

The Enclosure and Alienation of Academic Publishing: Lessons for the Professoriate

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Abstract: This paper interrogates and situates theoretically from a Marxist perspective various aspects and tensions that inhere in the contemporary academic publishing environment. The focus of the article is on journal publishing. The paper examines both the expanding capitalist control of the academic publishing industry and some of the efforts being made by those seeking to resist and subvert the capitalist model of academic publishing. The paper employs the concepts of primitive accumulation and alienation as a theoretical register for apprehending contemporary erosions of the knowledge commons through the enclosure effects that follow in the wake of capitalist control of academic publishing. Part of my purpose with this discussion will be to advance the case that despite a relatively privileged position vis-à-vis other workers, academic cognitive labourers are caught up within and subject to the constraining and exploitative practices of capitalist production processes.

Keywords: Academic Publishing, Primitive Accumulation, Alienation, Marx, Open Access, Political Economy

1. Introduction

“The means of effective communication are being expropriated from the intellectual worker.” (Mills 1951, 152)

The situation Mills bemoaned some six decades ago has proceeded apace, reaching a level today that borders on complete expropriation. Similar to most sectors in the communications and media industries, academic journal publishing has experienced a significant wave of consolidation over the last couple of decades. The consequent result is a market dominated by a handful of oligopolistic mega-publishers that wield an inordinate amount of power, as made manifest most prominently in skyrocketing journal subscription costs and a drastic lockdown of content through strict application of copyright and licencing restrictions. While these effects have been widely discussed, particularly among library and information studies and communication and media studies scholars and practitioners, less work has thus far been conducted in trying to account theoretically for these industry developments and their impacts. Even less prevalent in the existing literature is any systematic attempt to interrogate these issues from a critical political economic approach that considers capital’s ability to alienate the actual producers from their product, which represents an appropriation of the free labour that underwrites the academic publishing system (notable exceptions include Merrett (2006) and Striphos (2010)).

In an effort to respond to some of these lacunae, this paper seeks to interrogate and situate theoretically from a Marxist political economic perspective various aspects and tensions that inhere in the contemporary academic journal publishing environment. I propose to examine both the expanding capitalist control of the academic publishing industry and some of the efforts being made by those seeking to resist and subvert the capitalist model of academic publishing. In order to engage with these issues, the substantive focus of the paper is informed by the following three questions. First, what are the structural characteristics of the academic publishing industry and how do they impact the production and dissemination of scholarly research? Second, what efforts have been made by various actors to resist the dominant capitalist model in the academic publishing industry? Third, what novel, and potentially more radical, strategies might be offered to drive attempts at actively subverting capital’s control of academic publishing?

I suggest that we can conceptualise the responses to these questions by returning to Marx’s concepts of ‘primitive accumulation’ and ‘alienation.’ Drawing mainly on Volume I of *Capital*, my goal will be to demonstrate that primitive accumulation, understood as a continuing historical process necessary for capital accumulation, offers an apropos theoretical lens through which to contemplate contemporary erosions of the knowledge commons that result from various enclosing strategies employed by corporate academic journal publishers. As a theoretical complement, I will

further suggest that some of the elements of alienation Marx articulated in respect of capitalist-controlled production processes capture the contemporary estrangement experienced by the actual producers of academic publications. The exegetical account of alienation offered here will draw primarily on Marx's discussion in the *Economic and philosophical manuscripts*. Aside from demonstrating the continued relevance of the concepts of primitive accumulation and alienation, part of my purpose will be to advance the case that, despite a relatively privileged position vis-à-vis other workers (albeit one increasingly under attack), academic cognitive labourers are caught up within and subject to some of the constraining and exploitative practices of capitalist accumulation processes.

In developing my arguments, the paper will first briefly elaborate the broader structural context of the contemporary academic ecosystem, in which journal publishing is firmly rooted. In particular, I will demonstrate some of the ways that neo-liberal policies have metamorphosed institutions of higher education into sites increasingly characterised by obeisance to and subsumption by capitalist accumulation imperatives. The subsequent section will provide an overview of the commercial academic journal publishing industry, including its major structural characteristics, some of the consolidation trends experienced over the last couple of decades, and their effects on the dissemination of scholarly research. Having established this empirical context, the following section will articulate Marx's concepts of primitive accumulation and alienation. The attempt here will be to make conceptual sense of the way that these broader structural characteristics of the academic publishing industry function as mechanisms of enclosure of the knowledge commons and alienation of the actual producers in support of capitalist accumulation imperatives. The focus will then shift to a discussion of the open-access movement as an active, remedial response to the enclosing and alienating effects inherent in the capitalist-controlled academic publishing industry. As the discussion here will demonstrate, open-access publishing is not inherently anti-capitalist. For that reason, we need to distinguish between traditional open access and the more explicitly anti-capitalist attempts to guarantee open access, in what we might term a commons-based open-access regime that more accurately reflects the actual nature of peer and commons-based scholarly knowledge production and dissemination. In the penultimate section, and in response to question three, I will suggest some basic strategies as well as a possible alternative model for academic publishing that, building on open-access projects, would radically subvert capitalist control.

2. The Academy as a Contemporary Site of Capitalist Accumulation

In order to obtain a firmer purchase on contemporary academic journal publishing, we need to first elaborate the broader academic context in which the industry is situated. As interrogated by a growing corpus of scholarly literature, neo-liberal policies over the previous few decades have imprinted an unambiguous stamp on the nature and functioning of tertiary education. Among other things, the effects of neo-liberalism can be seen in the severe reductions in government spending on higher education, the generation of conflicts of interest within the university, the skewing of research, expanding industry-academia linkages, increasing and intensified faculty teaching and administrative loads, the proliferation of non-tenured and precarious adjunct appointments, and the indoctrination of a new generation of academic researchers motivated increasingly by private rather than public interest (Bok 2003; Giroux 2007; Krinsky 1991, 2003; Levidow 2002; Newfield 2008; Olssen and Peters 2005; Peekhaus 2010; Slaughter and Rhoades 2004; Washburn 2005). Rather than rehearse this critical literature, with which I am mostly in agreement, my intent here is to focus on a couple of important ways that neo-liberal policies have been made manifest in Canada (though certainly similar trends characterise the situation in respect of higher education in the United Kingdom and United States); ways that impact most directly the production and dissemination of academic research, and thus that are most relevant to academic publishing. The first and perhaps most acute has been drastic government funding cuts. In Canada, reduced federal funding was exacerbated by Ottawa's decision in 1996 to amalgamate the previously separate post-secondary program financing along with transfer payments for healthcare and welfare into the Canada Health and Social Transfer. This new method of block transfer payments from the federal government to the provincial governments, who have constitutional jurisdiction over education, allowed the provinces and territories to determine how they would allocate these funds. Given the heavy emphasis at this time placed by Canadian governments at all levels and political persuasions on the neo-liberal commitment to zero deficits and debt reduction, large portions of the Canada Health and

Social Transfer went to debt retirement at the expense of many other social imperatives, including education.¹

Concomitant to these policy developments there also emerged the now well-established 'truth' among many governments, including Canadian, that economic growth and development depend upon the ability of private enterprise to commercially apply and exploit the knowledge and innovation developed in educational institutions. These types of policy have been operationalized in a variety of ways in Canada. For example, the Association of Universities and Colleges of Canada in 2002 signed a framework of agreed principles with the Government of Canada that commits universities to double the amount of research they conduct and to triple the amount of commercialisation of this research (Association of Universities and Colleges of Canada 2002). Evidence of this commitment can be seen in the well-staffed technology transfer offices found at universities throughout Canada, which continue to increase their staff complements in response to expanded commercialization activities on Canadian campuses (Bostrom, Bruce, and Flanigan 2007). In part, these developments have been facilitated by the opening up of most Canadian university boards and other top-level governance structures to members of the corporate community (Whiteley, Aguiar, and Marten 2008).

Such trends have been exacerbated by the latest iteration of federal science and technology policy – *Mobilizing science and technology to Canada's advantage* – according to which this country must engage more ardently in translating publicly-funded research into commodifiable innovation. This Harper Government strategy specifically states that universities should engage in basic research so that the private sector can avoid the time and costs associated with this type of research. The private sector is to have complete and unhindered access to the results of this research. Moreover, should such research yield practical applications, institutions of higher education are admonished to cooperate with business in commercialisation. Business is set to win even further as this new policy also outlines the goal of reducing corporate taxation rates to the lowest levels among G-7 nations on new business investment (Government of Canada 2007). We are thus witnessing yet another instance of the socialization of costs and the private appropriation of any resulting rewards. In order to achieve these types of deliverables, the policy lays out specific plans to undermine the autonomy of Canada's major research granting institutions by inserting representatives from business into the various councils' governing bodies and soliciting private sector input about revamping policies and procedures for selecting fundable research proposals. This same document also makes a plea for producing more scientific researchers who are also trained in business skills – the underlying belief being that we only need to inculcate our scientific researchers with sufficient business acumen in order to increase overall levels of commercialisation of college and university research (Government of Canada 2007).² Given the overall tone of the policy document that outlines Canada's new science and technology policy, even the most casual reader is left with the distinct impression that fundable research equates to research that is readily commodified. Of course, an inherent problem with this type of funding structure is that research projects that fail to promise readily commodifiable applications find it very difficult to obtain research grants. The result is a situation in which research questions that go beyond immediate, utilitarian concerns and instead respond to broader social issues run the risk of being marginalised and left unanswered.

In their assessment of the contemporary academic environment, Etzkowitz and Webster (1998) speak of a 'second academic revolution,' characterised by the drive to translate the research developed in institutions of higher education into products and new business ventures for the benefit of the private sector.³ Kenney (1986) observed these trends already in the 1980s, when he analysed the relationships between universities and business, paying particular attention to the growth in start-up companies that were increasingly managed by businesspeople and active members of the professoriate.⁴ Elzinga characterises such developments as an epistemic drift through which the utility of science is measured according to market criteria (as discussed in Etzkowitz, Webster, and Healey 1998). According to Krinsky (2003, 7; emphasis added), "[t]he consequences are that

¹ In fiscal year 2004/2005 the Canada Health and Social Transfer was divided into the Canada Health Transfer and the Canada Social Transfer in order to establish increased transparency and greater accountability for federal healthcare funding.

² The previous Labour Government in the United Kingdom engaged in similar policies, committing £250 million to the creation of 44 centres to train 2,000 Ph.D. students over five years. These students will spend up to 75 percent of their time training with industrial partners (Mulland 2008).

³ The first academic revolution involved a change in emphasis among universities from being bastions of cultural preservation to becoming institutions concerned with expanding the frontiers of knowledge (Etzkowitz and Webster 1998).

⁴ Yoxen's (1981) review of the history of molecular biology indicates that there was a substantial amount of reluctance among scientists to conceive of their work as one of the structural components driving industrialisation and economic growth, but that once this transpired, structural change within the institutions of science was quick to follow.

secrecy has replaced openness; privatisation of knowledge has replaced communitarian values; and commodification of discovery has replaced the idea that university-generated knowledge is a free good, *a part of the social commons*.⁵ In the United States, the expansion of long-term collaboration between industry and universities, particularly with regard to fundamental, discovery-oriented research programs, has been facilitated greatly by the *Bayh-Dole Act*, which compels the commercialisation of practical applications that emerge from federally-funded research.⁵ But as a number of commentators point out, close alliances between universities and corporate funding partners are often accompanied by a number of associated quandaries, including: restrictions on internal collaboration within the university; loss of academic freedom; deferral of publication and other information withholding practices; loss of objectivity; emphasis on applied research at the expense of basic research; student exploitation; pressure on faculty to concentrate disproportionately on commercial activities instead of other duties such as teaching; and, abuse of the researcher/physician-patient relationship in the case of clinical trials (Bekelman, Li, and Gross 2003; Caulfield and Feasby 1998; Lievrouw 2004; Washburn 2005).

Of course, it might be objected that scientific ideas have long been translated into industrial applications as evidenced by the historical importance of the chemical and electrical industries to the Industrial Revolution.⁶ What does appear both quantitatively and qualitatively novel is the intensification of this process in terms of the reduced time frame between discovery and application, the expanded push by governments to encourage (coerce?) universities into becoming incubators for economic growth and development through partnerships with business, and the strategic importance to industry of the knowledge developed in academic institutions. Indeed, scientific knowledge, which has traditionally been considered an input necessary to expand the field, is, under mounting commercial pressure, being evaluated more and more as a research outcome that can drive industrial utility (Freeland Judson 1994; Sigurdson 1993; Krinsky 2003). The corporatist ethos that informs current higher education policies, and that has established a formidable beachhead within university governance structures, threatens to exercise a formidable censoring effect on the generation and communication of knowledge that is perceived to be antagonistic to capital. Moreover, the internalization of neo-liberal values and capitalist accumulation imperatives is effecting a betrayal of Mertonian principles of scientific development that has direct and detrimental implications for two of the most fundamental mandates of the university as institution – knowledge production and knowledge dissemination.⁷

The general point that I want to make based on this brief account is that the discipline of funding cuts, coupled with government emphasis on commodifiable research projects, has helped normalize neo-liberal values within academia in a way that has established the contemporary university as a site of capitalist appropriation. Indeed, the prominence of knowledge in fuelling production and economic growth helps explain why universities have become such an attractive site for appropriation by capital in service of its expansionist agenda. Given the function of academic journals as one of the predominant mechanisms for disseminating such knowledge, capital has also moved to subsume this industry within its own commercial logic.

3. A Survey of the Commercial Academic Publishing Industry and its Impact on the Dissemination of Scholarly Research

Over 25,000 active, scholarly peer-reviewed journals are published each year, and there is steady annual growth in numbers of both journals and articles (Ware and Mabe 2009). In fact, Morgan Stanley has reported that, over the last 15 years, academic journals constituted the fastest-growing subsector of the media industry (Morgan Stanley 2002). It is therefore perhaps not surprising that the academic publishing industry has experienced a level of consolidation over the past two decades similar to that found in other information and communication sectors. According to Munroe (2007), by 2004 a mere 12 European and North American publishing companies dominated West-

⁵ The American *Bayh-Dole Act* of 1980 requires federally-funded organisations to report any potentially patentable discoveries made as a result of the sponsored research. The institutions are permitted to retain title to their inventions only if they agree to file patent applications and exploit any patent granted. If they fail to do so, the government reserves the right to grant licences to other entities in an attempt to ensure practical application of the invention. Clearly, this law assumes that patents are necessary to facilitate the transfer of technological discoveries from government labs to universities and on to the private sector.

⁶ Hindmarsh and Lawrence (2004) point to an even earlier historical period, discussing Francis Bacon's ideas of science as technology.

⁷ Given the possibility of sustaining critique for invoking a set of norms that were perhaps more imagined than actual, I hasten to add that my intent here is merely to emphasise some very real and negative impacts on the free and robust production and dissemination of information and knowledge within and from universities that are occurring with increasing frequency at our contemporary neoliberal conjuncture.

ern academic publishing. With total annual revenues of US\$65 billion and a quarter of a million employees, most of these companies traced their roots to the 19th century and the bookselling business. The increasing consolidation in academic publishing documented by Munroe (2007) has proceeded apace since her initial study, with the field now dominated by ten major corporations. The top three publishers of scientific journals (Elsevier, Springer, and Wiley-Blackwell) account for approximately 42 per cent of all articles published. And while there are over 2,000 academic journal publishers, no other publisher beyond the big three accounts for more than a three per cent share of the journal market (McGuigan and Russell 2008). In part, this concentrated degree of control has been made possible because these large commercial publishers have been very successful in acquiring many of the most prestigious and high-circulation journals across almost all academic disciplines. Indeed, in the 1980s, a number of scholarly and professional societies began selling their journals to commercial publishers in an effort to avoid the cost and logistical burdens involved in publication and distribution processes. These sales also helped generate additional revenues to subsidize society activities and membership fees (McGuigan and Russell 2008; Kranich 2004).

Although more selective than exhaustive, the following examples of major mergers and acquisitions over the last decade establish the scale of the largest players in the academic publishing industry. The magnitude of these deals offers an important indicator of the lucrative nature of journal publishing, which is underwritten largely by the free labour of (mostly) academics. Thanks to aggressive merger and acquisition activities that actually date to the 1970s, Reed Elsevier is now one of the world's largest publishers of science, technology, and medicine (STM) journals. This Anglo-Dutch conglomerate, whose stock is quoted on the London, Amsterdam, and New York stock exchanges, also specializes in the subject areas of law, education, and business. According to Reed Elsevier, in addition to a catalog of over 2,500 journals available through *ScienceDirect*, the world's largest database of scientific and medical research, the company publishes almost 20,000 new clinical reference works and health sciences and science and technology book titles annually. The company is also active in the business information segment of publishing, offering over 100 business magazines across a wide range of sectors. Reed Elsevier similarly owns LexisNexis, an online legal and news portal that contains over 4 billion searchable documents available from several thousand databases compiled from over 35,000 legal, business, and news sources.

In early 2003, Candover and Cinven, a London-based venture capital firm that specializes in large buyouts and buyins, acquired controlling interests in Kluwer Academic Publishers from the Dutch company Wolters Kluwer for €600 million. Later that same year, Candover and Cinven bought BertelsmannSpringer from Bertelsmann Media Worldwide for €1.1 billion (in 1999, Bertelsmann had acquired 85 percent of Springer Verlag, including its scientific journals). Candover and Cinven subsequently merged these two publishing businesses into Springer, at the time the second largest STM publisher in the world, with annual publications in 2004 of almost 1,350 journals and 5,000 books, and revenues of €880 million. According to the company's website, it now possesses the world's largest collection of STM books, journals, protocols, and reference works (2,741 journals). In 2006, John Wiley paid £572 million to acquire Blackwell Publishing, which, at the time, published around 600 books a year and over 800 journals, many of which are from professional and scholarly societies (Munroe 2007). Together, these two companies produce over 1,400 peer-reviewed journals across a wide range of academic disciplines, including the social sciences, humanities, and STM.

According to economist Mark McCabe (2002), who was employed in the late 1990s in the United States Justice Department's Antitrust Division, merger and acquisition activity within the academic publishing industry played a role in subsequent journal price increases of biomedical titles between 1988 and 2001. Other researchers have similarly determined that prices charged by commercial publishers average between four and six times those levied by non-profit publishers, when considered on a per-page basis (Bergstrom and Bergstrom 2004). Such inflated prices no doubt explain the staggering profit levels that the major academic publishing companies have been able to book. In 2006, Reed Elsevier earned an operating profit of almost 31 percent on its science, technology, and health publications. Wiley carved out an operating profit of over 45 percent on its journals in these same disciplines, while Blackwell, which is involved more in social science publishing, generated a profit of 28 percent. Taylor and Francis's academic and scientific division brought the company an operating profit of over 26 percent, while the Thomson Corporation realized a 24 percent operating profit from its health and science publishing activities (Pirie 2009).

In addition to an increasingly consolidated industry, there are structural characteristics specific to the market for journal articles of which capital is able to avail itself in asserting its grip on academic publishing. One particularly potent mechanism of control is the almost universal practice among commercial journal publishers to make publication of scholarly articles contingent upon the

author agreeing to transfer the intellectual property rights in a work to the publisher. This ability to demand ownership rights in the work of academic labourers has been partly facilitated by a relatively conservative system of tenure and promotion that reinforces the *status quo* of corporate-controlled journal venues. The nature of academic scholarship has also contributed to the power of capital. Unlike typical goods, competing journals and journal articles, although often complementary because of overlapping subject areas, are rarely substitutes for one another. This lack of fungibility augments substantially the monopoly power of publishers, particularly those that control the top-ranked journals in their respective fields. This is because academic library collection development policies are driven by the underlying objective to maintain and expand research holdings, which motivates collection development librarians to subscribe to as many of the key journals of record as is fiscally possible. Indeed, because of pressure from faculty to ensure easy access to key disciplinary journals, demand is relatively price-inelastic and differences in quality across journals are not typically reflected in price differentials. Similarly, librarians are typically loathe to replace an existing journal with a new one, despite possible price advantages, until they are certain of its quality, as judged by the broader research community. And because those journals with the highest reputations in a discipline typically attract the best papers, it can be a long and arduous process for new journals to establish a sufficiently rigorous reputation. Cognizant of this captured market situation, publishers have an incentive to engage in profit maximizing behaviour, such as price increases far in excess of inflation and bundling practices (Bergman 2006; McCartan 2010).

Industry consolidation, working in tandem with the captured demand side of the market, gave rise to what is commonly referred to as a 'serials crisis,' which is shorthand for a double-pronged dilemma faced by academic libraries beginning in the 1990s: skyrocketing journal prices coupled with static or declining library budgets. For example, journal prices in the United States increased by 10.8 per cent in 1995, 9.9 per cent in 1996, 10.3 per cent in 1997, and 10.4 per cent in 1998 (Bosch, Henderson, and Klusendorf 2011). According to other survey data, the average serial unit cost more than tripled between 1986 and 2003, increasing from US\$89.77 to US\$283.08 (Greco et al. 2006). This increase far outpaced the 68 per cent rate of inflation during this same period. In terms of overall serials expenditures, libraries had increased their average serials budgets by just over 260 per cent from almost US\$1.5 million in 1986 to slightly more than US\$5.3 million in 2003. In comparison, monograph expenditures actually declined about two per cent when adjusted for inflation – US\$1.1 million in 1986 to US\$1.85 million in 2003 (Greco et al. 2006). Perhaps more revealing of the true extent of the serials crisis is the significantly increased expenditure on library materials as a proportion of overall academic library budgets. In 1986, materials (journals and books) represented just over 32 per cent of an average library budget for an Association of Research Libraries (U.S.) member. By 1995, the proportion had risen to just under 36 per cent, and by 2000 and 2003 the proportion reached 39 per cent and 43 per cent, respectively (Greco et al. 2006). Caught between the Scylla and Charybdis of higher prices and reduced funding, librarians responded with strategies that typically included cancelling some subscriptions, not subscribing to new journals, and reducing the number of books purchased in order to shore up the amount of funds available for journals. Unfortunately, the impact on monograph acquisitions has been felt in both absolute and relative terms; because the number of monographs has also been rising, now libraries are acquiring an even smaller proportion of available titles.

Even in the most recent years following the global economic meltdown of 2008, serials prices rose at rates between four and five per cent, well above the negative rate of inflation in 2009 and the 1.6 per cent level of inflation in 2010 (Bosch, Henderson, and Klusendorf 2011). According to EBSCO, between 2007 and 2011 journal prices increased by almost 30 per cent for U.S.-based titles and almost 34 per cent for non-U.S. titles (EBSCO 2011a). The higher price of non-U.S. journals might be explained, in part, by the weakness in the U.S. dollar since 2008. For 2012, EBSCO is projecting journal price increases of between four and six per cent for U.S. publications, seven to nine per cent for journals priced in British Pounds, and nine to eleven per cent for journals priced in Euros (EBSCO 2011b).

In contradistinction to some industry proponents, researchers have provided empirical evidence to defeat claims that seek to equate price with quality of a journal. Finding no correlation between high costs and high quality among high-impact economics journals, Greco et al. (2006) determined that the highest quality journals, based on ISI⁸ citation indices, were published by non-profit publishers who charged substantially lower subscription fees than commercial publishers. Overall, Greco and his colleagues ascertained that subscription fees, price per page, and price per ISI citation were consistently lower for non-profit publishers than for commercial academic publishers. Although these authors point out that they did not complete similar analyses for journals in the so-

⁸ ISI is now known as Thomson Reuters Web of Knowledge.

cial sciences and humanities, their preliminary analysis supports the hypothesis that similar patterns exist in the majority of periodicals in these fields (Greco et al. 2006).

On the supply side, a dominant sales strategy adopted by the major academic publishers in response to these structural conditions was the introduction of bundling practices, through which publishers sell access to an aggregated collection of anywhere from dozens to hundreds of electronic journals rather than individual titles. Such practices force libraries to subscribe to journals that they might not otherwise want as part of their collection in order to obtain those they do require. Referred to in the trade as 'The Big Deal,' these typically multi-year contracts, although sometimes providing price caps over the life of the deal, have been critiqued by some for their almost Byzantine pricing structures that prohibit libraries from cancelling even a single title in the collection during the period under contract (Bergman 2006). Given their all or nothing nature, these deals also erode librarian control over the content and scope of a library's collection. More fundamentally problematic, libraries are actually only renting access to these electronic journals, with no guarantee that back issues will continue to be available should the library terminate the contract. Given the archival function of libraries, many would find it unacceptable to lose access to past scholarly works. This fact, not lost on publishers when setting prices for bundled offerings, further undermines a library's bargaining power when negotiating new contracts. These bundles also represent significant portions of a library's annual acquisitions budget, so when cuts in the collection have to be made it is often the stand-alone journals from smaller publishers that are cancelled. Aside from reducing access for the community served by the academic library, bundling practices also intensify the tendencies towards concentration and monopoly power of the commercial publishing oligarchs.

3.1. Exploding the Added-Value Myth

In an attempt to justify the high rents they extract when selling access to the knowledge created by academic labourers, publishers typically invoke claims about adding value to the broader knowledge ecology. Such assertions completely sidestep the reality that unpaid academic labour provides the content, peer-review, and editorial work (although a few publishers pay editors a small stipend, it is typically well below the true value of the person's efforts) being appropriated by journal publishers. They also occlude the additional time and money burdens typically downloaded onto authors should their manuscript contain colour material, or require copyright release for images and other copyrighted material they might want to incorporate into their work. And even this value-added work is appropriated by publishers who coerce authors into surrendering their intellectual property rights as a precondition for publication. That having been said, it is true that authors receive the value-added services of typesetting, marketing, and, in some cases, copyediting. Academics also realise indirect benefits such as tenure, promotion, and scholarly recognition. And as users, academics benefit from and are becoming increasingly accustomed to a variety of electronic services such as full-text search capabilities, issue and table of contents alerts, citation tracking and export, etc.

Yet, according to a Deutsche Bank analyst, no commercial academic publisher adds a magnitude of value to the publishing process that would warrant the profit margins the major oligarchs are earning:

"In justifying the margins earned, the publishers, REL [Reed Elsevier] included, point to the highly skilled nature of the staff they employ (to pre-vet submitted papers prior to the peer review process), the support they provide to the peer review panels, including modest stipends, the complex typesetting, printing and distribution activities, including Web publishing and hosting. REL employs around 7,000 people in its Science business as a whole. REL also argues that the high margins reflect economies of scale and the very high levels of efficiency with which they operate.

We believe the publisher adds relatively little value to the publishing process. We are not attempting to dismiss what 7,000 people at REL do for a living. We are simply observing that if the process really were as complex, costly and value-added as the publishers protest that it is, 40% margins wouldn't be available." (as cited in McGuigan and Russell 2008, para. 18; emphasis added)

When even investment analysts cast doubt on the veracity of the claims advanced by commercial publishers about the purported value they add to the publishing process, clearly something is amiss. Indeed, as Clarke (2007) points out in his analysis of alternative approaches to scholarly

publishing, the main value added by publishers – journal branding and active marketing, aggressive customer management, and content protection – are mainly of interest and accrue to owners and shareholders, not the scholars actually producing and using the work. Economists Conley and Wooders are similarly critical of industry contentions about purported value added, arguing that “by far the greatest part of spending by commercial publishers is related to advertising for subscriptions, fulfilling subscriptions, and policing access to content, as well as managing all this, paying taxes, employing lawyers and accountants, and so on. None of this activity is closely related to facilitating scholarly communication.” (Conley and Wooders 2009, 82)

Industry consolidation, coerced assignment of copyright, bundling, and increasingly prohibitive pricing practices as employed by the Elseviers and Springers of the world to wring maximum surplus value out of scholarly research and communication processes indicate the extent to which academic publishing is increasingly subsumed within the capitalist mode of production. In order to make conceptual sense of this situation, the following section of the paper seeks to demonstrate that recourse to Marx’s concepts of primitive accumulation and alienation provides an apposite theoretical lens through which to analyse and understand the structure and practices of the contemporary academic journal publishing environment.

4. Conceptualizing Capitalist Control through the Lenses of Primitive Accumulation and Alienation

Marx provides his deepest discussion of primitive accumulation in Volume I of *Capital*, where he develops a critique of the ‘so-called primitive accumulation’ articulated by classical political economists. At its most basic, primitive accumulation can be understood as providing the origin of the separation between producers and the means of production, a separation that is responsible for the alienated character of labour and thus for defining the opposition inherent in capitalist social relations. As articulated most fully in the *Economic and philosophical manuscripts*, the alienation of labour under capitalist social relations manifests itself in four manifold ways, two of which are most germane to the present paper.⁹ The first consequence of the estrangement of practical human activity – of labour – is a resulting alienated relationship between the worker and the product of labour, which, because of private property and the capital-labour relation, appears as something alien – as a power independent of the actual producer. Because the product of the worker’s labour is an alien object that belongs to the capitalist paying her wage, the more that she toils under capitalist social relations the more powerful becomes the alien, objective world she brings into being against herself. Although this basic idea inheres in the production of academic journal articles, it does require a slight adaptation. Publishers own the means of dissemination not production, as is the typical Marxist understanding of the alienation inherent in capitalist social relations premised on wage labour. Although an argument could be made that capitalist control of journal content – a necessary factor of production in subsequent research – represents partial capitalist control of the means of production. In any event, the perhaps stronger argument is that this type of control facilitates an even more insidious form of exploitation and alienation since the capitalist provides neither a wage nor the means of production (in the strictest sense), yet accumulates the benefit of the product of intellectual labour. At perhaps an even more fundamental level, an argument could be advanced that, from Marx’s dialectical perspective, alienation reaches farther back than the estrangement among direct producers from the means of production and the resulting products of social labour to include the alienation inherent in the disconnect between the driving motivation of capital, the profit motive, and the fulfilment of socially-produced human needs (Burkett 1999; Mandel 1968).

A second and related aspect of the alienation of labour encompasses the relationship of the worker to the act of production within the labour process. Under the control of capitalist production processes, not only is the product of labour objectified in an alien object that holds power over the actual producer, but the corresponding form of productive activity renders the worker’s own labour as something alien and opposed to him, reflecting an estrangement from himself and from his own activity. Rather than offering satisfaction in and of itself, alienated labour is external to the worker, something sold to and thus belonging to someone else. Through its alienability, the relationship of the worker to his activity becomes an example of what Marx refers to as ‘self-estrangement’:

⁹ In elaborating his third characteristic of capitalist alienation, Marx contemplates the effects of alienation on the person’s relationship to other people when engaging in productive activity, itself a fundamentally social activity. The fourth type of alienation that Marx develops in the *Economic and philosophical manuscripts* is the notion of alienation from species-being – alienation from a person’s being as a member of the human species.

“... estrangement manifests itself not only in the result, but also in the *act of production*, within the *activity of production* itself. ... So if the product of labour is alienation, production itself must be active alienation, the alienation of activity, the activity of alienation. The estrangement of the object of labour merely summarizes the estrangement, the alienation in the activity of labour itself.” (Marx 1975, 326; emphasis in original)

Under the dominance of capitalist social relations, we witness the social separation of the conditions of production from the control of the direct producers in service of capitalist valorisation. As the empirical evidence presented in the previous section illustrates, this dual form of alienation inheres in the scholarly communication process that is dominated by commercial publishers, who have been quite successful in wresting the outputs of scholarly research from the control of direct producers in service of capitalist accumulation imperatives.

Primitive accumulation thus represents a historically specific and class-differentiated relationship of control over the necessary means of social production. Most contemporary scholars engaging in a re-invigoration of primitive accumulation¹⁰ as a theory for comprehending contemporary capitalist development tend to agree on three additional basic points about this concept. First, primitive accumulation should be understood as a continuous process that remains vital for capitalist accumulation. As Marx informs us, “the capital-relation presupposes a complete separation between the workers and the ownership of the conditions for the realization of their labour. As soon as capitalist production stands on its own feet, it not only maintains this separation, but reproduces it on a constantly expanding scale.” (Marx 1992, 874) That is, the separation between producers and the means of production, a central category of Marx’s critique of political economy, is the constitutive presupposition of accumulation and thus common to both primitive accumulation and accumulation in general – capital presupposes this separation. In Marx’s own words, “the manner in which the capitalist mode of production *expands* (takes possession of a greater segment of the social area) and subjects to itself spheres of production as yet not subject to it ... entirely reproduces the *manner* in which it arises altogether” (Marx 1994, 327; emphasis in original). The *Grundrisse* similarly weighs in on the issue: “Once this separation is given, the production process can only produce it anew, reproduce it, and reproduce it on an expanded scale” (Marx 1993, 462). As Marx again points out in Volume III of *Capital*¹¹, accumulation is really nothing more than primitive accumulation – which he conceptualises in Volume I in terms of separation – “raised to the second power” (Marx 1967, 246). In Part III of his *Theories of surplus value*¹², Marx is even more explicit about the continuous nature of primitive accumulation, contending that accumulation “reproduces the separation and the independent existence of material wealth as against labour on an ever increasing scale” (Marx 1972, 315). For this reason, accumulation “merely presents as a *continuous process* what in *primitive accumulation* appears as a distinct historical process” (ibid., 272; emphasis in original). We thus note that Marx’s discussion of primitive accumulation contains a basic ontological connection between primitive accumulation and expanded reproduction, such that accumulation in general represents a form of intensified primitive accumulation (Bonfeld 2001, 2002; De Angelis 2001, 2007; Mandel 1975).

While there is a temporal element that distinguishes primitive accumulation from accumulation proper – indeed, the *ex novo* separation between producers and the means of production represents an *a priori* historical event – the critical distinction between the two is grounded less in temporality and more in the conditions and exigencies that comprise the separation. As Marx tells us in the *Grundrisse*, “once developed historically, capital itself creates the conditions of its existence (not as conditions for its arising, but as results of its being)” (Marx 1993, 459; emphasis removed). That is, once produced, capital must reproduce the separation between producers and the means of production (and, indeed, expand this reproduction). In order to normalize capitalist social relations, increasingly larger swaths of the population must be brought into the fold of capitalist commodity production through

¹⁰ Depending upon the theorist to whom one refers, the nominal term employed to reflect the phenomenon of primitive accumulation differs. Glassman (2006) discusses ‘primitive accumulation,’ ‘accumulation by dispossession,’ and ‘accumulation by extra-economic means,’ though he seems to favour the original term coined by Marx. McCarthy (2004) speaks of accumulation by ‘extra-economic means.’ Bonfeld (2001, 2002) and DeAngelis (2001, 2007) remain true to Marx, employing the term ‘primitive accumulation.’ Harvey (2003, 2006) prefers to substitute the updated predicate ‘accumulation by dispossession’ for what he believes is the dated ‘primitive accumulation.’

¹¹ Volume III of *Capital*, subtitled *The complete process of capitalist production*, was compiled by Engels based on notes left by Marx. It was originally published in 1894, eleven years after Marx’s death.

¹² Marx worked on the three volumes of *Theories of surplus value* in the 1860s. Considered by some to be the fourth volume of *Capital*, this work was published posthumously by Karl Kautsky.

“the silent compulsion of economic relations [that] sets the seal on the domination of the capitalist over the worker. Direct extra-economic force is still of course used, but only in exceptional cases. In the ordinary run of things, the worker can be left to the ‘natural laws of production’, i.e. it is possible to rely on his dependence on capital, which springs from the conditions of production themselves, and is guaranteed in perpetuity by them.” (Marx 1992, 899)

Once we recognize that primitive accumulation satisfies a precondition for the expansion of capital accumulation, the temporal element assumes a secular form that encompasses not only the period in which the capitalist mode of production emerges, but also the reproduction and expansion of the capitalist mode of production. The upshot of this process is that capitalist production entails the production of surplus value, as well as the reproduction of social relations of production in an inverted form – social production alienated through private property and the commodity form (Bonefeld 1992; De Angelis 2007).

The second point about primitive accumulation is that it manifests in a variety of forms, including the privatization of once public goods, which has the ultimate effect of re-organizing class relations in favour of capital. As presented above, what might be considered the public good character of academic research and its dissemination has been transformed through extensive enclosing practices into a relatively new source of capital accumulation. The third feature of primitive accumulation speaks to its spatial ambition. Despite a general ethnocentrism present in Marx’s work (an ethnocentrism that Marx readily admits), he discusses both the historical and the global elements of the processes of primitive accumulation, through which a privileged minority relentlessly pillaged the means of production from the people of pre-capitalist civilizations around the world:

“The discovery of gold and silver in America, the extirpation, enslavement and entombment in mines of the indigenous population of that continent, the beginnings of the conquest and plunder of India, and the conversion of Africa into a preserve for the commercial hunting of blackskins, are all things which characterize the dawn of the era of capitalist production. These idyllic proceedings are the chief moments of primitive accumulation.” (Marx 1992, 915)

Ensuring an expanded reproduction of capital depends upon enveloping new spheres of production and peoples within the web of capitalist social relations of (re)production. Having historically extended the territorial reach of capitalist social relations through colonialist expansion and the imposition of private property rights across the globe, primitive accumulation in the twenty-first century has become both more extensive and intensive, affecting an enormously broad range of spatio-social activity. In practice, primitive accumulation motivates efforts by capital to enclose more and more areas of our social existence that can be mined for extraction of surplus value. Because enclosures make possible $M-C-M'$,¹³ as well as its continued reproduction, they all share the basic universal character of separating people from access to any social wealth that falls outside the purview of competitive markets and money as capital. That is, in line with what we elaborated above with regard to the basic element of the theory of primitive accumulation, we note that enclosures provide a mechanism for realizing the *ex novo* separation between producer and the means of production (De Angelis 2007; Harvey 2003, 2006).

¹³ Traditionally, capital accumulation is denoted by the following formula: $M-C-M'$, where M denotes an amount of money invested by individual capitalists in the market to buy commodities, given by C in this formula. The transformation of money into commodities, shown as $M-C$, represents the act of ‘buying’. Individual capitalists, however, purchase such commodities not to satisfy their particular needs but to generate a profit, which occurs when M' is greater than the amount of money originally invested. In order to realize this potential profit, the commodity C must be placed back on the market to be sold. If buyers are found and the sale is made ($C-M'$) at a price where M' is greater than M , the individual capitalist is able to record a profit. Thus, $M' = M + \Delta M$, where ΔM represents the change in the amount of money in the possession of the individual capitalist after the sale of the commodity. While an individual capitalist might terminate investment at this point, as a system the ‘class’ of capitalist investors, driven by the profit motive, will generate a new cycle of accumulation in a process that repeats *ad infinitum*: $M'-C-M''$. That is, commodities of a greater value are bought ($C-M'$) and placed back on the market to be sold for a greater amount of money, which provides investors with a new sum of money available for purchase and subsequent sale of commodities in a potentially endless cycle of accumulation. Bell and Cleaver (2002) provide an excellent and fuller explication of Marx’s examination of the role of labour in providing surplus value for capital through the labour/manufacturing process.

4.1. Capitalist Academic Publishing as an Alienating Instance of Primitive Accumulation

As we saw above, capital has availed itself of a number of strategies to subvert toward its own accumulation imperatives the knowledge produced in common by members of the academy. Given the heightened emphasis on commercialisable research agendas within both universities and funding agencies, the general intellect developed within the academy is being appropriated with alarming frequency by capital in ways that support rather than subvert the status quo. In the terms of our theoretical framework, institutions of higher education have joined the ranks of casualties infiltrated by capital's practices of primitive accumulation. By appropriating the free labour that sustains the production, peer-review, and editing of scholarly communication and then locking the resulting content behind intellectual property rights, licencing agreements, and technological protection mechanisms, capital has developed a very lucrative model in service of its own accumulation imperatives. The result of these processes is an increasing individuation and alienation of scholarly producers that dispossesses them of their material capacity to consciously control their product and potentially their labour processes. While there might not be a formal separation of academic producers from the most basic means of production, research production, or perhaps more precisely its dissemination and use, nonetheless are subsumed increasingly within the capitalist mode of production. This increasing enclosure of scholarly communication and academic publishing within the capitalist market nexus that is informed by property rights, alienability, and capital accumulation represents a contemporary instance of primitive accumulation and alienated productive activity.

The exponential increase in the production of scientific and technical information after World War II helped spur a corresponding increase in the number of academic journals. Recognizing new opportunities for accumulation associated with this burgeoning volume of journals and research articles, capital began exerting a stranglehold over this industry and the processes of scholarly communication in what can be interpreted as yet another area of social existence now brought under capitalist control, thus reinforcing the idea that primitive accumulation remains a continuous social process. Ever larger swaths of the social knowledge produced by academic labourers are being enclosed by capital, which represents intensified efforts to privatise research output paid for largely by the public purse and thus rightly belonging to the public domain. Finally, efforts by capital to bring academic publishing profitably within its control involve the same spatial ambitions outlined previously in respect of primitive accumulation. Although clearly more intense in the global North, scholars in the global South are also increasingly confronted by such efforts, particularly as more and more feel compelled to publish in western academic journals. Moreover, these examples demonstrate how contemporary processes of primitive accumulation and the consequent expanding capitalist control of social production processes are exacerbating the alienation Marx elaborated to include new strata of producers beyond the orthodox Marxist emphasis on the industrial proletariat and waged labour.

However, the imposition of an *ex novo* separation represents a social process that, in practice, is susceptible to contestation by oppositional social forces seeking to recover those social spaces appropriated by capital and to re-invigorate them as spaces of commons. Capital is thus compelled to wage a two-front war in its battles for enclosure: invading and enclosing new realms of social existence that can be subverted in service of capital's accumulation priorities in the face of resistance, and defending those enclosed areas governed by accumulation and commodification imperatives against *ex novo* guerrilla movements struggling to liberate enclosures from capitalist control. The point to take from this discussion is that not only does separation occur *ex novo*, but that *ex novo* opposition can also form in response to capitalist enclosure (De Angelis 2007). Enclosures, and the responses they engender, thus represent strategic problems for capital. They pose limits that must be overcome if capital is to be successful in colonizing new areas of social existence or in sustaining those areas already enclosed from attacks by alternative social forces seeking to de-commodify such spheres and transform them back into commons. We note, therefore, that limits to capital are both endogenous and exogenous. In the former, capital itself identifies and defines a limit that it must overcome, and in the latter, that limit is defined for capital by the oppositional social forces that strive to liberate an already enclosed space. But regardless of how limits are identified, it is critical to recognize that counter-enclosures (read commons) represent alternatives that seek to circumscribe accumulation imperatives either by resisting enclosure strategies or by liberating enclosed areas of social life. Commons therefore tend to emerge out of struggles against their negation. "Therefore, around the issue of enclosures and their opposite – commons – we have a foundational entry point of a radical discourse on alternatives" (De Angelis 2007, 139). And, as the following section demonstrates, a number of struggles have been waged against capitalist enclosure of academic journal publishing.

5. Open Access Efforts to Subvert Capitalist Control of Academic Publishing

In response to several of the trends in the academic publishing industry that have clearly disadvantaged both authors and libraries – that is, the producers and the purchasers of scholarly output – a sustained movement has emerged over the last decade and a half that advocates for and develops open-access models to academic research. For example, the Santa Fe Convention in 1999 gave birth to the Open Archives Initiative, which was tasked originally with developing a ‘low-barrier interoperability framework’ that would facilitate access to e-print archives.¹⁴ Soon thereafter, in December 2001, the Open Society Institute convened a conference in Budapest to interrogate issues around open access to scholarly research. This conference, which laid the foundation for the subsequent Budapest Open Access Initiative (BOAI), was one of the defining moments of the then nascent open-access movement. Indeed, the BOAI was the first internationally-focused, formal statement to articulate a commitment to open access, which is defined as follows:

“By ‘open access’ ..., we mean its [scholarly literature] free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited.” (n.a. 2002, para. 3)

Informed by the underlying premise that scholarly research should be freely accessible online, the BOAI suggests two complementary strategies to achieve and sustain such access. The first suggestion is self-archiving. Recognizing that many scholars might lack the technical capacity to deposit their research in open electronic archives, the BOAI includes language about the need for tools and assistance. Some thought was similarly given to users. By conforming to the standards being developed at the time by the Open Archives Initiative, the drafters of the BOAI envisioned optimal capture and seamless aggregation by search engines of all the emerging electronic repositories. This would alleviate the need for users to know what and where all the separate archives are in order to access content. The second strategy relies on expanding the number of open-access journals, both *de novo* journals and those that elect to transition to open access. Given the underlying emphasis on free access that informs the BOAI, these open-access journals are encouraged to employ copyright in ways that ensure permanent open access. Moreover, and at an even more fundamental level of change, the BOAI suggests that open-access journals should avoid price barriers to access by eliminating subscription or user fees. Instead, open-access journal producers are exhorted to seek out and develop alternative funding sources, including government and foundation grants, author charges, or any other mechanism appropriate to the disciplinary and national context in which the journal is located. Indeed, flexibility, experimentation, and adaptation to local conditions are key elements expressed in the BOAI for ensuring rapid uptake and sustained longevity of the open-access movement.

Within a couple of years, additional international statements in support of open access emerged across a range of disciplines. For example, the Bethesda Statement on Open Access Publishing was drafted in April 2003 by a group of scientists and representatives from universities and medical institutions, funding agencies, libraries, and publishers. Specific to biomedical research, this statement affirms a commitment to open access publication and deposit of all published work and supplemental materials in electronic repositories that ensure open access, unrestricted distribution, interoperability, and long-term archiving (e.g., for biomedical research PubMed Central). At a meeting in October 2003 in Berlin, a very similar statement was adopted for sciences and humanities research (Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities).

The two models suggested by the BOAI have subsequently emerged as the chief mechanisms for delivering open access to scholarly literature. According to Carroll (2011), a member of the Creative Commons¹⁵ Board since 2001, full open access to content requires easy online accessibility,

¹⁴ Although this remains a fundamental mission of the Open Archives Initiative, it has since broadened the scope of its work to include development of a technological framework and standards not restricted by type of content or economic mechanisms surrounding that content.

¹⁵ As outlined on its website, the Creative Commons project provides infrastructure that consists of a set of copyright licenses and tools designed to create a balance inside the traditional “all rights reserved” setting that copyright law creates. These tools provide creators a simple, standardized way to keep their copyright while permitting certain uses of their work — a “some rights reserved” approach to copyright. The ultimate goal is to create, maintain, and expand a vast digital com-

gratis availability, and unrestricted re-usage rights, save attribution for the original creator. To the degree that either of the latter two characteristics is satisfied, scholars and practitioners distinguish between 'Gratis' and 'Libre' open access. The former eliminates only price barriers while the latter removes at least some permission barriers. Irrespective of whether works are offered Gratis or Libre, there are two accepted models for delivering open access to scholarly works: 'Gold' and 'Green.' The primary distinction between Gold and Green open access is based on venue or delivery vehicle (i.e., journal or repository) rather than price or user rights, which delineates Gratis from Libre. Gold open access refers to peer-reviewed publication in an open-access journal, whereas Green open access involves deposit of the work in an institutional or subject repository.

Depending upon the particular repository, it might provide access to pre-prints¹⁶, post-prints¹⁷, or both. For example, one of the earliest subject archives was ArXiv, a repository for physics pre-prints developed by Paul Ginsberg in 1991. Since its inception, it has expanded its subject area coverage and now provides open access to over 700,000 e-prints in physics, mathematics, computer science, quantitative biology, quantitative finance, and statistics. PubMed Central, another electronic repository, houses full-text articles from biomedicine and the life sciences. Developed and maintained by the United States National Library of Medicine, this online archive of biomedical journal articles experienced significant growth when the National Institutes of Health (NIH) mandated, as of 7 April 2008, that all researchers who receive NIH funding deposit into PubMed Central complete electronic copies of their peer-reviewed articles within 12 months of publication. As of April 2012, PubMed Central contained over 2.4 million items, including articles, editorials and letters.¹⁸ Beyond these well-known examples, a recent search (April 2012) of the Registry of Open Access Repositories returned 2,730 entries of international institutional and cross-institutional repositories.¹⁹

Beyond the mounting success of the Green model that relies on repositories, recent research provides additional evidence that open-access journal publishing has matured into a sustainable form of scholarly publication (Laakso et al. 2011). In fact, a quick search of the Directory of Open Access Journals revealed over 7,600 registered journals as of April 2012. Perhaps more importantly, many of the early open-access journals remain active and the average number of articles per journal and year has almost doubled between 1993 and 2009. Similarly, relative to growth rates in the overall volume of peer-reviewed research articles, the number of articles in open-access journals has expanded at a much higher rate. In part, this has occurred because in recent years sever-

mons, a pool of content that can be copied, distributed, edited, remixed, and built upon, all within the boundaries of copyright law (<http://creativecommons.org/about>).

¹⁶ Pre-prints are drafts of articles before they have undergone peer review and thus have not yet been published in a journal.

¹⁷ A post-print is a draft that has undergone peer review. These versions may not always be identical to the published article, depending on whether the author retains copyright and, if not, whether the publisher allows such deposit. However, more and more commercial publishers are permitting Green open access, although often only after a publisher-specified embargo period has lapsed. Project SHERPA/RoMEO tracks publishers' open access policies at the following URL: <http://www.sherpa.ac.uk/romeo/statistics.php?la=en&flDnum=J&mode=simple>.

¹⁸ In the United States, a bill is currently before Congress that would expand on this mandated open access requirement for federally-funded research. The *Federal Research Public Access Act* (FRPAA) would require "free online public access" to almost all publicly-funded research. This bipartisan bill, which was introduced on 9 February 2012 in both the Senate and in the House by Representatives, would strengthen the open access mandate at the NIH by reducing the maximum embargo period from 12 months to six months, and extend this strengthened policy to all the major agencies of the federal government. Although a maximum of six months would be permitted, the bill requires open access "as soon as practicable" after publication (Section 4.b.4). The chances of this bill being passed into law remain unclear at the moment. Indeed, previous versions of this bill were introduced into Congress in 2006 and 2009/2010. In the United Kingdom, Research Councils UK (RCUK) published a draft policy paper in March 2012 that proposes amending its open access policies to make it mandatory for all RCUK-funded research papers to be made freely available no later than six months after publication (research funded by the Arts and Humanities Research Council and the Economics and Social Research Council will have a maximum 12 month embargo period). A similar policy is already in place for research funded by the United Kingdom Medical Research Council. RCUK is the strategic partnership of the United Kingdom's seven Research Councils. The Research Councils provide around £3 billion annually to fund research that covers the full spectrum of academic disciplines from the medical and biological sciences to astronomy, physics, chemistry and engineering, social sciences, economics, environmental sciences, and the arts and humanities. The Wellcome Trust, Britain's largest non-government funding body and one of the world's largest science funding bodies, requires its funded researchers to make electronic copies of their articles available online within six months of publication. It announced in April 2012 that it will begin sanctioning researchers who fail to comply with this policy.

¹⁹ The Registry of Open Access Repositories, which is part of the EPrints.org network, is hosted at the University of Southampton and is funded by the JISC. Historically, the acronym stood for 'Joint Information Systems Committee' but the work of this organization has evolved and expanded over time. The stated goal of this registry "is to promote the development of open access by providing timely information about the growth and status of repositories throughout the world. Open access to research maximises research access and thereby also research impact, making research more productive and effective" (n.a. 2012b). The other leading list of open access repositories around the world is the Directory of Open Access Repositories (OpenDOAR).

al high-impact and high-volume journals have transitioned to open access (Laakso et al. 2011). Although annual growth rates of the number of articles appearing in open-access journals has declined during the period from 2005 to 2009, which Laakso and his colleagues (2011) refer to as the consolidation years of open-access publishing, they are still averaging around 20 per cent annually.

As might also be expected given such monumental growth, open-access infrastructure and technical applications have advanced considerably. In particular, Open Journal Systems²⁰, a journal management and publishing system developed by the Public Knowledge Project²¹, has become a widely used software platform by almost 5,000 open-access journals. And, no doubt in response to the various open-access statements articulated above, the use of licencing agreements appropriate to the goal of facilitating unrestricted access to the scholarly literature has increased quite substantially. Finally, and again reflective of the increasing institutional support for open-access research as articulated in the Bethesda and Berlin declarations, many more funding agencies and institutions now permit the inclusion of open-access fees in research budgets (Laakso et al. 2011).

Such institutional support is particularly important because the Gold model of open-access journal publication eschews user fees, so production costs are typically levied upfront to ensure downstream gratis availability. Although Gold open-access journals employ a wide variety of financing models, the most typical model still relies on charging publication fees for accepted articles to be published. As noted, these fees are increasingly paid for by the author's institution or a research funding agency, although many journals will waive fees if they represent an insurmountable barrier to publication for the author. A number of journals that have been successful in attracting some form of institutional support waive publication fees altogether (Laakso et al. 2011).

It is also important to note the positive benefits of open-access publishing for the broader knowledge ecology. For example, a study from the United Kingdom, which modelled the economic implications of alternative scholarly publishing systems, draws the conclusion that expanded open-access publishing would likely produce significant long-term net benefits along the entire scholarly communication cycle and to the broader economy. Although lower during a transitional period, the authors of the report suggest that the net benefits would likely be positive for both open-access publishing and self-archiving alternatives (i.e., the Gold route) and for concurrent subscription-based publishing and self-archiving (i.e., the Green route) (Houghton et al. 2009).

Further, albeit disconcerting, evidence of the growing sustainability of open-access publishing comes from a number of commercial publishers, who have begun to offer open-access options to authors. Springer has implemented a program called Springer Open Choice, which permits authors to make their journal article freely available to anyone, at any time in exchange for payment of an open-access publication fee of US\$3,000/€2,000 plus tax. Since 2006, Taylor & Francis Group has offered a similar program called iOpenAccess. Renamed in 2012 to Taylor & Francis Open Select, authors must pay US\$3,250/£1,725/€1,900 to permit open access to their article. Taylor & Francis has also announced that it will launch Taylor & Francis Open in 2012, which will expand the number of fully open-access journal titles across a range of subject areas. In February 2011, Wiley-Blackwell launched Wiley Open Access, a new publishing program that currently publishes five open-access science and medical journals. Publication fees vary by journal and range between US\$1,850 and US\$3,000. The perhaps most stunning example to date of corporate recognition of the accumulation potential of open-access publishing came in 2008, when Springer purchased BioMed Central for a reported US\$35 million. BioMed Central was launched in 2000 as an early for-profit, open-access publisher that charged authors a fee of US\$500 to have accepted articles published. Springer subsequently quadrupled this article processing fee to US\$1,940 an article, although there is some variation among the journals published by BioMed Central (certain journals have processing fees over US\$2,500).

But it is not just the major publishers who have begun to exploit the open-access model of publishing for purposes of capital accumulation. For example, Bentham Science Publishers, which is headquartered in the United Arab Emirates and has offices in Oak Park, Illinois and Bussum, the Netherlands, claims to publish over 230 open-access journals in the disciplines of science, technology, medicine, and social sciences. This for-profit company's business model is based on charging authors flat rate article processing fees of US\$ 800 for research articles, US\$ 900 for re-

²⁰ Open Journal Systems (OJS) is part of a broader suite of software developed and maintained by the Public Knowledge Project, which includes Open Conference Systems, Open Harvester Systems, and the currently under-development Open Monograph Press. OJS covers every stage of the refereed publishing process, from submissions through to online publication and indexing. OJS is open source software available gratis to any journal that wants to pursue an open-access publication model. As of 2012, the system has had 19 upgrade releases and is available in 20 languages.

²¹ The Public Knowledge Project is an effort funded by the Canadian federal government to expand and improve access to research. The other partners involved in the project include the Canadian Centre for Studies in Publishing at Simon Fraser University, the University of British Columbia, and Stanford University.

view articles, US\$ 600 for mini-review articles, US\$ 600 for letters, and US\$ 450 for book reviews.²² Bentham has been the subject of criticism among a number of academics for aggressive email marketing practices deployed to solicit editorial board members and article submissions. Some have characterised the company's practices as spamming since the email solicitations have often been very poorly targeted. For example, academics in a particular discipline were invited to contribute papers in a completely unrelated discipline or even join editorial boards of journals publishing in areas clearly beyond the subject matter specialty and even discipline of the person asked. And according to some academics, repeated requests to be removed from the company's marketing database went unanswered (Poynder 2008a).

Although such marketing *faux pas* may be shrugged off as unprofessional efforts to expand the scope of content it publishes, the company was involved in a more egregious example of the dangers of letting the profit motive inform academic publishing. After having received numerous emails asking him to contribute his research to one of Bentham's journals, Phil Davis decided that he would test the rigour of the company's peer review system. He used SCGen, a software programme that generates grammatically correct, yet "context-free" (i.e., nonsensical) essays in computer science, to construct a bogus research paper entitled "Deconstructing Access Points" that he submitted in January 2009 to Bentham's *The Open Information Science Journal* (TOISCIJ). Although complete with figures, tables, and references, the article's professional surface appearance was quickly betrayed upon a cursory reading. For example: "In this section, we discuss existing research into red-black trees, vacuum tubes, and courseware [10]. On a similar note, recent work by Takahashi suggests a methodology for providing robust modalities, but does not offer an implementation [9]." The fabricated institutional affiliation – The Center for Research in Applied Phrenology based in Ithaca, New York (a name that yields the acronym CRAP) – similarly failed to set off alarm bells at the journal; phrenology is a pseudoscience based on the belief that certain mental faculties and character traits are indicated by the shape of the skull. Within about four months Phillips received an acceptance letter from Ms. Sana Mokarram, the Assistant Manager of Publication, in which she requested that the US\$800 article fee be sent to the company's post office box in the SAIF Zone, a tax-free complex in the United Arab Emirates. According to Davis, the acceptance letter, despite claims to the contrary, offered no evidence that the article actually went through peer review (Davis 2009b; Shepherd 2009). To be fair, it should be noted that Davis did submit the article to another of Bentham's journals and in that case it was rejected by the editor based on reviewer comments (Davis 2009a). Although certainly not definitive, the case of Bentham does hint at the ways that the dissemination of academic research, even under the banner of open access, can be subsumed within the logic of capital in ways that portend potentially disastrous results for the broader knowledge ecology. What these examples do clearly demonstrate is that open access *per se* is not inherently anti-capitalist. Indeed, these corporate strategies represent a direct response by capital to subvert the open-access model in service of its own accumulation imperatives. In fact, content delivery through the online open-access model contributes to commercial publishers' profits by lowering marginal costs of production to almost zero and reducing many of the traditional costs associated with physically publishing a paper journal (materials, printing, inventory management, and distribution costs). Moreover, with funding agencies and universities beginning to apportion more funds to cover publication fees, there exists the potential for publishers to retain their control and their rent-seeking behaviour as they shift their revenue models from a subscription base to author fees. Given the historically, often-successful ability of capital to decompose class struggle and re-appropriate for its own ends the creativity produced in common by autonomous workers, the increasing adoption of open-access models by commercial publishers is a worrisome trend that demands a counter-response by academics. As perhaps the first part of that response, we need to sharpen the distinction between open access that can be harnessed to serve capital, and explicitly anti-capitalist open access, in what we might term a commons-based open-access regime that more accurately reflects the actual nature of peer and commons-based scholarly knowledge production.

6. Building on and Radicalizing Open Access

As part of the first salvo against the dominant, capitalist-controlled academic publishing industry, all academics, but especially tenured faculty, need to be reminded of their role in the broader knowledge ecology and the constraining effects that the current capitalist model of journal publish-

²² The actual ownership of the company remains shrouded in secrecy. Despite repeated requests for this information by Richard Poynder, Bentham's Editorial Director, Matthew Honan, would only state that the company is "owned by a number of individuals, and the legal part of the business is based in the United Arab Emirates" (Poynder 2008b).

ing exercises on this ecology. Unfortunately, the conservative value and reward systems of the academy with peer review at its core represent significant challenges to subverting the current scholarly communication/publishing system. In their extended study of the state of academic journal publishing, Greco et al. (2006) ascertained that prestige of publication venue and high readership in the particular discipline, as well as peer-review rather than the ownership status of the journal publisher (i.e., commercial or non-profit) remain the dominant motivating criteria among a sizable majority of scholars when making their decisions as to where to publish their research. Indeed, recent surveys from both the United Kingdom and the United States indicate that aside from low levels of awareness of the opportunities for publishing in open-access journals, most academics feel hamstrung by “the existing reward systems of tenure/promotion (and even grant making) which favour traditional publishing forms and venues” (Cullen and Chawner 2011, 462). Such institutional and cultural inertia pose an immense challenge if younger students and academics, despite being more adept and comfortable with new technologies, are socialised into the current system in a way fails to challenge, let alone, subvert the *status quo*.

As part of this effort, scholars need to be made aware of the emerging evidence about the utility of commons-based open access for research recognition. At the risk of stating the obvious, this is critical since we, as academics, benefit from our work being widely disseminated and used (and hopefully cited), not from royalty streams. A number of bibliometric studies reveal that, although there is variation across disciplines, research published in open-access journals tends to enjoy a citation advantage over metered content of between 25 and 250 per cent (Gargouri et al. 2010; Antelman 2004; Eysenbach 2006; Hajjem, Harnad, and Gingras 2005; Norris, Oppenheim, and Rowland 2008; Donovan and Watson 2011). And in response to charges (charges typically emanating from proponents of the current journal publishing system) about possible author self-selection bias, Gargouri et al. (2010) have determined that the citation advantage that accrues from making research open access is not due to a quality bias on the part of authors, but instead is attributable to a quality advantage through which users, unencumbered by access constraints, are able to more easily select what to employ and cite. Put another way, the open-access advantage is a quality advantage and not a quality bias. Moreover, commons-based open access augments this advantage because it maximises accessibility and consequently citability (Gargouri et al. 2010; see also Hajjem, Harnad, and Gingras 2005).

As another element in this effort, and in direct response to such empirical evidence, we must similarly begin to task tenure and promotion committees with developing new models of assessment that reduce the extant reliance on citation metrics (particularly given all the biases inherent in current, largely capitalist-controlled, measurement tools) and publication in marquee journals, which inhibit faculty, particularly untenured, from publishing their work in open-access journals. Given the potent gatekeeping function of citation indices, many of which are owned by Thomson Reuters, brief consideration of their role in the capitalist-controlled journal publishing industry is warranted. The extensive control that commercial publishers exercise over the major citation indices could be leveraged to exclude open-access journals not published by the major corporate players. I suspect this would particularly be the case for commons-based, open-access journals. Although Thomson Reuters claims on its website for Web of Science (an index of 12,000 international journals in the sciences, social sciences, arts, and humanities) that it indexes open-access journals, the actual number of such journals is not publicised. In addition to unilateral power to decide which journals to include in its indices, Thomson Reuters exerts a significant influence on journal publishing through its annual calculations of journal impact factors. The company calculates a journal's impact factor by dividing that year's number of citations to all the articles published in the particular journal by the number of articles considered 'citable' by Thomson Reuters in the immediately preceding previous two years. Yet, accountable only to its shareholders rather than the actual authors and readers of scholarly research, Thomson Reuters refuses to divulge the criteria it employs to determine what counts as a 'citable' article. In their terse assessment of the company's method of calculating journal impact factors, the editors of *PLoS Medicine* “... conclude that science is currently rated by a process that is itself unscientific, subjective, and secretive” (*PLoS Medicine* Editors 2006, 0707). Beyond this complete lack of transparency, journal impact factors are susceptible to a number of additional critiques. For example, the distribution of citations provides no causal evidence about the quality of a particular journal. Similarly, limiting the calculation to two years after publication biases the statistic, particularly for those disciplines in which uptake of new work takes longer. Perhaps more troubling, the calculation fails to properly distinguish between and weight things such as article type (original research articles versus editorials, reviews, and letters), multiple authorship, self-citation, and language. This shortcoming lends itself to impact factor manipulation if a journal publishes a few highly cited pieces of research and/or many review articles,

which often garner more citations than novel research articles. This might also explain the frustrating, and seemingly increasing, practice among some journal editors to 'suggest' to prospective authors that they cite other articles from the journal. With regard to tenure and promotion decisions, these weaknesses are exacerbated and can become truly detrimental for academics if they are made to serve as proxies for research quality. Indeed, because the impact factor is based on citations to all articles in a journal for a given year, it is incapable of rendering any assessment about the quality of a specific author or article published in the journal (*PLoS Medicine* Editors 2006).

Their control by capital, coupled with their systemic political, linguistic, and geographic biases, renders current citation indices and their attendant system of journal impact factors largely antithetical to efforts to recuperate academic publishing from capital. Fortunately, competition is emerging in the form of programs and applications for alternative metrics to measure scholarly influence.²³ And although these tools remain very much at a nascent stage in which their effectiveness, validity, potential value and flaws, and their relationship to established measures requires deeper interrogation, it is promising that such tools are being developed. Despite the fact that indexing services require significant capital outlay that can be cost-prohibitive for smaller publishers, not to mention scholarly societies that may only publish a handful of titles, more open-access versions of scholarly indexing are becoming available, such as PubMed (contains more than 21 million citations to biomedical literature) and Citeseer^x, which aid users in locating scholarly articles and in some cases tracking citations (Striphas 2010).²⁴ Since both of these resources have been supported by federal grants in the United States, a project to develop an open-source and transparent direct alternative to Thomson Reuters would presumably attract government funding. Indeed, given the push to increase access to scholarly research in both the United States and the United Kingdom²⁵, perhaps a collaborative project would be possible. In terms of actual oversight and maintenance, I suggest that national academic library associations would be suitable candidates. Here too I think that international collaboration would be warranted in order to respond to some of the weaknesses in the current system that tends to underrepresent and undervalue scholarship along North/South trajectories. Through a combination of cultural change and technological development, there exists the potential to break capital's stranglehold on this important gatekeeping function in academia and the journal publishing industry.

At an institutional level, and as open-access champion Steven Harnad has long been advocating, universities need to mandate self-archiving policies so that academics begin engaging in this method of scholarly dissemination on a regular basis. By eventually normalizing such practice, academics and universities would satisfy more fully the dissemination function of higher education. A number of universities in the United States, including Harvard, MIT, and most recently Princeton, have embarked on precisely this path and established open-access policies that grant the university a non-exclusive, irrevocable licence to distribute a faculty member's scholarly articles on a non-profit basis. Typically, the individual universities then establish an institutional repository to house the articles. However, any faculty member can usually apply to the university for a waiver of the licence requirement if the publisher refuses to permit open-access archiving. Moreover, not all policies require immediate deposit. The waiver option and lack of an immediate deposit requirement have been critiqued by some within the open-access movement for introducing a degree of indeterminacy that could potentially undermine open-access archiving. On the user side, open-access repositories could increase their up-take by enhancing metadata standards and quality, as well as search functions. To this end, institutional archives should consider adopting the standards developed by the Open Archives Initiative, as well as best practices from other established repositories.

Open-access proponents, and particularly those seeking to abolish capital's parasitic appropriation of academic publishing, also need to engage in more radical, awareness-raising activities that shake academics out of their complacency to the *status quo* of journal publishing. The recent boycott of Elsevier, which has been gaining substantial support, is a good example of precisely the type of actions needed to re-appropriate academic journal publishing from capital. This protest grew organically out of the blog posting in mid-January 2012 by Cambridge University mathematician Timothy Gowers, in which he wrote that he would no longer publish papers in any of Elsevier's journals or serve as a referee or editor for them. By mid-April of the same year, almost 10,000 researchers from around the world had pledged to support the boycott of Elsevier. The online statement of protest, which was organized by Tyler Neylon, raises three key objections to the business practices of Elsevier. First, individual journal prices are much too high. Second, because of these high prices libraries are compelled to avail themselves of publisher-developed bundles when order-

²³ Altmetrics.com links to a number of alternative tools for measuring scholarly impact: <http://altmetrics.org/tools/>.

²⁴ Google Scholar is also increasingly popular, but, given its corporate ownership, reliance on it is not a viable option.

²⁵ *Supra*, note 18.

ing serials. As noted previously, very often these bundles include journals that are superfluous to a particular library's collection. Finally, Elsevier supported the *Research Works Act* in the United States, a bill introduced in the House of Representatives in December 2011 that would have reversed and banned federal policies that require researchers who receive federal funding to deposit their research papers in open-access repositories within one year of publication.²⁶

Elsevier's defence for its support of this proposed legislation, as outlined in an open letter on its website, demonstrates the unbridled hubris of commercial publishers:

"Why then do we support this legislation? We are against unwarranted and potentially harmful government laws that could undermine the sustainability of the peer-review publishing system. The RWA's purpose is simply to ensure that the US government cannot enshrine in law how journal articles or accepted manuscripts are disseminated without involving publishers. We oppose in principle the notion that governments should be able to dictate the terms by which *products of private sector investments are distributed*, especially if they are to be distributed for free. And private sector means not just commercial publishers like Elsevier, but also not-for-profit and society publishers." (n.a. 2012a, para. 5; emphasis added)

The laughable claim about undermining peer review relies on a failure to appreciate the true locus of effort that permits the peer review system to function: voluntary labour of academics. Similarly, the indignation registered against a government-compelled distribution of "private sector investments" obfuscates the free labour provided by academics that comprises the bulk of the content Elsevier sells.²⁷ One wonders just how much private investment a company is making when it earns, even in 2010, a profit margin of 36 per cent on revenues of \$3.2 billion.

In 2000-01, a similar petition directed against publishers who refused to permit deposit of articles in electronic repositories attracted the support of almost 34,000 scholars. Although it is unclear how many people actually remained true to the pledge, the more important development was the creation of Public Library of Science by some of the people who spearheaded the campaign. Originally developed as an electronic repository in 2000, Public Library of Science founders, Harold Varmus, Patrick Brown, and Michael Eisen, expanded quickly into Gold open access and began publishing open-access journals in 2003, when they launched *PLoS Biology*. As a non-profit publisher, Public Library of Science currently produces seven peer-reviewed, open-access journals in the field of biomedicine.

Open-access models, and particularly the Gold route, have performed admirably in expanding the amount of valuable knowledge produced in the academy that now flows freely into the public domain. And while I am very sympathetic to these models of knowledge dissemination, they remain plagued by certain weaknesses. The first problem is specific to Gold open access, which eschews subscription fees. While the thinking behind this principle is both understandable and admirable, it requires that a journal secure some source of external funding or levy author charges. The first strategy can be problematic since funding sources are very seldom guaranteed long term, thus placing the longevity of the journal in question. And author charges could represent unacceptable hurdles to publishing for those academics who possess negligible or even non-existent research budgets. Given the emphasis within the neo-liberal university on commodifiable research, as outlined above, and the consequent redistribution of university budgets and research grants, I suspect that many people in the social sciences and, especially, the humanities might experience precisely such difficulties. And as also discussed previously, article processing fees are even higher in those open-access journals controlled by commercial publishers. Since decisions about tenure and promotion rely so heavily on peer-reviewed output, underfunded academics might thus be compelled to publish in conventional journals, thereby further reinforcing the *status quo* of commercial publishing. One potential solution might be for universities to establish and fund publishing programs, perhaps administered by university libraries, that academics could draw on to cover author charges. However, the current fiscally-challenged environment of higher education does not bode well for the chances of such a solution materialising, particularly since during any transition period libraries would also need to continue paying for high-priced, capitalist-controlled journals. And in developing

²⁶ A month before the *Research Works Act* was introduced into the House by Representatives Issa (R-CA) and Maloney (D-NY), the White House tasked the Office of Science and Technology Policy with soliciting formal public input on the potential impacts of establishing a national policy that mandates public access to the research results of projects funded by the federal government.

²⁷ In the face of substantial pressure, Elsevier formally withdrew its support for this bill on 27 February 2012. However, in its statement the company made it clear that it will continue to oppose legislated efforts to extend open-access mandates. On the same day, the sponsors of the bill announced that they will no longer try to move it through Congress.

countries this would presumably be even less of an option, thus threatening to further marginalise non-western knowledge and scholars. This leads to the second and more systemic problem of current open-access models, particularly the Gold route. While they might challenge on the fringes, for the most part they not only leave in place the dominant commercial model that is proving so disastrous, but they also add additional costs to the overall system of knowledge production and dissemination.

I therefore believe that we need to become even more radical in our solutions to the capitalist enclosure of our knowledge ecology. As mentioned previously, academics provide the majority of labour that sustains the production of scholarly knowledge, including the actual research and writing, peer review, and editing. It is time for academics to re-appropriate from capital the products and processes of our collective labour in order to revitalise the knowledge commons in ways that serve the public good rather than capitalist accumulation imperatives. And although this might require significant amounts of persuasion among some of our more conservative colleagues, I want to suggest that logistically such a re-appropriation would be less difficult. There already exists a basic publishing infrastructure in the form of non-profit university presses, which should be able to substitute easily for the commercial publishers in ways that would not require the assignment of copyright by authors or the imposition of onerous pricing and licencing contracts on customers. I realise that this proposal will fall flat among those open-access advocates for whom user fees are anathema. Nonetheless, I think this suggestion recommends itself for several reasons. Without the profit motive and bloated marketing and legal budgets, university presses should be able to produce and distribute academic journals at prices much lower than is currently the case. In fact, I would further suggest that the price differentials would be so large as to permit university presses to charge libraries much more affordable prices for journals, while still retaining some level of revenue that could be employed to cross-subsidise monograph publishing and provide better author services such as copyediting, particularly for those authors whose native language is not English. Moreover, because this solution fits the current funding model of serials acquisition, it would require very little change within the university or the library to implement. Although some type of national, and possibly international, co-ordination, perhaps in the form of library and publisher consortia, might be required to facilitate the logistics of developing pricing models that would ensure equitable access across institutions of higher education. Here too I think that national academic library associations could play an immediate and effective role. Given the massive cost savings, libraries might face a challenge in trying to convince university administrators that the cost savings obtained in serials budgets remain within the library system to shore up other areas that have long been neglected because of the serials crisis. Finally, this proposal aligns with the Green open access model since it would permit academics to deposit their scholarly research in an institutional or subject repository. Since many journal titles are actually owned by the commercial publishers, my proposed solution would almost certainly require the creation of new journals. Again, I think any difficulty here would result more from conservative torpor within the academy since it really is the quality and reputation of the journal editor and the editorial board that contributes to the success of a particular journal in attracting scholarly contributions. The task is therefore to convince significant numbers of editorial boards to stop providing their free labour to capitalist publishers, who then sell back that work to libraries at inflated prices. I am in no way underestimating the power of inertia within the academy and hence the scope of this challenge. But, there are a number of precedents for editorial boards deciding to resign en-masse and successfully create a competing journal (see *Journal declarations of independence* at the following URL: http://oad.simmons.edu/oadwiki/Journal_declarations_of_independence). Given the general tenor in broader society, in which increasingly larger numbers of people are disaffected by our current socio-economic conditions, we may be at a critical junction point. By this I mean that people appear much more critically attuned to the exploitative practices of capital. We need to seize on this disaffection and make more people aware, both within and outside of the academy, of the deleterious effects capitalist control has on the knowledge ecology. Only by revealing and openly challenging such exploitative relations of production will we recover and restore our labour products and processes in service of a vibrant and sustainable knowledge commons. Commercial publishers have had their golden age. Now it is time for them to go the way of the dinosaur.

7. Conclusion

As elaborated above, Marx critiques capital as an alienating social form because it privatises the product of another's labour as property, thus rendering it susceptible to the exigencies of atomised market exchange from which an inequitable distribution of the wealth generated by social production obtains. The object of labour increasingly appears as alien property to the actual producers as

the means of their existence and of their activity is concentrated progressively in the hands of capital. Corporate control of academic publishing through strategies and practices such as industry consolidation and forced assignment of copyright represents a new modality of capitalist primitive accumulation that strives to appropriate and enclose the knowledge commons that otherwise would emerge from the unrestricted flow of academic research. “Capital has from the start sought to enclose the commons. From colonization to slavery, from the work day to the home, from activity to the deepest thoughts and feelings, the history of capital is its extension into the human commons” (Neill, Caffentzis, and Machete n.d., para. 46).

The evidence presented in respect of the capitalist academic publishing industry is similarly testament to the expanding range of actors caught up in practices of primitive accumulation and capitalist control of social production processes. Despite a still relatively privileged position vis-à-vis other workers, it is precisely through such capitalist-controlled processes that cognitive workers in the academy are being robbed of control over their works, and scholarly research production and communication practices more broadly, as academic journal publishing becomes increasingly integrated into capitalist relations of production.

Capital's expanding exploitation of social labour brings with it a corresponding substitution of value accumulation imperatives for use value as the driving motivation for production, leading to a situation in which the social conditions that provide the basis for social production come to confront labour as the power of capital:

“The forms of socially developed labour...appear as *forms of the development of capital*, and therefore the productive powers of labour built up on these forms of social labour – consequently also science and the forces of nature – appear as *productive powers of capital*. In fact, the unity of labour in co-operation, the combination of labour through the division of labour, the use for productive purposes in machine industry of the forces of nature and science alongside the products of labour – all this confronts the individual labourers themselves as something *extraneous* and *objective*, as a mere form of existence of the means of labour that are independent of them and control them....And in fact all these applications of science, natural forces and products of labour on a large scale...appear only as *means for exploitation* of labour, as means of appropriating surplus-labour, and hence confront labour as *powers* belonging to capital.” (Marx 1963, 390-392; emphasis in original)

The prescience and sagacity of Marx's thought to our contemporary situation cannot be emphasised strongly enough when considering the material presented in this paper, particularly in respect of the way capital has and continues to successfully appropriate the massive amounts of 'free' labour that sustain the content production and evaluation of the academic journal publishing industry. Put another way, capitalist control of academic publishing expedites the private expropriation of some or all of the value that is produced in common through the cooperative relationships inherent in scholarly production. Under the dominance of capitalist social relations, we thus witness a further instance of the social separation of the conditions of production from the control of the direct producers in service of capitalist valorisation.

Yet there is hope. The success of the open-access movement and models has demonstrated that there are viable alternatives to the capitalist control of academic publishing. However, as argued in the previous section, the dominant open-access regime suffers from inherent neutrality in respect of economic model that renders it susceptible to capitalist appropriation and exploitation. I have therefore suggested that we need to become more radical in our thinking and our actions in order to wrest control of academic publishing from the current capitalist oligarchs. Indeed, given the contemporary importance of information and knowledge to capitalist accumulation imperatives, the struggle against the enclosure of scholarly research represents a potentially critical element in the broader efforts to subvert capital. As Pirie (2009, 54) forcefully asserts, “[i]t would challenge the dominant fetishized understanding of informational systems that uncritically accepts the commodification of information. The undermining of corporate control in this sector must be understood as a dangerous threat to the stability of the regime as a whole.” If nothing else, my hope is that this paper engenders further discussion, elaboration, and eventual implementation of strategies that return complete and common ownership of the products and processes of academic knowledge creation to the actual producers and users.

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About the Author

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Employing critical, Marxist political economic analytical frameworks to his research, Wilhelm Peekhaus investigates social issues that traverse the boundaries between the analogue and the digital, the material and immaterial. As such, his current research agenda, which falls broadly within the field of information policy, interrogates issues such as the labour of academic publishing, and the ways that marginalized social groups in South Africa (poor farmers) harness knowledge and information and communication technologies in their struggles for development. He is currently an Assistant Professor in the School of Information Studies at the University of Wisconsin-Milwaukee.