shells, waiting for content; WebCT is always already a rich expression of someone's (e.g., Murray Goldberg) idea of an automated educational enterprise. WebCT is already rich in intellectual nuance, content and ideas. Third, the emotional labor that goes into the course by way of interests, passions and the everyday economy of rewards is automated. The automation of emotional labor is nearly as popular in computer science as artificial intelligence. Fourth, the personal knowledge of instructors is automated, as each course has a character that is regenerated within the proceedings of the course, and in the reproduction of the course. The young Marx has much to say about alienation in this form of automation. Once the course is designed, mechanisms of automation are in place for an indeterminate amount of time. See also de Castell, Bryson & Jenson, 2002.

research universities rather than a residue of automation.

Deskilling has always been contradictory within automation (e.g., Blauner, 1964), and education is no exception. In the 1960s, when computer-based education was in an incipient stage (Noble, 1991), critics of the automation of education noted that the new technologies separated curriculum from instruction, thus tending to deskill teachers. Curriculum design skills shifted to instructional designers, which was a new and high growth occupational title at the time, resulting in what some would argue were characteristically mixed effects of automation (Petrina, 2004b; Spenner, 1983, p. 825).

Less than half of the course designers (11 of 24) to date were FT faculty (Table 1), and one-third of MET sessionals had no formal input into the design of the courses. Design-wise, each section of the MET program's courses is a reproduction of, or nearly identical to, the original. One form of deskilling here is the separation of curriculum design from instruction, but this process is not specific to either FT or PT faculty. With this level of standardization, curriculum design skills shifted to DE&T instructional designers who necessarily developed skills necessary for courseware programming. DE&T instructional designers played a major role in designing most of the courses and have varying design roles in all of the sections. One counter-balance to the deskilling argument is that MET instructors are upskilled in honing techniques for teaching in S2S virtual environments, perhaps confirming a mixed effects thesis of automation.



Table 1. MET Course Designers, 3 October 2005

Course	Designer(s)*		Contract
ETEC 500	Prof	Assoc Prof	√
ETEC 510	Assoc Prof	DE&T Director	√
ETEC 511	Prof	DE&T Asst Director	√
ETEC 512	PT Sessional	DE&T Designer	√
ETEC 520	DE&T Director	DE&T Designer	√
ETEC 521	Assoc Prof	DE&T Designer	
ETEC 522	FT Sessional	PT Sessional	√
ETEC 530	Asst Prof	DE&T Designer	
ETEC 531	Assoc Prof	PT Sessional	
ETEC 532	Assoc Prof	FT Sessional	√
ETEC 533	Asst Prof	Asst Prof	
ETEC 540	Asst Prof	DE&T Designer	√

*Females = 29%, Males = 71%

To be sure, the sessionals who teach in the program have high levels of expertise and the issue is *not* competence. The quality of the education the students receive is debatable, given that the sessionals have no time to pursue their research and can hardly be expected to bring this to bear on their teaching. The FA's position is that administrators are exploiting PT labor instead of creating FT faculty positions and

paying fair wages. As an indicator of hiring practices, the Department of Curriculum Studies (CUST), which accounts for eight of the eleven FT faculty who have designed or taught in the MET program, has sustained increasing graduate enrollments and stagnation in FT appointments only by exploiting the PT labor pool (Figure 1). There are similar trends across the FoE (Barman, et al, 2005, p. 30).

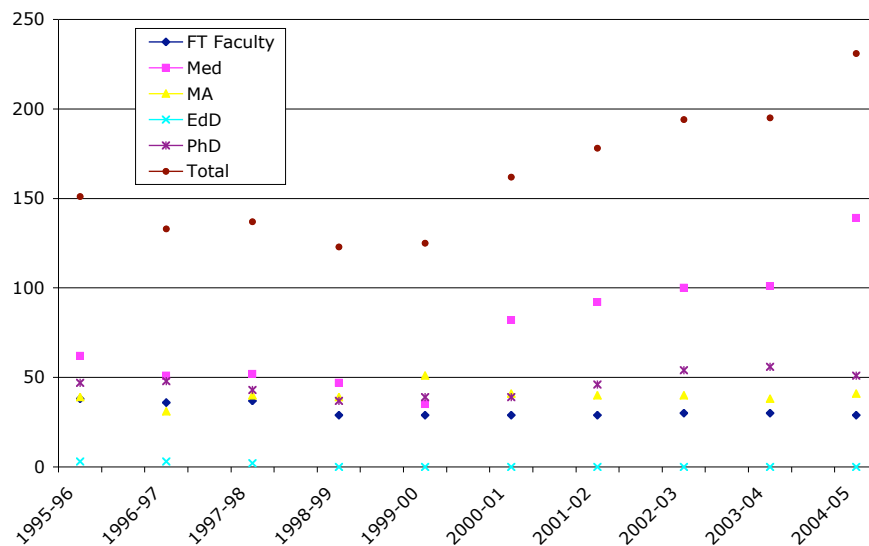


Figure 1. CUST Graduate Enrolments and FT Faculty, 1995 – 2004. *(CUST currently has four faculty members on FT administrative leave)

MET sessionals work without basic support and for a piecemeal wage of \$220 (CD) per student.⁸ When necessities, such as office space, a monthly photocopy allocation, and a phone budget were requested, the MET Coordinator asserted that these niceties are unnecessary for S2S courses (Gaskell, 2005). Laptop and workstation requests were similarly denied. After calculating the time that MET sessionals spend in attending to the everyday demands of S2S courses, remuneration for teaching MET courses disintegrates into the average national minimum wage (\$7.30 per hour) or worse.⁹ Generally assigned to multiple sections but only one course in the program, a number of MET sessionals attempt to cobble together a living by migrating from one online program to another in Canada, as the virtual *and* blood and flesh version of what Jane Jacobs (2004) calls "gypsy faculty" (Kubacki, 2005).¹⁰

⁸ As indicated, the \$220 piecemeal wage derives from Dr. Bates' calculations for DE&T tutors and was recommended in the MET Business Plan (Bartolic-Zlomislic & Bates, 1999a; Bates & Miller, 2001) and is in the FA & UBC's *Collective Agreement*, section titled "Tutors in Distance Education and Technology." The *Collective Agreement* stipulates a \$53 per student credit salary with a course load of 30.7 students. Multiply this by three (3 credit courses) and you get \$4,881, a fairly arbitrary wage. The defense of the piecemeal wage is that DE&T and MET sessionals can make more per course than FoE F2F sessionals receive (3,048 per 3 credit course on step 1 of scale).

⁹ Research, anecdote and narratives overwhelmingly report significant increases in workload for S2S courses. See AFT (2000), McKenzie, Mims, Bennett & Waugh (2000), Lenz, Jones & Monaghan (2005), Weiner (2000) and Young (2002).

¹⁰ Over the three years (2003-2005) of the MET program, there was one full-time, tenure track appointment, which was administrative, i.e., for the MET Coordinator's position. When the first MET Coordinator was appointed to Associate Dean of EPLT in January 2003, the new Coordinator took over, but resigned from the appointment after eight months.

The MET sessional wage is the lowest in BC, and in order for sessionals to feel fairly compensated, administrators have to drive up enrollments or the sessionals have to recruit and maintain high enrollments, toward unsustainable numbers. A MET sessional has to bear the burden of not just X, but X + Y, numbers of students to feel properly remunerated. From an administrator's standpoint on piecemeal wages, the most efficient or entrepreneurial sessionals will be properly rewarded— in other words, those who can reduce the work (e.g., emails, assignments, discussions, etc) feel appropriately compensated (e.g., DiBiase, 2004; Ragan & Terheggen, 2002). Total enrollments for the program have well exceeded the MET *Business Plan* projection (Bates & Miller, 2001) (Table 2).

Table 2. MET Enrollment, 1 March 2005

Program	Male	Female	Total
MET	76	76	152
TBDL Certificate*	16	16	32
TBLS Certificate*	4	1	5
Total	96	93	189

*Certificate programs are 15 credits and either combine or ladder into a MET degree.

In the old days of correspondence and distance education, professors believed they were extending the university to the masses in lighthouses, on islands, and farms and communes "off the grid." Today, only international market expansionists use or fall for this access romanticism of "borderless" education; others face the fact that more banal justifications effect enrollments: (1) administrative desires to exploit investments in capital and infrastructure for S2S education, (2) administrative desires to reduce vehicular traffic and address facility space and occupancy limitations on brick-and-mortar campuses, and (3) "net-generation" student desires for isolated, albeit connected and flexible, S2S interfaces. "The Creative Use of Learning Technologies" in higher education amounts to little more than this (ACCULT, 2000). DE&T uses 47% as a figure to estimate delivery costs of S2S versus F2F courses and programs (Oslington, 2004; Qayyum & Bourlova, 2004). Figures such as overall costs of \$2,000 to \$5,000 per student for

S2S courses versus \$10,000 to \$12,000 per student for F2F courses are common. At UBC, this figure has a second implication for tuition fees of master's programs, considering MET fees are set at \$12,750 for the program (includes 2% increase beginning January 2006) (fee for ten course program) and F2F Master of Arts and Master of Education fees at \$10,614 (fee for two year program). Models redirecting 10,000 students to S2S courses predict 20% fewer peak hour trips to campus and more occupancy

flexibility for UBC's 500 F2F classrooms (Bourlova, 2005, p. 40). About 54% of all DE&T students are local to the Vancouver and lower mainland area (Bourlova, 2005, p. 21). This figure is a fair estimate for MET, where fewer than 10% are Mexican or Tec de Monterey students. While 26% of the instructors for the 65 sections taught from 2003 to 2005 were female (Figure 2), there is nearly a balance of female and male students (Table 2).

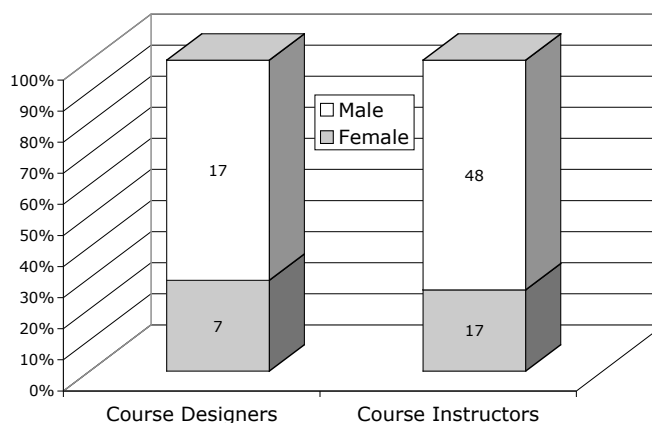


Figure 2. Total MET Course Designers and Instructors, by Sex

Profit margins increase as enrollment increases. Tuition revenues from the current cohort of the MET program will be about \$2.13 million.¹¹ Salary expenditures for course design and teaching will be around \$543,224 for this current cohort.¹² Design costs will fall off to minor maintenance investments for the next cohort. Technology expenses, such as servers housed in DE&T for the WebCT software are

¹¹ Derived from the \$12,500 tuition fee (10 courses) and a March 2005 enrollment of 152 full-time students and 37 part-time (certificate) students (Figure 3).

¹² Total teaching cost 543,224. Total design cost is \$122,124. (FT faculty = \$7,500 per course) (DE&T and sessional designer = \$3,048 per course).

minimal and course are being migrated to central IT Services. Neither FT nor sessional faculty was given hardware or software, but a few computer systems were purchased for administrative use. The staff necessary for accounting, advising, record keeping, and student inquiries have salaries at least partially covered within the EPLT service unit. As indicated (see note 4), profits are not reinvested in the program, either through capital for faculty or FT appointments. In other words, the overhead costs and expenditures on top of salaries are minimal. During the *Bryson v. MET* arbitration and appeal, the UBC lawyer (e.g., Roper & McFarlane, 2004b, p. 2) repeatedly noted that there was \$2 million invested into the program, but this figure reflects UBC's accounting practice of one cost recovery unit on campus (DE&T) charging another (EPLT). At the same time, the university has enjoyed rather steady increases of revenue since the late 1990s, partially from investments, licensing deals, and real estate, and partially from revenue-generating programs such as MET (Figure 3).

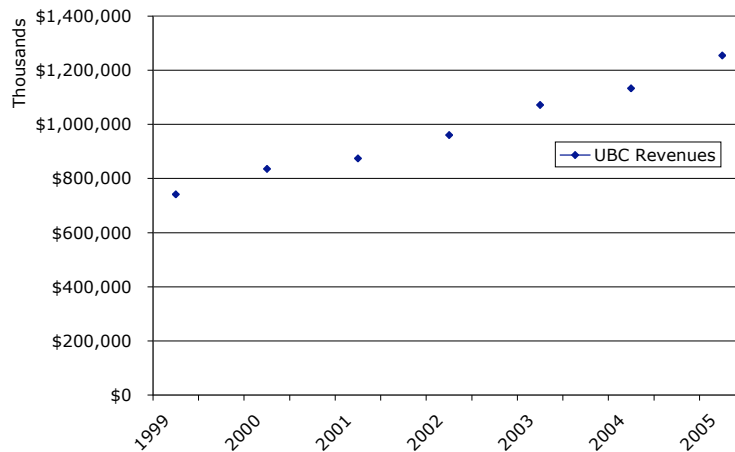


Figure 3. Total UBC Revenues, 1999-2005

On occasion, the EPLT Associate Dean noted that the language of automation does not apply to online courses and eLearning (e.g., Gaskell, 2003). It has always been more pleasant to put a happy face on automation and, of course, white-collar professionals are seemingly above or beyond (i.e., post) automation. Forget the days when "educational technologies" were "just a tool." These are the corporate campus-friendly days of "learning technologies." Instead of automation or anything distasteful to describe prevalent aspects of e-learning, "ultimately," says The Conference Board of Canada (Murray, 2003, p. 38), "for both employer and employee, technology is just an enabler."

Conclusion

In a postmodern form of self-mockery, the now infamous University of Berkeley digital diploma mill exclaims on its homepage: "Success is measured in DEGREES." Blamed for inflating the qualifications market and swelling an overproduction of advanced credentials by manufacturing over 12,500 Master and Ph.D. degree graduates, the University of Berkeley shamelessly capitalizes on the University of California, Berkeley's reputation (Goral, 2006). In this context, administrators, faculty members, instructional designers and lawyers building and anxiously maintaining digital diploma mills are products of their times (de Castell, Bryson & Jenson, 2002).

Certainly, one does not have to turn to for-profit education to explain how (and why) digital diploma mills (don't) work.

E-learning as e-commerce requires stable course management systems (e.g., Blackboard, Moodle, WebCT) for the automation of C&I, secure database management systems (e.g., MySQL, Oracle) for the automation of financial transactions and registration, and the acquisition of copyrights or licenses to legally deploy or transfer C&I from program to program, market to market, and of course from institution to student. Credentialism and desires for mobility partially underwrite demands in an unpredictable economy marked by corporate collapse, dangerously high consumer and government debt, and global threats to flows of assets, commodities and capital. Supply is partially underwritten by an upswing of investment and speculation in a growth e-learning industry, reduction of public funding for education and increased commercialization, corporatization, and privatization of social services, erosion of the tenure system, and turn from FT tenure track jobs to a burgeoning, surplus academic labor market (Aronowitz, 2000; Peters, 2002; Polster, 2000, 2001; Shumar, 2004; Waks) (see also Petrina & Weir, this issue of *Workplace*).

The analysis of the MET program, taken as a case in point, indicates that conflict and disputes among capital, labor and management

are generated at all nodes in the e-learning-commerce complex. Noble (2002) and others (e.g., Apple, 1991; Guernsey & Young, 1998) documented and predicted the types of disputes prevalent in the MET program and proliferating within academia. The workings of digital diploma mills are socially significant matters. These disputes over academic freedom and IPRs are disputes over the purpose of the university and throw into question commitments to a free circulation of knowledge in the public interest. More specifically, much of the conflict within the university at this time is between the market and the public domain (Drache, 2001).

On one hand, proprietary interests in public knowledge (e.g., courses, research, etc.), whether enforced by administrators or faculty, restrict "the fair interaction between persons considered in their equal capacity as authors" (e.g., teacher, researcher, etc.) (Drassinower, 2003, p. 122). The university's *qua* employer's (or publisher's) proprietary rights claims severely limit the scholar's choice to share works created through her or his labor and freely circulate them in the public domain. In effect, academic freedom is eroded as proprietary interests regulate the scholar's social compact with the public trust. One promising reaffirmation of the public domain came in September 2002, when the Massachusetts Institute of Technology's (MIT) OpenCourseware site was launched to freely circulate courses; in response, a number of universities followed suit (Young, 2005).

On the other hand, conditions for transgressions against proprietary interests, whether in the form of P2P exchanges, research data reproduction, software bootlegging, or course counterfeiting, are established through a bourgeois legal system of protection that both administrators and faculty are wont to enjoy (Conley, 1990; Philip, 2005). Would be authors among authors— disenfranchised intellectual laborers— who transgress authority and property are marginalized or prosecuted as "pirates" and "scavengers." Both administrators and faculty, Conley (1990) suggests, uphold the "original author" "as one who brings to life an important new work, while the author-user is continually relegated to the position of a nonproductive interloper," or worse (p. 26). As Philip (2005)

explains, geographic and neoliberal politics, animating both administrators and faculty, parcel out unacceptable from acceptable forms of authorship and create pirates out of would be authors who, in reclaiming culture, rights, etc., "threaten to invert power relations through appropriating things less tangible than ships" (p. 199). When we fail to recognize that pirates' and scavengers' demands are more often about redistributions of money, power and rights than authorship or ownership, open access and open source disintegrate into another pernicious indulgence to "let them eat data" (Bowers, 2000).

In 1964, Mumford described the "automation of knowledge" with acuity, and cautioned against automated courses, with "their cybernetic apparatus, their computers, their TV sets and tape recorders and learning machines, their machine-marked *yes* or *no* examination papers"— "the human personality disturbs this complex mechanism which operates increasingly as a single unit and can be managed efficiently only by remote control under centralized direction" (p. 15). Now, imagine either a body or a bot that crawls the library, cybrary or web, accumulates curriculum and produces a few original files at essaygenerator.com that fit within preset parameters, mixes or organizes it all into a sequential format for exchange and interaction over some duration of time, and eventually creates an outline with a syllabus generator. Imagine that the curriculum assembled has various sources, all of which retain various attributes. At this point, we can again ask, what is an automated course author?

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