

Transition, Transformation, Revolution:
An Assessment of Open Access Discourse and Practice in Canada

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Abstract

Canadian institutions have been actively involved in the Open Access movement as both producers and consumers of electronic, peer-reviewed articles; however, there is little in the published discourse on Open Access to indicate this involvement. This thesis seeks to help rectify this situation by situating the movement in a Canadian context, and questions whether – and to what extent – the move towards Open Access in academic institutions and state policy may be constituted as ‘revolutionary’ in Canada. Using an integrated critical political economy and critical discourse analysis approach, it is argued that while the push towards Open Access may be seen as part of a larger transformation in scholarly communication, ultimately, close examination of Open Access discourse and practice reveals that conventional tenets of capitalism, including notions related to access, commodification and power, remain intact.

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I first became aware of Open Access in late 2005 while completing an undergraduate practicum with the Canadian Association of Research Libraries. I was inspired to research this topic in large part due to CARL's Executive Director, Timothy Mark. His enthusiasm and dedication convinced me, a Canadian Studies student, that a library science issue was both a fascinating and worthy topic to explore for my M.A. thesis.

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In loving memory of my grandfather,
Francis Joseph DesRoches
(February 28, 1929 – September 23, 2007)

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Appendix 1 – An Annotated Timeline of Open Access in Canada

Introduction

Context

The commercialization of scientific journals is a relatively recent phenomenon, though such journals have been in existence since at least 1665 with the creation of *Philosophical Transactions of the Royal Society of London*. Commercial publishers began to exhibit interest in scientific publications in the mid-twentieth century, after the notion of 'core publications' had developed for each academic specialty (Guédon, 2001). Core publications, briefly, are those regarded as central to the research in each field. Often, these journals possess the articles most frequently cited by other researchers. By the 1960s, Eugene Garfield of the Institute of Scientific Information had developed the *Science Citation Index*, which allowed for the tracking of citations in order to determine which journals constituted core publications. These publications became regarded by both scientific researchers and academic institutions as the key to gaining elite status in the scientific world. Simply put, it has been impossible for an institution to gain or maintain elite status if its researchers have been unable to access and publish in these journals (Ibid.).

While core publications remained in the hands of learned societies and scholarly associations for a time, issues related to publication delays and censorship slowly began to emerge, which gave commercial publishers an opportunity to enter the field of scientific publishing. With an explosion in university enrolment and in the growth and number of libraries after the Second World War, printed journals developed a sizable market. As Guédon asserts,

Commercial publishers did not take long to realize that a new, potentially lucrative, situation had just emerged. There was gold in those there stacks after all! What librarians viewed as crucial core journals, publishers translated as the constitutive elements of an "inelastic market", i.e., a market where demand was little affected by pricing (and vice versa) (Ibid).

Commercial publishers, within less than a decade, were able to secure ownership of the core publications in many fields, particularly in the scientific, technical and medical (STM) fields, through a variety of means including direct acquisition, the sale of publishing services and through the rapid concentration of science journal publishing (Ibid., 14). As noted by McGuigan and Russell, scholarly societies found it desirable to form partnerships with commercial publishers as it relieved them of the “costs and administrative burdens of publishing their journals” (2008). As these publications were considered vitally important to the research process, commercial publishers were able to charge just about any fee they desired. Prices for core publications shot up dramatically, helping lead to what has been termed the “serials crisis,” which emerged in the 1970s and continues to this day.

Briefly, the “serials crisis” refers to the inability of university libraries to afford to maintain past levels of journal subscriptions. While a variety of contributing factors exist, four have featured prominently in the literature on the “serials crisis”. First among these is the increasing domination of the academic publishing market by commercial publishers, who are interested in maximizing profits at the expense of university libraries’ budgets. The explosion in the number of academic subfields and the ‘publish or perish’ philosophy that is particularly prevalent in the STM fields are also key factors contributing to the crisis. Finally, currency fluctuations increase instability in subscription

prices; this is particularly true in countries that are 'net importers' of information such as Canada (Shearer and Birdsall, 2002, p. 5).

The conversion of paper journals into electronic publications by commercial publishers has only exacerbated the effects of the "serials crisis". Publishing material online allows for rapid access to information and reduced distribution costs, but this reduction in expenses has not meant reduced prices for journal subscriptions. Academic institutions are also finding that their access to commercially published electronic journals is becoming increasingly contingent on restrictive licensing agreements. As opposed to buying a hard copy of a journal, which the university will have in perpetuity, certain licensing agreements only permit the university to "rent" the publication for a set period of time. Should a university decide not to renew their subscription to a particular journal, there is a possibility that the university will no longer have access to previous editions of the journal (Solomon, 2002). In response to this, Canadian library consortia and research libraries have begun to negotiate with publishers for perpetual access to electronic content, which permits licensees access to these materials after the license has lapsed.

Restricted access to scientific information has serious implications for the dissemination of research. In light of this, many scholars and research librarians have begun to establish a potentially subversive means of reestablishing control over the information produced by researchers. This means, named the Open Access movement, advocates unfettered access for all persons with an internet connection and an interest in the subject matter. With the development of new technologies and the internet, rapid dissemination of research is able to occur at a faster pace than previously conceivable,

and in a less expensive format than paper-produced journals. This movement, however, has not been met with unanimous approval. Many publishers claim that the Open Access movement will bankrupt them, and many scholars continue to cling to core publications. Nonetheless, the fairly rapid move towards Open Access demonstrates a drastic and far-reaching change in ways of thinking and behaving: in short, a potential revolution in academic publishing.

Although Canadian institutions have been actively involved in the Open Access movement as both producers and consumers of electronic, peer-reviewed articles, there is little in the published discourse on Open Access to indicate this involvement. My thesis seeks to help rectify this situation by situating the movement in a Canadian context.

A Brief History and Definition of Open Access

Freely accessible, peer reviewed journals have been available online since the early 1990s, including such titles as *Psycology* (launched by Stevan Harnad in 1989, became peer reviewed in January, 1990), *The Public-Access Computer Systems Review* (launched in 1989, became peer reviewed in April, 1992) and the *Bryn Mawr Classical Review* (launched in November, 1990). Journals such as these were usually distributed by email, and libraries, unsure as to how to handle the new format, would typically print and bind the texts, then shelve them.

The notion that articles should be digitally archived by authors and made freely available on the internet was spearheaded by Stevan Harnad, a cognitive scientist, with what become known as his “subversive proposal”, submitted to a Virginia Tech mailing list in 1994. Essentially, this proposal advocated the continuation of peer reviewed scholarly publications in print form, but also put forward that authors should archive

these materials online, in such a way that they could be freely accessed by all. Harnad stressed that he was speaking of “esoteric” writings, meaning those written for research impact, and not royalty income, and emphasized the collective nature of research and scholarly communication:

The scholarly author wants only to PUBLISH them [the articles], that is, to reach the eyes and minds of peers, fellow esoteric scientists and scholars the world over, so that they can build on one another's contributions in that cumulative, collaborative enterprise called learned inquiry... If every esoteric author in the world this very day established a globally accessible local ftp archive for every piece of esoteric writing from this day forward, the long-heralded transition from paper publication to purely electronic publication (of esoteric research) would follow suit almost immediately... The subversion will be complete, because the (esoteric -- no-market) peer-reviewed literature will have taken to the airwaves, where it always belonged, and those airwaves will be free (to the benefit of us all) because their true minimal expenses will be covered the optimal way for the unimpeded flow of esoteric knowledge to all: In advance (emphasis in original, Harnad, 1994).

As Harnad noted at the time, a similar online network already existed – Paul Ginsparg’s repository for preprints in physics, arXiv, which was launched in 1991 – and was already experiencing much success, with over 20 000 users worldwide and over 35 000 hits per day (Ibid.).

Harnad’s posting sparked a series of online exchanges, which became known as the “subversive discussion”. These exchanges were summarized and collated in the report Scholarly Journals at the Crossroads: A Subversive Proposal for Electronic Publishing, published in 1995. The report highlighted several of the key themes and issues which arose in these online exchanges, including the problem of enacting such a large-scale proposition, a questioning of who is responsible for scholarly findings, an examination of journal and editorial costs and a discourse on citation, citation frequency, and the rudimentary editing and peer review processes already taking place in the digital

environment. This report helped lead to the formation in 1997 of *Cogprints*, an electronic, freely accessible archive edited by Harnad of self-archived articles in the field of Cognitive Science. This archive and others like it, however, did little to resolve the budgetary crisis many libraries were experiencing in the face of skyrocketing journal prices.

There has been a significant discussion in Canada on the crisis of scholarly communication since the early 1990s, which includes but is not limited to issues arising from the “serials crisis”. In October 1994, the Association of Universities and Colleges Canada (AUCC) agreed to establish a joint Task Force with the Canadian Association of Research Libraries (CARL) to “address the crisis of scholarly communication and its effect on higher education in Canada” (AUCC-CARL/ABRC Task Force, 1996, p. i). In September 1995, the Task Force released a discussion paper which examined the nature and extent of the crisis in scholarly communication, with a focus on worldwide proliferation, runaway costs and the limitations of Canadian copyright legislation. This was followed in November 1996 by a report entitled The Changing World of Scholarly Communication: Challenges and Choices for Canada, which called for significant changes in how academics publish scholarship and research. The report described a looming crisis in Canada due to a number of issues confronting the system of scholarly communication, including “the soaring cost of research publications, the rapidly increasing number and diversity of serials and monographs... growing funding constraints on universities and their libraries [and] the surrender of copyright by authors and their institutions” (Ibid., p. 3). The report emphasized the need to support electronic publishing, and to view electronic peer-reviewed publications as comparable in quality to

print-based publications. The report also stressed the need to transform the academic reward system, and underscored that the current system, in which scholars are rewarded with promotion, tenure and salary for their ability to publish (and publish often) in top ranked journals, had contributed to the “unprecedented surge in the published body of knowledge”, a key facet of the growing scholarly communication crisis (Ibid., p. 11).

Ultimately, this report – and more broadly, the creation of the joint AUCC-CARL/ABRC Task Force – signaled that the crisis of scholarly communication was not and should not merely be the concern of research libraries. Rather, these issues had the potential to drastically affect all areas related to research creation and dissemination, and as such could be considered a challenge that academia as a whole would be required to confront.

In response to the “serials crisis”, in 1998 the Association of Research Libraries formed the Scholarly Publishing and Academic Resources Coalition (SPARC), which was, and continues to be, an “international alliance of academic and research libraries working to correct imbalances in the scholarly publishing system”, particularly those that exist in the networked digital environment (SPARC, 2009). SPARC’s advocacy platform has three main planks: 1) providing alternative titles to the high-priced commercial titles, 2) encouraging leading-edge publishing efforts, including the increased use of technology and innovative business models and finally, 3) recognizing the importance of creating new outlets for scientific communication that are based around the needs of the scholarly community. SPARC has also acted in an educational capacity, and has published many articles, guides and reports on issues related to scholarly communication, including, but not limited to, Open Access publishing and archiving efforts.

In 1999, the Open Archive Initiative (OAI) was launched. Initially designed as a metadata harvester, OAI neatly helped resolve one of the issues Harnad had first articulated in his “subversive proposal”, that of searchability and functionality. With OAI, collecting the necessary metadata describing journal articles is a relatively straightforward process, as is the provision of searching services against the data. OAI, which was initially created with the goal of facilitating scholarly communication, has become the *defacto* standard for libraries in their digital archive and repository initiatives.

Over the next several years, the number of ‘open’ archives slowly began to climb, as did peer reviewed, freely accessible online journals. BioMed Central, for example, which would later become one of the largest and most prolific Open Access publishers, published its first freely accessible article in July, 2000. The term ‘Open Access’ itself, however, was only coined in February, 2002, in the Budapest Open Access Initiative (BOAI). This initiative, launched by the Open Society Institute, provided one, if not the, first definitions of Open Access:

By “open access” to this literature, we mean its 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 (BOAI, 2002).

BOAI remains distinctive from other initiatives that strive to make digital information free for users in that not only is it limited in scope, focusing specifically on peer reviewed literature, but also in its assertion that free access should depend on explicit author consent.

BOAI became the model for other statements on Open Access. In 2003, both the Bethesda Statement and Berlin Declaration were issued; the combined definition in these three statements have become known as the 'BBB' definition for Open Access. The Bethesda and Berlin statements, which mirror one another, differ slightly from the Budapest declaration. They assert that a complete version of the work, including any supplementary materials, should be deposited in at least one online repository using appropriate technical standards, such as those defined by the Open Archive Initiative (Berlin, 2003; Bethesda, 2003).

Open Access may further be defined as being either 'green' or 'gold'. The terms 'green' and 'gold' refer to venues for access to articles; these are typically either repositories or journals. Green Open Access refers to the self-archiving of peer reviewed papers (usually pre- and/or post publication) in institutional repositories, where Gold Open Access is the publication of peer reviewed articles in online, freely accessible (i.e., Open Access) journals. The two are not necessarily mutually exclusive, as it possible to publish in an Open Access journal and also submit a paper to an institutional repository.

More recently, a distinction has also been made between *gratis* and *libre* Open Access. Suber has termed free online access which removes price barriers as *gratis*, whereas *libre* OA is that which removes both price barriers and at least some permission barriers (2008). The *gratis/libre* distinction is concerned with user rights and freedoms, and both 'green' and 'gold' OA may be either *gratis* or *libre*.

Finally, a distinction must be made between Open Access as a publishing model and Open Access as a social movement. Open Access publishing is about providing alternative business models to those adopted in conventional publishing. The most

common Open Access business model is one in which journals provide free online access to their articles by charging either the author or the author's institution a fee for publication. Open Access as a business model is solely concerned with 'gold' OA; this is contrast to Open Access as a social movement, which also places heavy emphasis on 'green' OA. The Open Access movement is primarily concerned with increasing access to scholarly literature, whether this be through publishing in OA journals or through self-archiving in an open (i.e., freely accessible) institutional repository.

This thesis discusses Open Access both as a movement and as a publishing model, with emphasis placed on the 'author pays' business model. Primarily concerned with *gratis* and *libre* 'gold' publication routes, this thesis pays special attention to Canadian institutional repositories and their impact on scholarly communication.

Issues of Power, Commoditization and Access

This thesis is comprised of both an examination of the discourses, practices and policies on Open Access currently in existence, as well as an attempt to theorize the Open Access movement using an integrated 'New Canadian' political economy and critical political economy of communication approach. As described by Banks and Hanushek, political economy is the study of how political factors influence the functioning of an economic system (1995, p. 1). Knowledge of the political institutions, actors and incentives present in the decision-making process is necessary for a comprehensive understanding of economic phenomena (Ibid.). This definition can be expanded upon through an analysis of what Clement and Williams term the "New Canadian Political Economy", which emerged in the late 1960s and focuses on identifying social relations and examining social change (1989, p. 10). New Canadian Political Economy is primarily

concerned with human agency – that is, the “choices and decisions made by political, economic, and social actors and their effects” (Ibid., p. 11). While the concept of agency is utilized to convey that social outcomes are not predestined, Clement and Williams caution that individual actors are largely bound by both historical, cultural and ideological factors on the one hand, and also by forms of social organization and technological developments on the other (Ibid.). These boundaries effectively structure decision-making processes by social actors. As noted by Clement and Vosko, the effects of social forces can often be seen as paradoxical, or incongruous; however, these elements have the potential to result in progressive social change (2003, p. xiv-xv). An understanding of the relationship between agency and structure is a critical component of this thesis, as it allows for an understanding of how academics are able to act as agents of change, yet also contribute to – and continue to perpetuate – the crisis in scholarly communication.

Critical political economy is concerned with both symbolic and economic aspects of public communications, and the interplay between these two dimensions. As articulated by Golding and Murdock, critical political economy is holistic, meaning it is not merely concerned with the ‘economy’ as a separate domain but instead examines the interplay between economic organization and politics, society and culture. Critical political economy is also historically located, in that it is interested in how the day-to-day and year-to-year events and experiences relate to the gradual “unfolding of the history of economic formations and systems of rule”, and is centrally concerned with the balance between private and public interests (Golding and Murdock, 1997, pp. 15-16). Finally, critical political economy goes beyond “technical issues of efficiency to engage with

basic moral questions of justice, equity and the public good” (Ibid, 1991, p. 18). The use of critical political economy raises significant issues and opens avenues of inquiry in an analysis of Open Access as a potential ‘revolution’ in academic publishing. As opposed to merely looking at the feasibility of Open Access from an economic standpoint, critical political economy allows broader questions regarding who controls knowledge and how this knowledge is disseminated to be addressed. Critical political economy also allows for an exploration of the private and public interests at stake, including those of commercial publishers, academics and research librarians, as well as those of the state and general public.

The Commodification of Information

In addition to the framework developed by Golding and Murdock, this thesis will draw on the works of D. Schiller, H. T. Wilson, V. Mosco and Y. Benkler, among others. D. Schiller’s conceptualization of political economy posits that information as a commodity is central to capitalism (1988, p. 41). Mosco also observes the use of information as a commodity, and contends that an examination of how power is utilized to shape the production and distribution of the information commodity is an effective measure of social change (1988, p. 3). Mosco theorizes that new technological developments have led to the formation of a ‘Pay-per Society,’ in which electronic communication and information activities are increasingly measured and monitored (Ibid., p. 5). New technologies also have the potential to act as major instruments of profit and control for corporations and the state.

While the commodification of information is not a new phenomenon, Mosco contends that “the new technology deepens and extends opportunities for selling

information by transcending the boundaries that space and time impose on the packaging and repackaging of information in a marketable form” (Ibid., p. 8). Thus, a corporation is able to be paid for the same piece of information, repackaged in numerous saleable forms, several times. While the advent of the ‘Pay-per Society’ has benefited corporations, Mosco problematizes it from a user standpoint, with issues of privacy and accessibility of paramount importance. Increased monitoring can easily lead to a loss of privacy, and a growing number of people simply cannot afford access to information. The theme of accessibility is further elucidated upon by H. Schiller and A. Schiller. Through an examination of American university and research libraries, Schiller and Schiller demonstrate that the key library value of equal information access has been steadily eroded due to increasing commercialization and privatization of research, both within, and external to, research institutions. This undermines the “social character of information” and assists in the institutionalization of a “process whereby information is restricted to those with the ability to pay” (1988, pp. 158-163). Both Mosco and Schiller and Schiller assert that the outcome of turning information into a saleable good, restricted to those who can pay, has potentially serious consequences for democracy itself (1988, p. 8; 1988, p. 152).

Unique and Peculiar Qualities of Information

Information has a number of unique qualities that conform poorly to economists’ standard definitions of commodities. As articulated by Babe, the conceptualization of information by neoclassical economists as a ‘reduction of uncertainty’ can be criticized as being an inadequate understanding of information. Babe argues that information cannot be treated in the same manner as other factors in production (1995, p. 15). Information

not only permeates and transforms traditional factors of production, but it also affects the production process itself. Significantly, unlike other commodities, information is not reduced to nothing in being consumed. Commoditization, argues Babe, pertains “only to artifacts that contain information, not to information itself” (Ibid., p. 4). Ultimately, Babe argues that a communicatory approach to information as an element of transformation rather than as a commodity itself is more thorough and appropriate than a reductionist neoclassical approach.

Bates (1988) also considers the apparent paradoxes that arise from attempts to treat information as an economic good, including the question of whether information can be considered a private or public economic good, and also whether information goods, as a consequence of their unique nature, intrinsically fail to meet social efficiency conditions. Bates notes that the nature of information makes it practically impossible to ascertain the value of information until it has been put to use by its consumer, and thus the value of a specific piece of information is derived from its future usefulness, and is “influenced by the circumstances of that use” (1988, p. 77). Traditional economic models, by and large, are unequipped to deal with this type of indeterminacy, and Bates suggests that a probabilistic approach is needed to deal with issues of potential value and uncertainty (Ibid., p. 78).

Information as a Public Good

Information does not easily correspond to traditional economic notions of commoditization; however, it may be seen to better fit the conception of a public good. As articulated by Stiglitz, a public good has two essential properties: nonrivalrous consumption, meaning that consumption on the part of one individual does not detract

from another individual's consumption, and nonexcludability, meaning that it is virtually impossible to stop an individual from enjoying the good in question (1999, p. 308).

Benkler expands upon this definition, noting that "certain characteristics of information and culture lead us to understand them as 'public goods,' rather than as 'pure private goods' or standard 'economic goods'" (2006, p. 36). Benkler contends that information is nonrival, as once information is produced, there is no additional outlay to create more of it to satisfy the next consumer. While the physical paper and ink of a journal, for example, cost something to produce, the information itself need be created only once. Incomes are generated through the regulation of publication and copyright. Benkler argues that according to a technical economic perspective, the market for information is one which is systematically inefficient, as efficiency is only achieved when a good is produced at its marginal cost, which in the case of information would be zero. Benkler further posits that because it is not possible for information to be sold both at its marginal cost and at a positive price, that it is "fundamentally a candidate for substantial nonmarket production" (Ibid., p. 36). This is particularly true when information producers do not need to "capture the economic benefits of their particular information outputs", such as in the case of scientific researchers, who receive no royalties for the information and articles they produce (Ibid., p. 37).

Capitalism and Concentration

This thesis will also draw on the framework developed by H. T. Wilson for examining capitalism. Wilson contends the legitimacy of capitalism is under threat (2002, p. 14). Capitalism as a societal institution can only survive with the continuous support of both the state and the public. This support is becoming more and more tenuous as

capitalists increasingly co-opt public capital for personal gain (Ibid.). The idea that markets are self-correcting, according to Wilson, is little more than a myth. Markets “absolutely require the continuous intervention of extra-market institutions” (Ibid., p. 165). This is clearly demonstrated in the Open Access case. Due to the inelastic nature of the core publications market, journal subscription fees have risen nearly four times the rate of inflation (ARL, 2003). In a sense, the Open Access movement aims to act as a check on publishers’ abilities to increase prices. As Open Access journals gain prominence and core publication status through an increasing number of citations, traditional publishers could find themselves in a situation where they no longer have control of the market. This thesis will analyze the power structures embedded within the current publishing model, and question the naturalization of free market capitalism within this system.

The naturalization of free market capitalism in the academic publishing market has led to an immense concentration of media ownership, which has had serious implications for scholarly communication. While there are approximately 2000 smaller publishers in the market, three major for-profit publishers – Reed Elsevier, Wiley and Springer – account for almost 42% of all published journal articles (McGuigan and Russell, 2008). There is a singular lack of transparency regarding the profitability of journal publishers, especially in light of the ever-increasing fees they charge to access their publications. What little information available, however, paints a striking picture – using data mined from the *UK Competition Report* and the *RMA Annual Statement Studies*, McGuigan and Russell show that the operating profit margins for Elsevier Science and Medical journals between the years 1998-2000 were consistently above 35%,

far above the number for all periodical publishers, which was lower than 5% (2008). Concentration of media ownership leads to an absence of healthy, market-based competition, slower innovation and increased prices, all of which have been evident in the non-elastic academic publishing market. Open Access has the potential to disrupt this concentration, especially as Open Access journals gain prominence and core publication status, and thus it is possible that radical change could occur in the academic publishing market. Whether this will become an actuality or remain mere possibility, however, remains to be seen, although this thesis takes steps towards examining this issue in the Canadian context.

The Move Towards a 'Networked Information Economy'

Media markets have been significantly affected by the development and diffusion of digital technologies and networks; for example, digital information markets tend to have relatively lower marginal costs related to the production and distribution of informational goods and services than traditional media markets. Benkler contends that these differences are transformational and that we are experiencing a shift from the “industrial information economy” to a “networked information economy” (2006, p. 3). The networked information economy, which has emerged over the past 15 years, is characterized by dispersed individual and cooperative action conducted via nonmarket means employing nonproprietary strategies. The infrastructure utilized by actors in the networked information economy is the internet, and the “declining price of computation, communication, and storage have, as a practical matter, placed the material means of information and cultural production in the hands of a significant fraction of the world’s population” (Ibid.). Benkler posits that within this digital information environment,

successful, extensive cooperative efforts have emerged in every area of information and cultural production, and that these efforts challenge traditional notions of politics and economics. Nonmarket collaborations in the networked information economy, which allow people to interact as social beings, have the potential to motivate far more successfully than conventional market mechanisms, and this has resulted in growing, and flourishing, nonmarket sectors in information and cultural production. As these outputs are the product of voluntary collaborative action, Benkler argues, they are not treated as exclusive property, but are instead “subject to an increasingly robust ethic of open sharing, open for all others to build on, extend, and make their own” (Ibid., p. 7). While these efforts are typified by open-source software, they are quickly becoming apparent in every facet of the networked information economy.

The notion that a “commons” approach can be superior to an exclusive rights approach to intellectual property rights is further developed by Benkler in his discussion of issues pertaining to justice and development. He notes that “[a]ccess to knowledge has become central to human development”, and furthermore, in the emerging information economy, information and innovation are essential for economic growth and progress (Ibid., p. 302). Information produced from nonproprietary collaborative efforts can remove some cost and distribution barriers, which in turn can assist in increasing access to this now vitally critical component of this networked information economy.

Benkler identifies four major sectors of information and knowledge production: 1) software, 2) scientific publication and research, 3) agricultural biotech, and 4) biomedical and health (Ibid., p. 317). Key actors in all four of these sectors include individuals, nonprofit organizations, both intellectual property and non-intellectual property based

industries, universities and the state and state organizations. Most significant to this thesis, Benkler examines scientific publication as an area where nonproprietary strategies have been developing to challenge the existing proprietary model. Touching on both for-profit and nonprofit Open Access business models as an example of “a reorganization of the components of the industrial structure of an information production system”, Benkler posits that this type of economic reorientation has the potential to greatly benefit not only Western scholars, but also scholars and physicians in developing countries, thus achieving a more just distribution of resources and knowledge (Ibid., p. 325). Benkler also briefly discusses self-archiving, focusing on the repository ArXiv, and asserts that these efforts more closely follow developments in open source software and peer production. While ArXiv does not perform quality control apart from ensuring all submissions meet technical format compliance, a type of peer review exists in the form of postpublication review and commentary. This type of nonmarket, peer produced filtration and accreditation, which is seen in many areas of the networked information economy, neatly helps to solve the issues of information overload and the determination of quality.

Conclusion

There is need for a critical examination of the economic and political implications related to the ownership of scientific research. The work of theorists such as Clement, Golding and Murdock, Mosco, Wilson, Schiller and Schiller, Babe and Benkler will be used to explore themes of power, commodification, and access within the context of the Canadian scholarly communication system, focusing particularly on the nature and role of new technologies in giving researchers and librarians potentially increased agency and control over their research and its dissemination.

Research Questions

Rhetoric on the ‘digital revolution’ has been prevalent in media studies for the past several decades (see, for example, Negroponte, 1996, and Zysman and Newman, 2006). There appears to be an implicit assumption in the literature – both on Open Access and on media studies more generally – that new media will displace old media, which in turn will result in an era of shifting social structures and increased access to information. While the fairly rapid move towards Open Access signifies a considerable change in ways of disseminating and accessing scholarly information, questions can be raised about the nature and extent of this change. This thesis questions whether – and to what extent – the move towards Open Access in academic institutions and state policies constitutes a ‘revolution’ in scholarly communication in Canada. I define revolution not only as a drastic and far-reaching change in ways of thinking and behaving, but also as a fundamental change in power or organizational structures that takes place in a relatively short period of time (a more thorough interrogation of ‘revolution’, and the criteria for assessing whether Open Access in Canada can indeed be said to constitute one, is conducted in Chapter 4).

A secondary research question is concerned with the production and reproduction of discourses on Open Access, and seeks to uncover the discursive strategies in play in the debate on Open Access. Uncovering these strategies will allow me to isolate the ideologies present in the discourse, and will also allow me to explore questions of power and how discourses are related to practices.

An additional aim of this thesis is to situate Open Access within the Canadian context. Furthermore, this thesis seeks to establish a political economic theoretical

framework through which Open Access may be examined. As will become evident in the following review of the literature, there is no dominant theoretical lens through which questions pertaining to Open Access are examined, and in truth, it is rare that Open Access is situated within any explicitly theoretical context.

Scope of the Thesis

Though this thesis will examine the international discourse surrounding Open Access, the focus is on Canadian efforts in the Open Access movement. More specifically, this thesis will examine scientific journals and articles only. The Open Access movement is primarily concerned with journal articles because these articles are royalty-free research, as opposed to books, for example, for which authors receive royalties. This thesis will not attempt to address the issue of Open Access in the humanities and social sciences, as the issues of funding and time sensitivity are different for these distinct areas of scholarship. Furthermore, this thesis will not address issues related to Open Access and its potential impact on developing countries in any substantial way, although I do acknowledge that such interests are prominent in the literature.

Significance of the Thesis

This thesis broadens the discourse on Open Access by positioning it within the Canadian context, detailing the history, policies and practices unique to Canada. Significantly, this thesis utilizes an explicitly stated political-economic theoretical framework to structure its analysis of the discourse on Open Access. The research goes beyond the current debates and issues in the literature on Open Access and discusses the political and economic implications of the Open Access publishing model as a means to disseminate knowledge. This thesis also attempts to account for the positions of various

actors in relationship to Open Access in Canada. Study of the Canadian facet of the Open Access movement is critical as it represents a drastic shift in the discourse on who should control scientific literature and how this literature will be financed. Now is also the time to critically reflect on the successes and failures of Open Access in Canada, and to identify the difficulties in maintaining Open Access as a viable option to conventional publishing.

Structure and Methodology of the Thesis

To assess the extent to which the move towards Open Access can be considered ‘revolutionary’, this thesis is divided into three chapters. Following the introduction is an extensive literature review. The current body of literature available on Open Access is characterized, and key issues pertinent to this thesis are highlighted, including the shift in relationships between academics, librarians and publishers due to new technologies and business models, the emerging discourse on the role of scholars in these debates, and the divergence between library and academic interests. The second chapter is a critical discourse analysis that examines the production and reproduction of discourses on Open Access, and includes a deconstructive reading and interpretation of the competing discourses surrounding Open Access journals and practices. It focuses on the series of discussions commissioned in 2004 by *Nature Publishing Group*, which features a series of insights and analyses on the Open Access movement from the perspective of scientists, librarians, publishers and other major stakeholders. Although the discussion is centred on European and American interests, a deconstructive reading of the discourse will lead to a more comprehensive and thorough understanding of the core assumptions behind the competing discourses on Open Access, which in turn will help to further understanding of

the Canadian situation. The third chapter situates Open Access in a Canadian context, and utilizes an integrated critical political economy and critical discourse analysis approach to assess whether Open Access practices and discourses in Canada can truly be considered revolutionary. Key actors and features of Open Access in Canada are identified, followed by an in-depth analysis of several key initiatives and policies of two of the most important actors in Open Access in Canada, namely research libraries and the state. The final chapter describes the key conclusions of this thesis and puts forward some thoughts on some of the larger issues at stake, including the transformation of scholarly communication as a whole and growing concerns over the commercialization of academic research. This chapter will conclude by suggesting areas for further research and potential new lines of inquiry.

Literature Review

Introduction

Open Access literature can be identified as being derivative of the much larger debates that have become especially prominent in the past two decades regarding matters related to accessibility, transparency and distributed peer review in the digital environment. These have included discussions on topics such as open source (Perens, 1999; Lerner and Tirole, 2003), open code (Lessig, 1999), information commons (Beagle, 1999; Bailey and Tierney, 2002) and Open Science (David, 1998; 2005). While the potential literature is sprawling and broad, unless noted otherwise, this chapter focuses exclusively on Open Access-specific literature.

The literature on Open Access may be characterized largely as a debate on the merits and economic feasibility of Open Access publishing. Proponents of the movement see Open Access scholarship as the primary way in which research should be accessed as it has the potential to increase research visibility, usage and impact, and as the only way research will be widely disseminated in the future. Critics of the movement, however, see these views as overly optimistic, particularly as they pertain to increased access, and feel that scholars and research librarians have a limited understanding of the difficulty and expense involved in publication. The literature also indicates that a significant number of leading scholars are either unaware or have severe misperceptions of Open Access as a type of academic publishing, which has potentially serious implications for its future success. The literature also illustrates a striking divergence between librarian and faculty interests. While librarians are primarily concerned with facilitating access to information and lessening the financial effects of the “serials crisis”, scholars tend to be more

concerned with issues related to the academic reward system - whether publishing in a particular journal can provide the impact factor they desire, as well as furthering their own career ambitions by meeting the need to publish in prestigious journals. The literature illustrates that although Open Access has begun to establish itself as both an efficient means of access to research and an economically viable option to traditional commercial publishing models, its future as a revolutionary means of facilitating scholarly communication is far from certain. Ultimately, this review of the literature clearly demonstrates that it has been uncommon for anyone involved in this debate to meaningfully interact with the other side of the debate's beliefs, arguments and critiques. This lack of meaningful dialogue has resulted in an astonishing lack of analysis of the theoretical underpinnings of points of view in the debate.

This review explores several key issues which can be drawn from the literature, including the shift in relationships between academics, librarians and publishers due to new technologies and business models. Criticisms of Open Access publishing, including arguments related to economic issues and critiques of quality, as well as counter criticisms to these arguments, are also examined, as is the discourse on the role of scholars in these debates and the divergence between library and academic interests. Finally, the review discusses gaps in the literature, and explains how this thesis addresses some of these gaps through its investigation of its central research question, expressly, the extent to which the move towards Open Access constitutes a 'revolution' in scholarly communication in Canada.

New Business Models, Shifting Relationships

New business models, and in particular Open Access business models, are emerging in the academic publishing market in response both to the serials crisis and to the recent debates on accessibility, transparency and rights in the digital era. This section provides a brief description of the traditional model of academic publishing before moving on to examine the new developments and issues that have arisen over the past few decades.

The traditional business model in academic publishing, which has been used both by commercial and society publishers, may be summarized as one in which the university is required to pay twice – first for the salary of the researcher and other costs associated with research creation, and second for the ability to access said research in its published, peer-reviewed form. Typically, an author will submit an article to a journal, and after a rigorous peer review process performed by anonymous, voluntary reviewers, the article is either accepted (with or without revisions) or rejected. Should the article be accepted, the author is usually required to relinquish their copyright in return for publication. Publishers then sell either hard copies, or licence electronic copies, to university libraries (whose budgets are funded and set by the university itself). Publishers contend that they add value through services such as typesetting, copy-editing, printing, and distribution, as well as through support of the peer review group. A growing number of librarians and researchers, however, contend that this system is unsustainable, and that new business models are required to address the needs of faculty, librarians and even the university itself in the digital era.

Peter Suber contends that scholarly literature should be both available online and free of charge. This suits the needs of published academics, who want their work to be noticed, read and cited, and also the needs of other researchers, including students and the interested public (Suber, 2004). In the conventional model, however, authors of scientific articles are required to transfer copyright ownership to the company that publishes their research. Open Access, in contrast, allows scholars to retain aspects of copyright ownership through, for example, Creative Commons licensing (Creative Commons). Suber also asserts scholarly journals are uniquely suited for the Open Access mode of research dissemination. For example, unlike writers of fiction, who are paid royalties by publishers, academics are instead paid salaries by their employers. In the majority of cases, publishers do not pay academics for their articles, and journal authors are occasionally charged a fee per article page to cover costs such as copy-editing (Suber, 2004).¹ Open Access itself is not without operating costs, including bandwidth expenses, server maintenance, labour and marketing. To cover these costs, the majority of Open Access journals charge a processing fee to be paid by either the author or the author's employer. Suber notes, however, that the costs associated with Open Access journals are still much less than the costs associated with purchasing journal subscriptions (Ibid.). According to Solomon, with electronic dissemination, "the actual costs of dissemination are trivial. The real costs are in the preparation of manuscripts" (2002). The drastic reduction in some of the costs associated with publishing, mainly distribution, has resulted in a situation whereby some scholars are beginning to question the consequences of the current relationship they have with publishers.

The move towards Open Access scholarship reflects a shift in the relationship between publishers and scholars. Some members of the academic community are becoming increasingly hesitant about submitting their research to publishing companies, only to then have those publishing companies turn around and sell that very same research back to them at an exorbitant fee. For Willinsky (2003), Open Access is eminently sensible. Authors and reviewers already donate a significant amount of their time and resources to make journals the leading source of scientific information. It is time that scholars use their resources to benefit the academic community, and not for-profit publishing corporations. The publication system is currently within a transition period from paper to electronic distribution. Scholars have a unique opportunity to shape the emerging system that will replace paper journals. Publishers are first and foremost businesspeople. If left to their own devices, “[they] will gladly shape the system in ways that best serve their ends” (Solomon, 2002). As Solomon notes, it is up to academics to choose the system of publication they wish to see in the future (Ibid.).

Chang (2006) provides a thorough overview of several of the current business models for Open Access publishing. BioMed Central (BMC) is a commercial publishing company that provides immediate open access to peer-reviewed biomedical research. Its portfolio includes approximately 160 journals, and a per article publication fee is charged on a sliding scale from zero to almost two thousand dollars (Ibid., pp. 702-706). BMC has been able to succeed primarily because it has saved on publishing costs through the use of new Internet technology, and also because it has implemented a strict system of quality control for its journals, thus making BMC a desirable company for academics to submit future articles. Chang also provides a case study of the Public Library of Science

(PLoS), a non-profit organization that provides immediate free access to its journals and places no restrictions of their subsequent distribution provided proper citation standards as followed (Ibid., p. 707). Though PLoS has received a \$9 million dollar grant from the Gordon and Betty Moore Foundation, its business model charges publication fees which closely reflect the costs of publication, at approximately \$2 500 per accepted article. PLoS has enjoyed a wide level of support from the academic community due to the exceptional quality of its journals and its post-publication tools, which help scholars determine citation impact and ranking. PLoS has also developed an extremely efficient editorial process, which allows for articles to be published within weeks of submission.

Chang has determined that four critical factors will determine the success and sustainability of Open Access publishing. Publishers, whether commercial or not-for-profit, must be able to save costs and increase incomes, both potentially through author fees. Additionally, publishers must be willing to adopt and exploit innovative new technology to improve cost-efficiency. Most importantly, however, publishers must control journal quality, as authors will be more willing to publish in journals they perceive to be of the highest calibre (Chang, 2006, pp. 710-711). This view is shared by Harnad, who emphasizes the importance of quality of content, rather than merely quality of form (1996, p. 105). Citation impact is also a key element to the future success of Open Access journals.

The issue of whether Open Access articles have a greater research impact than traditional journals has also been explored in the literature. Antelman's study examined articles in disciplines at varying stages of adoption of Open Access, including philosophy, political science, electrical engineering and mathematics, to assess whether

they had greater impact as measured by citation count in the ISI Web of Science database (2004, p. 372). While Antelman does note that scientific researchers are more likely to publish in Open Access journals than scholars in the humanities, freely available articles were found to have a greater research impact than those that were not freely available across all four disciplines surveyed (Ibid., p. 379). These findings are confirmed by Turk, who goes on to state that if authors see an improvement in the impact factor of their research through, for example, an increasing level of citations, they will be more willing to submit articles to Open Access publications (2008, p. 66).

Open Access journals and business models directly compete with those of traditional publishing companies. Open Access publishing circumvents conventional publication channels, and as such it is viewed as a threat by many traditional publishers. Over the past decade, the driving forces behind Open Access, including ubiquitous Internet access within the research community, escalating journal prices, and the consolidation of commercial publishing companies (see Tamber, 2000), have converged to create an environment favourable to Open Access publishing. Combined with reduced library budgets, annual declines in circulation and a wide scale protest of publishers' restrictive copyright and licencing agreements, there is a possibility that Open Access is "the next big thing that will wipe out publishers forever" (Lamb, 2004, p. 148). Open Access has the potential to put tremendous pressure on the prices and profits of traditional publishing houses. Should Open Access publishers be able to provide inexpensive, automated publishing services to academic journal editors with the potential of international readership, it is argued that traditional publishers will be forced to respond with similarly competitive offerings (Ibid., p. 149; Friend, 2002, p. 188). Lamb

reasons that while it appears to be “a classic case of competition coming from the lower end of the market”, if traditional publishers wish to remain contenders in the realm of scholarly publishing, they will need to pay attention, and also respond, to the messages being sent by their markets (2004, p. 146).

While Lamb does not suggest that publishers abandon their current business practices, she does propose that they incorporate a modified version of certain Open Access strategies into their business models. These strategies include moving to electronic-only publication, which would drastically reduce distribution costs, and allow authors to retain copyright and self-archive, which would assist in establishing feelings of goodwill for both authors and librarians (Ibid., p. 149). Ultimately, Lamb believes that a hybrid business model, in which some authors choose to pay publication fees while others do not, is the most appropriate and sustainable business model for traditional publishers, as it will allow them to “experiment with open access while keeping revenue streams secure” (Ibid., p. 147). At the same time, scholars will benefit from an increasing level of access and a greater amount of control over the dissemination of their research. Libraries also stand to gain from this arrangement, as increased competition will likely exert a downward pressure on journal prices, thus increasing their purchasing power and ability to provide the resources their researchers require. The adoption of Open Access business practices has the potential to radically reform traditional scholarly publishing business practices.

Criticisms and Counter Criticisms of Open Access Publishing

That Open Access is in existence testifies to the need for reform within the publication system for scholarly journals. Critics of Open Access, however, question

whether this movement is an appropriate vehicle for reform. Joseph Esposito, a former executive of both Simon & Schuster and Random House publishing corporations, contends that Open Access will result in an overall rise in the cost of research publications, and also that the movement threatens to destroy publishers' business models and "potentially their businesses, to the detriment of their shareholders, including many, presumably, who are academics themselves" (Esposito, 2004). Although Esposito fears the ramifications of Open Access publishing, he also does not feel the movement will be particularly effective. One reason for this is that many Open Access advocates have a limited understanding of the "systemic dimension of information creation and delivery" (Ibid.). This argument is shared by Crawford, who goes on to state that academic communities and conventional publishers share a mutually beneficial relationship (2003). Publishers have the specialized entrepreneurial and business skills needed to ensure consistent standards, as well as timely production and distribution, of publication. Without these specialized skills, maintaining a successful publication would likely be impossible (Ibid.).

The 'author pays' model of publication has also come under criticism. Wellan asserts that the cost of publication would not be reduced, but merely shifted from library subscription budgets to research budgets (2004, p. 112). In this scenario, universities would be forced to cover the "journal revenues previously delivered from subscription sales" (Ibid.). Scaria contends that the 'author pays' business model could well result in a second serials crisis, in which funding agencies will be unable to fully support authors, thus affecting the ability of authors to pay for publication of their research (2003). This is elucidated by O'Grady, who explains that very few, if any, American funding agencies

provide money to cover publication costs (2003, p. 1027). He argues that funding the cost of publication solely through author fees is currently impossible, due both to funding agencies' policies on allowable costs in their grants, as well as the unlikelihood that Congress would be willing to increase funding agencies' budgets (Ibid.).

Wellan also raises the concern that researchers from developing countries, unable to pay the processing fees of Open Access journals, would be forced to publish solely in less prestigious journals (2004, p. 113). Scaria notes that although most Open Access journals currently waive publication fees for researchers in developing countries, there is no guarantee that this practice will continue perpetually in the future (2003). Banks contends that the effect of forgoing revenue from authors in developing countries could become a considerable financial challenge (2004, p. 138).

A type of 'critique of quality' argument is also evident in the literature. Esposito, for example, believes that the future of Open Access is in personal writing, such as web logs (blogs). The 'author pays' system used in Open Access journals, he contends, did not start out to undermine conventional publishers, but instead arose to address the needs of those ignored by the proprietary regime (Esposito, 2004). Esposito considers Open Access to be any material that is on the Internet and free to access. Due to the unregulated nature of the Internet, he claims, any "pack of lies" could masquerade as the truth (Ibid.). This would have serious consequences for the dissemination of research. In turn, Wellan fears that some journals may relax their reviewing standards in order to "stay afloat" (2004, p. 112). There is also a fear that author fees could create "the same type of corrupting biases as donor-pays events create for elected officials" (Banks, 2004, p. 138). Stevenson questions whether Open Access is truly a new model of scholarly publishing,

or merely a type of vanity publishing, as payment of a publication fee is the means to being read (2004, p. 84).

Publishers of non-profit association and scholarly journals have also raised concerns about both the rhetoric of Open Access and its business models. O'Grady cautions that library advocacy for Open Access journals and business models, as well as their current budgetary and subscription decisions, "may well threaten the ability of many nonprofit scientific societies to continue producing high-quality, low-price journals and to reconfigure those journals for the online publication that libraries want" (2003, p. 1027). Banks contends that association and scholarly publishers advance the cause of Open Access while utilizing financially sound business and publishing models (2004, p. 136). As opposed to being 'cash cows', as charged by some Open Access proponents, association and society journals tend to charge relatively low institutional subscription prices. An Allen Press survey conducted in 2003 found that the average cost to American institutions for monthly journals was \$323, for bimonthly journals was \$204, and for quarterly journals an average price of \$125 (Ibid., p. 136). While Banks does acknowledge that the 7.5% annualized price increases for these journals was more than double the average consumer price index at 3.1%, he argues that this was because of a transformation in scientific publishing, and not because society publishers were attempting to raise profit margins (Ibid., p. 137). The volume of papers produced in the fields of science technology and medicine have skyrocketed over the past decade, resulting in increased costs of production for society journals. Despite recent innovations in open source software, and even though reviewers are unpaid, the costs in producing journals, including services such as copyediting, proofreading and statistical analyses,

remain fairly high. Banks considers the diversity of revenue sources association journals depend on, which include advertising, author page charges, subscriptions and royalties, and reprint sales, to be infinitely superior to acquiring revenue from a single source such as the fee charged to authors or their institutions to publish in Open Access journals. A diversified revenue base “minimizes the influence any party might have to sway editorial decisions or content” (Ibid., p. 138). As a final point, Banks explains out that many association and society publishers have been making journal content available for free, typically six to twelve months after it was first published. As well, many publishers will offer free access to users in developing countries (Ibid.). In doing these things, association and society publishers are able to promote the values of Open Access, while still operating under a traditional publishing model. O’Grady corroborates this viewpoint, but also cautions that the current system of “selling print subscriptions to institutional subscribers” is fast changing beyond recognition (2003, p. 1027).

The rhetoric of the Open Access movement has also been interrogated from a legal perspective. While the Budapest Open Access Initiative (2002) states that Open Access has the potential to be “an unprecedented public good” that will “lay the foundation for uniting humanity in a common intellectual conversation and quest for knowledge”, some critics contend that the notion that Open Access is ‘a public good’ may in and of itself be problematized. Anderson argues that ‘a public good’ is something legally owned by the public, such as a municipal park, whereas ‘the public good’ speaks to the general welfare of the public (2004, p. 207). While it is possible for information to be a public good, it must have been created and owned by the public. Information produced by private individuals and organizations, Anderson claims, does not fall into

this category, even if it was created with some level of financial public support. He asserts that the legal reality is that most information produced with government funding is copyrightable, and thus not an automatic addition to the public domain, despite much being made of the public's right to federally funded research by Open Access advocates. It should be noted, however, that Anderson's conceptualization of what constitutes a public good is somewhat narrow and overly legalistic in focus, and does not take into consideration what other scholars' have defined as critical components of information as a public good, namely its potential nonrivalrous consumption and nonexcludibility characteristics (see Stiglitz, 1999).

Concerns have also been raised about the positioning of Open Access in relation to the rhetoric of development and the advancement of science. Both proponents and critics of Open Access frequently point to the needs of developing countries to support their claims about the movement. Proponents argue that Open Access allows for researchers in developing countries to access information they may have otherwise been unable to afford, while critics charge that Open Access actually has the potential to limit where these researchers can publish (see Scaria, 2003; Morrison, 2004; Stevenson, 2004; Banks, 2004). Little discussion, however, has been raised about the ties between Open Access and the increasingly hegemonic discourse on development and the universality of Western science. Haider problematizes this, arguing that while Open Access is concerned with extending access to scientific information, its focus is on modern, or Western, science, which is "a particular and peculiar form of knowledge whose status depends on its claim to be universal" (2007, p. 450). The notion that Western science has a monopoly on truth, however, has come under considerable attack in recent years in regard to its role

in the process of colonialism and its association with the destruction of traditional forms of indigenous knowledge. Haider also problematizes the stereotypical depiction in the literature of developing countries as powerless, weak or diseased, noting that this type of portrayal denies that these countries have any agency or ability to act on behalf of their citizens (Ibid., p. 455). Haider concludes that Open Access occupies two discursive spaces:

“One that is firmly grounded in advancing the very type of knowledge that is associated with modernisation and modernity and which to a degree has been interpreted as a symbol and expression of Western dominance and its quite concrete consequences... and one the stands for opposition, collaboration, participation, and resistance” (Ibid., p. 457).

Ultimately, Haider sees these as fundamentally competing discourses, which have the potential to impede any serious engagement with issues that may determine the potential for Open Access to act as a truly revolutionary agent of change.

Although certain criticisms of Open Access are valid, particularly those that question rhetoric in the absence of empirical data, others reflect erroneous assumptions about the movement. Esposito’s contention that any material on the Internet constitutes Open Access literature is inaccurate. In contrast to Esposito’s broad definition, Open Access literature is much more narrowly defined as research that has been peer reviewed (Suber, 2003). As such, online diaries and personal websites do not constitute Open Access research. Much of Esposito’s argument can be defined as part the “first-generation critique of the democratizing effect of the Internet” (Benkler, 2006, p. 10). As explained by Benkler, these criticisms are typically based on the various implications of information overload, which is known as the Babel objection – simply put, when everyone speaks, no one is heard, “and we devolve either to a cacophony or to the

reemergence of money as the distinguishing factor between statements that are heard and those that wallow in obscurity” (Ibid.). If Open Access did indeed constitute blogs and personal websites, it is likely that truly significant research articles would get lost in the crowd. The academic community, however, already has mechanisms in place to counteract this possibility, namely through its peer review process of filtration and accreditation. As with the traditional model, Open Access publishing continues to adhere to the scholarly communication process. The Babel objection is, in this case, not particularly relevant, as “the mechanism that sifts through the universe of information, knowledge and cultural moves” – peer review – is already in place and continues to operate in the digital networked environment.

The belief that the overall cost of research will rise is also currently unsupported by research. Academic institutions are currently paying considerable journal subscription prices. Suber, for example, responds to this critique using considerable statistical evidence to demonstrate that Open Access publication is significantly less expensive for academic institutions than conventional publishing (2004). As well, many Open Access journals waive or reduce processing fees if the applicant is facing financial hardship. Processing fees would not bar an academic from a developing country to submit research to an Open Access journal. Additionally, Wellan’s fear that reviewing standards will be lowered in Open Access journals is unsubstantiated. Along with publications, a scholar’s reputation is key to their success in the academic world. It is highly unlikely that a scholar would be willing to compromise their career by reviewing articles in a less than rigorous manner.

A more legitimate critique of the Open Access movement is offered by Björk, who stresses that the current “volunteer work model does not easily scale up to large scale” and also that “sustainable operations and other business models need yet to demonstrate their strengths” (2004). To ensure the long-term survival of Open Access journals, marketing and branding strategies must be employed. Björk also contends that there needs to be a “massive behavioural change” on the part of academics (Ibid.). Open Access journals are irrelevant if academics do not use them for publication and citation. Solomon echoes this claim, adding that “[l]ibrarians know the situation all too well; they just are not in a position to change the outcome” (2002). If scholars themselves do not embrace Open Access scholarship, the movement will not succeed.

The Role of Scholars

The growing momentum behind Open Access can only be sustained with the support of a variety of actors, including research librarians, scholars, publishers and university administrations. As noted by Friend, however, academics, especially those in senior positions, have by far the greatest power to improve access and promote change within the scholarly communication system (2003, p. 186). While “[t]he most vocal advocates of open access are activist academics with tenure in science” and leaders in the research library community, by and large, the majority of academic faculty members are unfamiliar with or have misperceptions of Open Access as a mode of scholarly publishing (Lamb, 2004, p. 144). A comprehensive survey by Nicholas et al. (2005) of some of the world’s senior authors illustrates the extent of this issue. The study, which surveyed 3 787 senior scholars from 97 different countries, found that while nearly half (48 percent) of respondents indicated they knew “a little” about Open Access, one-third

of respondents knew nothing at all (Ibid., p. 502). Out of those respondents that did indicate an awareness of Open Access, 11 percent had published in an Open Access journal. Few of the scholars surveyed indicated they understood how the financial structure of Open Access operates, with nearly three-quarters (73 percent) of Open Access-knowledgeable respondents either associating Open Access a little or not at all with the 'author pays' business model. Only 71 percent of knowledgeable respondents very strongly associated free to access with Open Access journals. With regard to journal quality, 45 percent of knowledgeable respondents associated Open Access publications with high quality. Over two-thirds of respondents felt that publishing in Open Access journals would have little to no career benefits, although 78 percent felt that the proliferation of Open Access journals would mean it would be easier to get published (Ibid., pp. 503-512). Nicholas et al. conclude that "the biggest finding to emerge from the study is the general ignorance of OA publishing on the part of relatively senior scholarly authors...Currently, authors are not knowledgeable enough to influence a debate at which they are at the heart of" (Ibid., p. 515). This has serious implications for the future of Open Access, as the movement requires mass mobilization on the part of researchers if it is to succeed.

The views held by younger scholars in the Nicholas et al. study, however, were somewhat more promising. Academics between the ages of 26 and 35 were more likely to be positive about the outcomes of publishing in Open Access journals (Ibid., p. 512). Lamb considers Open Access' future to lie with the next generation of academics, "young, Internet-savvy scholars who do not yet have tenure, for whom electronic publishing and information are second nature" (2001, p. 144). Currently, however,

younger academics, especially those without tenure, do not have the influence necessary to truly affect change. While the positive views of younger scholars may benefit Open Access publishing in the future, they do little to alleviate the issues associated with escalating journals costs and strained library budgets in the current day.

Divergence: The Conflict Between Library and Faculty Interests

As illustrated in the literature, the debate over Open Access demonstrates that there are key differences between library and faculty interests; however, it is important to note that librarians and faculty have many of the same interests in common. These include – but are not limited to – an engagement in the scholarly communication process through the creation and peer review of academic articles. Many librarians are scholars and authors in their own right, and many faculty members are concerned with access to research and its dissemination. At the same time, the literature makes evident a growing divergence between the interests of libraries and faculty, particularly in regard to issues such as ‘prestige’ and reputation.

Morrison asserts that librarians and library associations have been leaders in developing solutions to the “serials crisis” (2004, p. 8). She further states that there is “currently substantial consensus that open access to scholarly information is ideal, not only for the public good, but also as the most effective means of advancing scholarly research” (Ibid.). While librarians see Open Access as having the potential to greatly reduce the financial effects of the “serials crisis,” it is also seen as a key means through which the library value of access to information will be realized.

While a study by Swan and Brown indicates that authors who have already published in Open Access journals share the belief that free access for readers is of

critical importance, the majority of scholars are primarily concerned with the impact factor and prestige of the journals in which they publish (2004, p. 220). As demonstrated by Hanauske et al., “maximization of their reputation” is of paramount importance, and even scientists that support the principles behind Open Access may be reluctant to publish outside the traditional publishing houses (2007, p. 650). Using a combination of classic and quantum game theory, Hanauske et al. demonstrate that, in many cases, scientists face a dilemma situation: in short, considering the potential loss to reputation, the incentives to publish in Open Access journals are either insufficient or missing (Ibid., p. 10). As such, for many scholars, Open Access publishing is simply not worth the risks involved.

The literature overwhelmingly indicates that ‘prestige’ and reputation are critical factors for scholars in determining the journals to which they will submit their research. Using a grounded theory approach, Park and Qin (2007) explore what factors increase or decrease scholars’ willingness to publish and use articles in Open Access journals and how these factors are interrelated. Perceived journal reputation, perceived topical relevance and perceived availability are all key factors affecting scholars’ publishing decisions (Ibid., p. 76). Interestingly, perceived content quality was not judged to be as important a factor to scholars as perceived reputation in determining scholars’ willingness to publish in Open Access journals, though scholars do assume “that high content quality indicates high journal reputation and vice versa” (Ibid., p. 72). Scholars determine journal reputation, in turn, by evaluating the renown or reputation of authors that have already published in the journal. In a somewhat circular fashion, scholars’ reputations are determined, at least in part, by the journals in which they publish.

Okerson (2003) questions whether non-traditional academic publishers will be able to break the “near stranglehold on the awarding of prestige-for-publication” now held by commercial publishers of core journals. This is echoed by Nentwich, who argues that whether Open Access, as a parallel infrastructure to traditional publishing, has the power to attract enough senior scholars to “break even” and establish high levels of prestige and impact, remains to be seen (2001, p. 34).

Scholars will not embrace Open Access as a means through which to disseminate their work unless they receive tangible benefits for doing so, such as promotion and tenure. The current system of academic advancement, however, forces academics to strive to publish in core journals, many of which are currently owned by traditional commercial publishers. Unless the entire system for academic advancement is substantially modified at the institutional level, perhaps through formally upgrading the status of certain Open Access journals “*vis-à-vis* traditional journals when it comes to research assessments”, it is doubtful that Open Access journals will be able to successfully compete with traditional journals for the highest quality publications (Ibid.).

Conclusion: Identifying and Bridging Gaps in the Discourse

Although there is a plethora of literature available on Open Access, significant gaps in the discourse remain. As noted by Nicholas et al., the debate over Open Access has been, for the most part, driven by rhetoric as opposed to empirical data (2005, p. 498). As well, little discussion has been raised about the possibility of using an Open Access model to publish works in the humanities and social sciences (see Suber, 2004 and Hutcheon, 2006). Somewhat surprisingly, despite an immense dialogue in the literature of the benefits of free access to scholars, particularly those from developing

countries, there is an absence of discussion of the advantages of Open Access for the next generation of scholars, today's undergraduate and graduate students. For the purpose of this thesis, however, it is more significant that the discourse on the Open Access movement in Canada is virtually nonexistent. Canadian involvement in Open Access has increased dramatically over the past several years, and includes undertakings such as the *CARL Institutional Repository Project*, launched in 2002, and the Canadian Institutes of Health Research's new strategy of pursuing Open Access policies (The Canadian Context; CIHR Policy, 2007). While the secondary literature provides a relatively cohesive picture of the history of academic publishing and discusses the merits, disadvantages and feasibility of both Open Access and non-Open Access publications, it does not fully explore the extent to which Open Access has revolutionized scholarly communication, either in Canada or in other parts of the world.

The following chapter uses critical discourse analysis to examine the production and reproduction of international discourses on Open Access, focusing on a series of discussions on the Open Access movement commissioned in 2004 by *Nature Publishing Group*. The discussion centres on European and American interests; however, a deconstructive reading of the discourses will help lead to an understanding of the core assumptions behind – and ideologies embedded within – the competing discourses on Open Access. This in turn will help to further understanding of the Canadian situation, which will be explored in Chapter 4.

¹ Fees per article page are more common in the scientific, technological and medical fields. It is extremely rare for these fees to be charged in the social sciences and humanities.

The *Nature* Debates

Introduction

Debates on the Open Access phenomenon remain, by and large, polarized. Proponents typically assert that Open Access is destined to become the ‘saving grace’ of scholarly communication: that it will be the key means by which the ‘serials crisis’ will be resolved and also through which authors will be able to reclaim ownership of their research. Its detractors, meanwhile, contend that Open Access is an unrealistic and undesirable goal for academic publishing, and that it has the potential to gravely harm not only traditional and commercial publishers, but also the scholarly communication cycle itself. As evidenced in the literature review, it has been uncommon for anyone involved in this debate to meaningfully interact with the other side of the debate’s beliefs, arguments and critiques. This lack of meaningful dialogue has resulted in a surprising dearth of analysis of the theoretical underpinnings of points of view in the debate. Little, if any, work has been done on uncovering the discursive strategies in play in the debate on Open Access. Uncovering these strategies, which include tactics such as attempting to persuade or dissuade others, deflecting blame, and self-positive representation, is important because it allows for us to isolate the ideologies present in the discourse, and also allows us to explore questions of power and how discourses are related to practices.

As noted in the literature review, little research has been conducted, at either a practical or theoretical level, on Open Access as it currently operates within Canada. While the following analysis is American and Euro-centric, given the interconnectivity of scholarship and scholarly communication, it is likely that the ‘lessons learned’ from this

analysis of an international discussion on Open Access can also be applied to – and help further our understanding of – the Canadian situation.

Points of Departure

Data

This chapter offers a critical discourse analysis of the language utilized in the competing discourses surrounding Open Access journals and practices. It will focus on the series of discussions commissioned in 2004 by *Nature Publishing Group* for its web focus entitled ‘Access to the Literature’, which examined the Open Access movement from the perspective of scientists, librarians, publishers and other major stakeholders. While an analysis of discourse cannot lead to a resolution of the conflicts that have arisen around the Open Access movement, such an analysis can lead to a more comprehensive and thorough understanding of the core assumptions behind the competing discourses.

Analytic Framework

This chapter will take a Critical Discourse Analysis (CDA) perspective to analyze textual data from the ‘Access to the Literature’ web focus in order to undertake a detailed investigation of the way structures and strategies employed in discourse perpetuate – yet also challenge – the reproduction of dominance by traditional academic publishers. This study adheres to the analytic paradigm of CDA employed by van Dijk (1993) and Fairclough (1989, 1995). The word ‘critical’ signals a departure from the purely descriptive goals of traditional discourse analysis. CDA involves a study of the relationship between discourse and power. Critical discourse analysts seek to understand the role of communicative events – and the properties of text, talk and verbal interaction – play in reproducing modes of dominance or social inequality (van Dijk, 1993, p. 250).

Essentially, CDA treats discourse as a 'social practice' that is historically, socially and politically situated (Fairclough, 1993, p. 134). As discourse is seen as both produced and shaped by ideology, emphasis for analysis is placed on social structures, power distribution and the key linguistic characteristics expressed in social relationships. This notion is elaborated on by van Dijk in his assertion that CDA reveals power asymmetry in discourse through its examination of the ways in which those with power are able to influence values and shape ideologies through the standards they set for what is and is not acceptable. At the same time, however, van Dijk cautions that dominance is not necessarily unilaterally imposed on those with less power. Rather, the imposition of power and its abuse may, in some cases, seem to be jointly-produced, so that there are no clear 'victims' or 'villains' (van Dijk, 1993, p. 255).

This analysis is undertaken in two stages. First, a broad thematic analysis of the discourse on Open Access is outlined, with a particular focus on the discursive strategies employed that have the potential to harbour ideological meaning. Following this, a deconstructive reading and structural analysis of four texts selected for contrastive purposes is undertaken. In doing so, I hope to further unravel the sort of ideological structures that are embedded within the layers of discourse.

Thematic Analysis

Contributors to the literature can largely be characterized as expressing three viewpoints: there are those who blatantly advocate for Open Access and the proliferation of Open Access journals, those who view Open Access as an experimental or ephemeral phenomena that will almost definitively cause more harm than good, and finally, there are those who occupy a murky middle ground – while in theory they support Open Access

principles, such as increased access to scientific research, they remain concerned over questions of its economic feasibility and its potential impact on revenue streams of learned societies. Within these viewpoints, it is possible to see the emergence of three major themes, which I would like to identify as uncertainty, power and influence, and evasion. Each of these themes has its own communicative objectives and employs different rhetorical strategies to achieve them.

Uncertainty

The most dominant theme is that of uncertainty, which is used throughout the literature to emphasize that recent changes to the scholarly publishing market are underscored by an element of indeterminacy or ambiguity, especially as these recent changes pertain to the future of academic publishing. Hunter, representing Elsevier, frames her discussion of uncertainty by implying that current situation is absurd and deserving ridicule:

Last month, Paul Saffo research director of the Institute of the Future in Menlo Park, California, told the board of the Copyright Clearance Center, at a meeting in Naples, Florida, that we were living in a period of ‘unprecedented uncertainty’. I cannot imagine a more apt description... It is not enough that we expect the measurable benefits in productivity for users (access, usage, functionality and lower unit costs) to continue. It has to also be free to users and be paid for in some other way. ‘Unprecedented uncertainty’, indeed (Hunter, 19.03.04).

In this instance, Hunter utilizes narration and exemplification to lend credence to her argument. Additionally, use of the expletive ‘indeed’ lends emphasis to the words that are immediately proximate to it, and as such, the words ‘unprecedented uncertainty’ are stressed (An in-depth analysis of the rhetorical strategies employed by Hunter is conducted further on in this chapter).

Many of the participants express hesitancy or uncertainty over a perceived lack of empirical evidence of the sustainability and economic feasibility of Open Access as a publishing model:

It seems fair to claim that it is unclear whether the system as a whole can adapt to support the quantity and quality of Open-Access publications envisioned by Open-Access advocates. And I am among them (Hawley, 15.04.04).

There remains a dearth of factual information, however, to support the arguments about the potential advantages and disadvantages of Open Access publishing (Richardson and Saxby, 08.04.04).

Even with happy, willing customers, the Open Access scientific publishing model is still unproven (Meyer, 22.04.04).

These statements demonstrate that for some participants in this debate, particularly those who occupy the 'murky middle ground', Open Access is still viewed as a fairly ambiguous phenomenon. That advocates themselves do not necessarily agree on the basic tenets of Open Access further compounds issues of uncertainty and doubt, even for supporters:

... I support Open Access as defined by Jan Velterop. But when I read the contributions of my supposed Open Access allies in this Nature Focus, and in other forums, I feel my enthusiasm waning. It seems that supporters of Open Access are unable to agree on almost anything. The broadest consensus they seem to have achieved is one of doubt (Waaijers, 23.04.04).

At the same time, however, we also see the ambiguous nature of the current situation being utilized by some participants in an attempt to minimize negative reactions and attitudes as a result of the ideological differences between those for or against Open Access. For example, Okerson, a librarian, emphasizes the experimental nature of Open Access as an attempt to keep contradictions and ideological contrasts to a minimum:

How can we live through these fraught times collegially and successfully? First, we need to remember that experiments are experiments... (Okerson, 01.04.04).

By emphasizing the ambiguous, or experimental, nature of recent changes, Okerson seeks to rein in the blind enthusiasm of some Open Access supporters, while at the same time

reassuring detractors that their concerns about the uncertain future of scholarly publishing have been acknowledged.

In the above examples, uncertainty is largely tied into the notion of expectations. Simply put, expectations are our conceptualizations of the future. The current state of flux in academic publishing, due to a combination of factors including the serials crisis, the emergence of new business models such as Open Access and also the changing needs and demands of scholars, has led to a situation where conceptualizations of the future are evolving at a breakneck speed. This destabilization of expectations has produced the feelings of uncertainty that are evident within the corpus of literature as a whole.

This analysis of uncertainty can also be anchored in the broader area of media studies, and more specifically, in the critical political economy of media. Mansell and Silverstone, for example, argue that advances in communication and information technologies have been, and still are, “associated with radical, and even revolutionary, socio-economic change” (1996, p. 2). The results of this change, they assert, will likely be both unpredictable and paradoxical. Furthermore, in their discussion of the politics of information and communication technology, they underscore that this politics is marked by great inequalities, and also by “great uncertainties and discontinuities: uncertainties and discontinuities generated as a result of the shifting tectonic plates of a global information and communication economy, as well as the opacity, fragility, and unpredictability of consumer behaviour” (Ibid., p. 213). This emphasis on uncertainty is echoed by Jenkins in his examination of convergence between old and new media: “...we are in an age of media transition, one marked by tactical decisions and unintended consequences, mixed signals and competing interests, and most of all, unclear directions

and unpredictable outcomes” (2006, p. 11). The literature illustrates the unstable, or at least uncertain, nature of informational and technological change, which is reflected in a lack of clearly articulated expectations for the future and in ever-changing conceptualizations of the techno-economic paradigm.

Influence and Power

The second theme evident in the literature is that of influence and power.

Influence refers to processes of producing an effect on a person through the mobilization of power resources, and power itself can be viewed as control over an entity and its actions. van Dijk identifies such influence and power as dominance, which he describes as:

. . .the exercise of social power by elites, institutions or groups, that results in social inequality . . . This reproduction process may involve such different ‘modes’ of discourse – power relations as the more or less direct or overt support, enactment, representation, legitimation, denial, mitigation or concealment of dominance, among others. (1993, pp. 249-50).

Influence and power are utilized by contributors to justify their own ideology and actions, and to attempt to persuade others to act likewise. Strategies of justification utilized in the literature include positive self-presentation and rationalization. For example, Karen Hunter of Elsevier makes use of these strategies to argue that the publisher’s actions in recent years are a direct result of the demands of the scientific community:

A decade ago the challenge to Science Technology and Medicine (STM) journal publishers was clear: move your journals to Internet distribution and do it in a way that increases both access and functionality. And we have done that. In the case of Elsevier's ScienceDirect, there are now over 5.6 million articles, at least 10 million researchers regularly use the service and full text downloads are doubling annually, with an expectation of over 275 million downloads in 2004 (and another 100 million at sites that hold the files locally). It has cost more than £200 million to create and maintain the service, including £24 million to digitize the backfiles of all titles back to volume 1, number 1 (which for The Lancet was in 1823). But this investment was clearly what we needed to do to deliver that which the scientific community wants (19.03.04).

Here, not only is positive self-representation apparent, but we also see the implication that because Elsevier has delivered “that which the scientific community wants”, that they have already done ‘their part’ for increasing access to literature. As noted by van Dijk (Ibid., p. 254), CDA focuses on discursive strategies that legitimate control, and the strategies at play in this example certainly work to naturalize the established order, that is, that traditional publishing models are natural, correct and acceptable, and that traditional publishers are operating with the best interests of the scholarly community in mind.

As a strategy of justification, positive self-representation among society and learned publishers is particularly evident:

... more selective journals, such as the JCB [Journal of Cell Biology], are of necessity high-cost operations, producing a high quality product for which libraries should be-and are-willing to pay a subscription. (Mellman, 08.04.04)

The not-for-profit society model has particular strengths. It brings together a real community of shared, discipline-specific interests. I do not think that the academy can lay claim to any such coherency. Learned societies share common values with the research community. The latter, in fact, governs the society and defines its mission. Professional staff execute the policies fixed by the society’s scientists, providing goods and services in an economically-sustainable way (Rous, 13.09.04).

In the former example, terms such as “selective” and “high quality” are used to justify the resulting “high-cost operations”. As well, the modal verb ‘should’ is a useful indicator of the ideological expectations at play, namely, it is being used to emphasize the moral obligation this contributor believes that libraries have to pay for subscriptions. The latter example uses emotive vocabulary such as “community” and “values” to construct learned societies as good and virtuous, which in turn helps them to justify their actions.

Positive self-representation is, of course, also seen on the part of Open Access advocates:

The benefits of Open Access are just too obvious. Should you be sceptical, consider this: the contributions to this very forum are all openly accessible. The logic is incontrovertible: it assures that the maximum number of interested readers is being reached. Just what the doctor (and postdoc) ordered for research literature! (Velterop, 01.04.04)

Here we see Open Access presented not only as something that is good, but something that is indisputably so. A repertoire has been constructed by advocates of Open Access as logical with clearly palpable benefits. This repertoire in turn is utilized by advocates to justify their own beliefs and their attempts to persuade others to think and act likewise.

Conspicuously, examples of negative other-representation are far more prevalent in the literature than those of positive self-representation. As with this thesis' literature review, we see that a significant number of those involved in discussions on Open Access are more interested in attacking those they perceive to be on the 'other side' than in either engaging in meaningful dialogue or even in strengthening their own position and analysis of the issue at hand. Those with unfavourable views on Open Access, for example, construct it as suitable for low-prestige, little-read journals only:

We believe that Open Access can be relevant to the very large number of low-tier journals where there is little publisher-added value, apart from a cursory review. This, combined with the fact that such journals also typically reject few papers, means that their operating costs are typically low, while high acceptance rates allows for these costs to be covered adequately by page charges, or 'open access dissemination fees'. Converting the swathe of low-tier journals to an Open Access model would also free libraries from spending enormous sums to maintain subscriptions to the many low-tier, archival journals that add little extra value and are not widely read anyway (Mellman, 08.04.04).

Open Access advocates, meanwhile, are portrayed as both fanatical and even ridiculous in an attempt to impugn their credibility:

The proponents of OA are not just offering one more good idea; they are promoting the one true faith, and they demand that we all become converts... There are reasons to resist that demand, primarily because this is a religion with a narrow view of research and a short-sighted perspective on publishing. Why is their view of research narrow? OA advocates do not seem to understand how research is done ... in general (Ewing, 13.09.04).

The 'us' versus 'them' dichotomy that emerges is also used to criticize traditional publishing models as unsustainable:

The traditional model is the one that is unsustainable, precisely because its customers are no longer prepared to pay the asking price. In January of this year, the University of California Academic Senate called the traditional model 'incontrovertibly unsustainable' (Velterop, 01.04.04).

I believe that the business model of commercial publishing, which once served the academy's information needs, now threatens fundamentally to undermine and pervert the course of research and teaching. Put bluntly, the model is economically unsustainable for us. If business as usual continues, it will deny scholars both access to the information they need and the ability to distribute their work to the worldwide audience it deserves (Greenstein, 28.05.04).

Traditional publishers are also charged with treating scholars' research as a commodity to be sold at the highest price possible:

An ever-growing online treasury of scientific and medical knowledge is open only to the fortunate few who have access to a major university library, or who are able to pay the exorbitant access fees charged by publishers who claim the research reports they publish as their private property (Brown, 19.03.04).

The construction of this 'us' versus 'them' dichotomy in this debate has been used by each 'side' to justify and legitimate their beliefs and actions, and to marginalize those they define as Other. It is significant to note that participants are orienting themselves in this manner – the tone of the vast majority of literature produced for this discussion is argumentative and confrontational, as opposed to, for example, conciliatory or consensus building.

As noted by van Dijk, one of the ways in which the less powerful group can be discredited is by paying "extensive attention to their alleged threat to the interests and privileges of the dominant group" (1993, p. 264). This can be clearly seen within the corpus of literature. Both society and commercial publishers, historically the actors with economic power (as opposed to librarians and individual scholars), construct Open Access as a serious threat to traditional publishing, and potentially to society as well:

If, as seems likely, the author-end cost-recovery model were further to reduce surpluses — which are already modest compared with some commercial publishers' profits — these other services would inevitably suffer, and it is arguable that both science and society would be the poorer (Morris, 19.03.04).

Hunter's explanation for Elsevier's complete refusal to even 'experiment' with elements of Open Access is connected to her conceptualization of OA as financially unsustainable:

Some of our advisors tell us it is essential at least to experiment with Open Access and try the author-pays-to-publish model. The problem is that the current pioneers such as the Public Library of Science (PLOS) or BioMed Central are, for whatever reason, charging substantially below the actual cost of publication. They are subsidizing the process with grants or private capital. It is not possible for a publisher that is accountable to a society membership or shareholders to act in this financially untenable way. Therefore, if we are to experiment, we would have to charge the real cost of publication, effectively pricing ourselves out of the current Open Access market. And we would be endorsing a model that at the moment is unsustainable (Hunter, 19.03.04).

There is an implicit assumption in these examples that because Open Access does not necessarily ascribe to several of the basic tenets of capitalism, including beliefs in the inherent superiority of the free market, *laissez faire* governance and the maximization of profits, that it is inevitably an inferior system, and not only that, that its threats extend beyond publishers to the free market (and hence society) as a whole. This ideology is consistent with the aims of values of the dominant group, namely, to appease shareholders and control as much of the market as possible. The naturalization of free market capitalism in this context, however, should be questioned – after all, scholarly journals by and large operate in an inelastic market, which has already resulted in large-scale market distortion, as evidenced by the rapid escalation of journal prices and subscription costs.

Evasion

Finally, the theme of evasion emerges, in varying degrees, throughout the course of the literature. Evasion in discourse is not simply confined to the mere non-communication of content. *How* one communicates or refuses to communicate content can be just as significant as what one says or does not say (Holly, 1989, p. 122). Evasion can be viewed as a discursive tool that allows individuals to make statements supporting

their ideology, without necessarily supplying the necessary information to support these claims. Within the context of this literature, evasion has been used to deflect moral blame, to skirt financial questions and to lessen the element of urgency in resolving the 'serials crisis'. In the following example, Hunter describes the serials crisis as being the result of an increase in research output, as well as due to the fairly stagnant level of library funding:

But the concern goes much deeper than a simple financial or competitive decision or a question about whether there is adequate access. There is another conundrum. Library associations such as SPARC and some individual librarians advocate the pursuit of the Open Access model as a way of solving the 'serials crisis'. This crisis is the result of the now decades-long and well-documented imbalance between the growth in R & D expenditures (and in the journal literature, with the number of articles increasing at about 3% per year for nearly a century) and the increase in research library budgets (which much more closely follows GDP). An author-pays model effectively puts the crisis back onto the shoulders of the researchers, saying: 'You created the problem by researching and writing so much. Now you solve it by paying for publication.' Clever. (Hunter, 19.03.04).

Notably, Hunter does not mention what has been identified repeatedly as a key element of the serials crisis, namely, skyrocketing journal prices and subscription costs. In this instance, Hunter is prioritizing issues generally accepted as minor elements of the serials crisis, and is lessening the crisis-element of her own company's actions.

Hunter further evades the issue of escalating journal prices in her discussion of editorial independence:

But, as with other traditional publishers, we have a real concern about how editorial independence will be maintained in this model, particularly where the price charged to authors is insufficient to cover the cost of publication. A journal that is losing money or lives on the margins of losing money will have little editorial independence. There will be pressure to mould content and opinion to secure greater revenue and to increase acceptance to improve cash flow. Any substantial change to the publishing model that might erode editorial freedom would damage the hugely valuable oversight and evaluative functions that journals have contributed to science and society. (Hunter, 19.03.04).

Given the lack of any empirical evidence to suggest that publishers and editors of Open Access journals are willing to compromise the editorial integrity of their journals, this mention of editorial independence acts as a red herring. A true item of significance,

namely the issue that scholarly articles and journals have become commodities in an inelastic market and hence commercial publishers may charge whatever they please, has been conveniently sidestepped in favour of a tangential topic with little evidence produced to support her claims.

Evasion and diversion have also been used by Open Access advocates. Within the corpus of literature, not one advocate clearly delineated just how, exactly, this type of business model could work on a larger, commercial scale. While more than willing to acknowledge traditional publishers' skepticism, little has been written to actively combat this uncertainty:

The fact that the article processing charges currently levied by Open Access publishers may seem too low for traditional publishers to be sustainable is one of the causes of their scepticism. Improved efficiencies can lower the production costs of every article published, however, although it is true that the current Open Access article charges may not sustain the level of profitability to which traditional publishers have grown accustomed (Velterop, 01.04.04).

While Velterop argues the "improved efficiencies" can lower costs, he offers no explanation of how this will actually occur. Evasion in this instance is used to ignore the question of financing pretty much altogether, most likely as it accentuates negative factors such as a lack of evidence, inconsistencies and issues related to credibility.

A Comparative Analysis of Four Sample Texts

The above thematic analysis is a general delineation of the discourse being investigated, and aimed to provide an overview of the types of discursive strategies employed by contributors, whether consciously or subconsciously, to perpetuate a particular set of beliefs or values. What follows is a more structural analysis and deconstructive reading in order to further assess the ideological structures and repertoires embedded within the discourses on Open Access. The analysis begins with an

identification of the participants, and then examines properties of the text themselves, including topics, text schemata, style and rhetoric. Due to the limited scope of this chapter, four contrasting texts from the literature have been selected. The first text selected was written by Patrick Brown, a co-founder of the Public Library of Science (PLoS), a nonprofit Open Access publishing organization that has enjoyed a considerable amount of success since its inception in 2003. The second text, “Not so quiet on the Western front”, was written by Daniel Greenstein in his dual roles as Associate Vice Provost, Scholarly Information, of the University of California, and as University Librarian, Systemwide Library Planning and California Digital Library. The third text, “The orthodoxy of Open Access”, was written by John Ewing, the Executive Director and Publisher of the American Mathematical Society, a nonprofit learned society based in the United States. The final text selected was written by Karen Hunter, the Senior Vice President, Strategy, of the commercial publisher Elsevier.

The topic of debate in all four articles is access to the literature. Propositionally, however, the topic may be defined in various ways, for example, “Open Access publishing allows us to broaden access to the public good that is scientific research” or “Open Access represents a new way of considering how access to scholarly resources may be accessed”. Conversely, the topic may be defined as “Open Access is a dangerous experiment that has the potential to seriously harm scholarly communication” or “Open Access is a threat to publishers that conduct business within the free market”. The former topics are being construed by Brown and Greenstein, the latter by Ewing and Hunter.

Argumentation, a major form of text schema, plays a prominent role in all texts. For Brown, the issue is, in part, one of morality. Current restrictions on access are seen as

a “perverse and unnecessary obstacle” that “needlessly limits access to an essential public good” (Brown, 19.03.04). Interestingly, Brown does not develop an extensive repertoire for Open Access, apart from a brief assertion that “[a]n ‘open access’ system for scientific publishing will not entail new expenses” and that “[a]n impressive and rapidly growing list of scientific organizations now advocate open-access publication” (Ibid.). Instead, Brown devotes a significant amount of space in the article to criticizing the traditional model for scientific publishing. Publishers charge “exorbitant access fees” and claim “the research reports they publish as their private property”, ideas that are in direct opposition to Brown’s conceptualization of scientific research as fundamentally a public good (Ibid.). Furthermore, Brown argues that the traditional business model

is a vestige of an era when printing articles in paper journals and transporting them in trucks and boats was the most efficient way to disseminate new scientific discoveries and ideas (Brown, 19.03.04).

Thus, Brown has constructed traditional publishers and publishing models as both old-fashioned and, in a sense, immoral (due to their refusal to provide the widest level of access possible to that public good, scientific research), in contrast to his construction of Open Access and its supporters as modern, enlightened, and on the side of good.

Greenstein also devotes a significant amount of space in his article to examining and criticizing the business model of commercial publishing. While at one point this model met the needs of academic institutions, he argues it now “threatens to fundamentally pervert the course of research and teaching” (Greenstein, 28.05.04). Scholarly associations and learned societies are also “not so innocent”, as while many of their journal subscription fees are currently lower than those that are for-profit, their subscription prices are rapidly approaching those of commercial publishers. In contrast to Brown, Greenstein is not actively advocating for Open Access, although he claims to

remain “open minded” on the subject. Ultimately for Greenstein, the debate is comprised of two fundamental points: first, that there is a lack of real solutions proposed by traditional publishers, and secondly, that proponents of increased access are getting caught up in debates over whether Open Access itself is the means by which the ‘serials crisis’ will be resolved. Greenstein is speaking about what he perceives to be a much larger crisis in academic governance. Those recognized as leaders in academia are not actually leading, and thus the current economic crisis continues to grow.

For Ewing, this topic has sociopolitical implications, and he makes these implications explicit: the debate is not merely about Open Access and its economic feasibility, or even about the protection of the “edifice” of “scholarship that extends both in space and time” but rather about the perceived failure on the part of Open Access advocates to consider the long-term consequences of the business model they promote (Ewing, 13.09.04). Thus Ewing is able to position his critique of Open Access and his attack on Open Access advocates as being the lone sane voice in a world gone mad:

... we are told... there is a simple solution that will provide OA to all, pay for the costs of producing journals, sustain the system in the future, and solve all the problems of scholarly publishing ... if only we switch to the author-pays model... But simplistic solutions to complicated problems are seldom right. I'm not Dopey ... and I don't believe it (Ibid.).

As such, Ewing presents his own position as moderate, logical and reasonable, whereas his perceived opponents are characterized as pronouncing edicts, and hence as intolerant and unreasonable.

Ewing's central argument is that Open Access advocates, blinded by an almost religious fervor, universally fail to consider the long term consequences on scholarly communication of the publishing model they promote. Ewing's position, however, is somewhat problematic in that several steps are needed to make sense of his arguments,

and also that this re-enactment is largely based on Ewing's own subjective arguments and attitudes. For example, the contention that reviewing standards will be lowered in Open Access journals is unsubstantiated, as is his assertion that "OA is based on the arrogant assumption that most research is done in wealthy countries" (Ibid.). Ultimately, the validity of Ewing's argument itself hinges upon his conceptualization of the situation, which is biased and also somewhat unfounded: after all, not all Open Access advocates are insistent that all fields of scholarship immediately convert to Open Access, there is little evidence to indicate that Open Access advocates are demanding that journals change their business models on "blind faith" alone, and also, no proof exists to support the assertion that that Open Access journals would accept unsuitable articles for publication to increase revenue streams. From a critical discourse analysis perspective, it is important to note that that a powerful and influential figure in academia, such as the publisher of a widely-respected society journal, may influence others into believing that all facets of his argument is valid. Unless the audience is aware that his perceived opponents' position has at least partially been misrepresented, they may associate Open Access advocates with hysterical and short-sighted ideologies. As such, Ewing has been able to discredit and dismiss his opponents without any sort of quantitative proof, while at the same time supporting and legitimating the status quo.

While Hunter initially frames her critique of Open Access as being concerned with threats to editorial independence in the 'author pays' model, it soon becomes apparent that her argument actually centres around the notion that Open Access negatively affects the free market. Hunter argues that if government bodies and funding agencies demand that all the research they fund be made freely available, "as a

community we run significant risk of unravelling a system that has developed over centuries” (Hunter, 19.03.04). Building on this assertion, Hunter claims that publishing is in danger of being “commoditized”, and that there is a considerable risk that valued-added features and extra functionality will all but disappear in the new, artificially constructed market. Hunter also criticizes two major Open Access publishers, BioMed Central and PLoS, arguing that the fees they charge are significantly below the actual costs of publication, and that it would be impossible for a publisher accountable to shareholders to “act in this financially untenable way” (Ibid.). Throughout the article, Hunter presents her position as being logical, cautious and in the best interests of the scientific community, whereas her opponents are portrayed as being unrealistic and irresponsible.

Style and rhetoric play a large role in shaping how each contributor constructs their argument and view of the debate. Style can be broadly defined as the way in which one chooses to express a message through use of a variety of rhetorical devices. Rhetoric is simply the use of language effectively and persuasively. While the following is not an exhaustive analysis of every stylistic and rhetorical device used by each participant, key elements of the discursive strategies used by the participants are illuminated in order to show how discourses on Open Access, as well as discourses on proponents and opponents of Open Access themselves, are constructed and reproduced.

Tone

The tonal qualities of the contributions differ noticeably from one another. Brown adopts a fairly colloquial tone, and attempts to persuade through presenting the issue of access to literature as one that is, in many respects, part of the ordinary and familiar of

people's everyday lives. This is in stark contrast to Greenstein, whose more formal approach is complemented by his use of graphs and tables. Greenstein's tone is also one of urgency; his use of charts and graphs illustrating skyrocketing journal prices is meant to convince the reader of the necessity of quick and decisive action to resolve this ever-escalating problem. Ewing's contribution is marked by its condescending tone, which emphasizes his belief in the superiority of his own position. Hunter, meanwhile, employs a mixture of sarcasm and self-righteousness to derogate her perceived opponents and to bolster her own positive self-representation. This examination of tone clearly illustrates each contributor's attitude to the issue at hand – Brown associates Open Access and increased access in general as that which is familiar and good, Greenstein portrays Open Access as the catalyst for necessary change in scholarly publishing as a whole, and both Ewing and Hunter construct Open Access as something that is dangerous, experimental, and, in many ways, beneath them or not worth their time.

Hyperbole and Over-Lexicalization

Both Brown and Ewing deliberately exaggerate conditions for emphasis and effect. Brown charges that scientists “give [their research reports] away to publishers, receiving in return only an audience for their work and the satisfaction of sharing their ideas and discoveries with the world” and also that there is “widespread support from scientists and the public” for Open Access publication (19.03.04). Both of these assertions, while commonly echoed by Open Access advocates, are not necessarily accurate – authors do receive tangible benefits (e.g. copy-editing, an addition to their C.V./ publication record) for submitting their articles to publishers, and the literature on Open Access as a whole does not yet indicate it has extensive support from all sectors of

the academic world. Nonetheless, by presenting these statements as fact rather than as hyperbole, Brown is reproducing a discourse which defines Open Access as moral and good.

Whereas Brown uses hyperbole to strengthen his own position, Ewing uses exaggerations to criticize those he perceives as opponents. For example, he describes proponents of Open Access as “promoting the one true faith [and demanding] that we all become converts” and describes himself as “against efforts to destroy our system of journals” (13.09.04). Through use of hyperbole, Ewing is clearly constructing Open Access and its advocates as illogical and destructive. Ewing also clearly constructs Open Access as an ‘experimental’ phenomenon; this can be seen through his over-lexicalization of the word ‘experiment’, which appears in his three page text ten times.

Analogies and Metaphors

Brown, Greenstein and Ewing employ a mix of analogies and metaphors in an attempt to improve the effectiveness and clarity of their arguments. As befitting the colloquial tone of Brown’s text, his analogies are similarly examples of the familiar and everyday – for example, his comparison of publishers to midwives suggests that publishers should not control research and its dissemination, but rather that they should act solely in an intermediary capacity. Greenstein’s use of a metaphor in the title of his text, “Not so quiet on the Western front”, invokes notions of both a battle – and indeed, a war – of great magnitude, and also the conceptualization of traditional publishers as enemies of librarians and others in favour of changing the current publishing system in place. Ewing, meanwhile, uses religious metaphors to assert that proponents of Open Access are not just acting like fundamentalists, but that in fact they are extremists

promoting their one true cause. As evidenced in these examples, metaphors and analogies are powerful rhetorical tools – they are often quite persuasive even when they lack substance or justification. Simply making the comparison, such as the comparison of Open Access advocates to religious fundamentalists, or publishers to enemies encroaching on the Western front, can create inferences that are otherwise unfounded.

Rhetorical Questions

Rhetorical questions are featured prominently in the arguments made by Greenstein and Hunter. Greenstein uses this rhetorical device for the purpose of provocation. For example, in his discussion of society and learned publishers, Greenstein uses a series of rhetorical questions to criticize a perceived lack of leadership on the part of these members of the academy:

But when, by whom and according to what logic, have some societies decided that academic libraries should bear such a large burden of those costs? Why do not more academic societies – which after all, are creatures of the academy, governed by its members - show more of the innovation and leadership that the academy sorely needs to place scholarly publishing on a viable footing? (28.05.04)

Through this critique, Greenstein is encouraging readers of his text to reflect on what the implied answers to the questions he is asking must be. The same can be construed through Hunter's use of this rhetorical device. Hunter sets up her rhetorical question by expressing concern that there are those who lack funds to pay for publication, and also that there are those with an abundance of funding who would be able to publish early and frequently. "Is this good for science?", Hunter questions, and due to the way in which she has framed the question, the apparent answer is 'no.' Hunter is attempting to draw a conclusionary statement from the facts at hand; however, the veracity of these 'facts' may be called into question – as noted in this thesis' literature review, there is no empirical

evidence that Open Access publications either prevent poorly funded researchers from publishing or publish an overabundance of well-funded authors' articles.

Contrastive Comparisons

Contrastive comparisons are particularly evident in the texts by Brown, Ewing and Hunter. Each of the authors emphasizes that there is a very clear distinction between 'us' and 'them'. As an advocate of Open Access, Brown underlines that this type of publishing is new, modern and working for the public good, whereas proponents of traditional or commercial publishing are constructed as old-fashioned and as an obstacle to increased access and the public good. Ewing, in turn, constructs 'us' to be logical, rational, cautious, and reasonable – versus 'them', as shortsighted, irresponsible and even "Dopey". Finally, Hunter frames her comparison in terms of what is tried, tested and true versus what is experimental and unsustainable. This rhetorical device in particular emphasizes what has already been expressed and formulated at a semantic and stylistic level, namely the discursive strategy of positive self-representation and other negative-representation in order to legitimate and justify one's own beliefs and actions.

Discussion

This chapter has examined diverging representations of Open Access through both a general thematic analysis of the discourses in the 'Access to the Literature' web focus and through an examination and deconstructive reading of two contrasting articles within the literature.

The question that arises at this point is why has this dichotomization of the discourses emerged, apart from obvious reasons such as traditional publishers being concerned about their revenue streams or librarians seeking to find solutions to the issues

that have arisen due to the serials crisis? To answer this question, a more thorough examination of the socio-political and economic forces that shape scholarly communication is needed.

This question can be considered through an understanding of the workings of a critical political economy of communication. The critical political economy of communication expands on traditional definitions of political economy as the study of how political factors influence the functioning of economic systems, and concerns itself with symbolic and economic aspects of public communications, as well as the interplay between these two dimensions. The use of critical political economy raises significant issues and opens avenues of inquiry in the analysis of how the structures and strategies employed in discourse either perpetuate or challenge the ideologies of those who have traditionally held power within academic publishing.

Of primary importance are the issues of who controls knowledge and how knowledge is disseminated. Within the traditional system of journal publishing, control of both knowledge and its dissemination is largely in the hands of commercial and society publishers. In order to publish in the vast majority of journals, authors must relinquish copyright. Publishers are able to control access through the use of fees and licensing agreements. Open Access, which not only allows but *encourages* authors to retain copyright to their work, represents a major challenge to traditional notions of publishing. As such, publishers are attempting to legitimate their control of academic publishing market through expressions such as 'Open Access is experimental', which implies that it is likely unreliable, or ephemeral. The construction of Open Access as 'experimental' or 'dangerous' to scholarly communication by traditional publishers is eminently

understandable, as Open Access has the potential to shift control from publishers to researchers or librarians. At the same time, proponents of Open Access are producing and reproducing discourses that stress the notion of scholars rightfully reclaiming ownership of their research – a highly ideological construction designed to convince scholars that publishing in Open Access journals is of direct benefit to them, as they are regaining something (in this case, copyright) which never should have been taken from them in the first place.

Economic factors play a significant role in the construction and perpetuation of discourses on Open Access. Commercial and society publishers have largely been operating in an inelastic market with a captive audience, and have thus been able to increase prices by huge margins year after year. Many commercial publishers, including Elsevier, are publicly traded, and their need to appease shareholders appears to override any financial responsibility to the academic and library community. Within discourses on Open Access constructed by traditional publishers, and in particular by Karen Hunter of Elsevier, we see attempts to naturalize capitalism and the free market within this decidedly non-free, inelastic market. The dominant position held by traditional publishers, however, must also be continually justified and legitimated: as opposed to merely making arguments about the free market, after all, a significant portion of Hunter's text is spent detailing recent efforts by Elsevier to benefit scholars through the digitization of older materials. Hunter appears to be arguing that it is, at least in part, because of these (very recent) efforts that Elsevier's pricing scheme is legitimate. At the same time, any discourse on what it *actually* costs to publish articles (in terms of copy-editing, distribution, and so forth) is noticeably absent from her argument. Her attempts

to legitimate the status quo, even in the face of unsustainable prices, have as much to do with what she is saying as what she refuses to discuss. Simultaneously, economic factors are also been used to challenge dominant ideologies commonly found within academic publishing. The same emphasis on shareholders and the free market used by Hunter to justify Elsevier's policies has also been used by Greenstein to assert that traditional models of commercial publishing now threaten to undermine and damage scholarly communication.

Finally, the issue of 'prestige' within the academic community must be addressed. Prestige, simply put, is the currency of academia. Scholars seek to publish in prestigious journals (in many cases as defined by citation levels), and in return are rewarded by their institutions with promotions (e.g. tenure), which in turn increases scholars' individual levels of prestige within the academic community. Prestige plays a large, though subtle, role in the construction of discourses on Open Access. As was seen in the thematic analysis, traditional publishers, and in particular society publishers, are attempting to construct Open Access as a venue perhaps suitable for lower impact, low prestige journals, but certainly not for the types of articles published in *their* journals. In these instances, Open Access is constructed not as a threat, but rather as an absolute non-issue. In portraying Open Access in this manner, however, it becomes apparent that these society publishers do in fact view Open Access as a threat. Rather than as a threat to profits and livelihood, as is the case with commercial publishers, Open Access represents a threat to the prestige system in academia. Threats to this system, a system which the vast majority of scholars (which include the majority of society publishers) are currently operating within, have the potential to undermine much of what many scholars have spent

their entire careers working towards, namely, prestige and the benefits associated with it. Many scholars well established within the current system not only have little desire to act outside its bounds, but would also like to see its preservation. This may help to explain why younger scholars are more likely to view and portray Open Access positively – they occupy a lower position on the totem pole, so to speak, and have not spent as much time operating within the prestige system as older scholars. Thus, discourses on Open Access as a nonentity have as much to do with legitimating the status quo as they do with actual concerns as to the role it should play within scholarly communication.

Conclusion

This chapter examined the discursive structures and strategies in play on debates on Open Access. Using a critical discourse analysis perspective, this chapter sought to unpack the ideologies within discourses both on Open Access and on scholarly communication itself in the 2004 *Nature* web focus ‘Access to the Literature’. Thematically, three major themes – uncertainty, power and influence, and evasion, were apparent, each with its own communicative objectives. The comparative analysis of the four texts allowed me to conduct a more structural analysis and deconstructive reading by investigating the properties of the discourse itself, which included such elements as rhetoric, tone and text schema. Finally, the dichotomization of discourses that emerged in the preceding analyses was examined using critical political economy, which ultimately demonstrated that discourses are constructed in order to either perpetuate or challenge the dominant world view on academic publishing and more generally on scholarly communication as a whole.

The following chapter situates Open Access – both discourse and practice – within Canada. Discourses produced and reproduced on Open Access will be assessed in relation to those that have been constructed internationally, and themes of power, commodification and access will be explored in relation to Canadian institutions and the academic publishing market.

The Canadian Context

Introduction

While Canadians and Canadian institutions have been involved in Open Access since its inception, there is little discourse in the published, peer reviewed literature to indicate this involvement. Furthermore, little effort has been made to situate Open Access within its Canadian context – that is, to explore the social, historical, political and economic factors that contribute to how Open Access practices and discourses function in Canada. Within the corpus of literature on Open Access, much has been made of its potential to ‘revolutionize’ academic publishing and research institutions on an international level. This chapter uses an integrated critical political economy and critical discourse analysis approach to examine Open Access discourses and practices, with the goal of assessing the extent to which the move towards Open Access may be considered a radical, or revolutionary, development in scholarly communication in Canada. Critical discourse analysis is used to examine specific properties of talk and text in order to uncover discursive strategies and ideologies at play. Critical political economy builds on this analysis by addressing some of the broader issues at stake, including those related to the state’s commitment to capitalism and the treatment of information as a commodity.

The methodology utilized for this chapter entailed a systematic monitoring of both formal and informal written discourses on Open Access produced and reproduced by Canadian actors, focusing particularly on research libraries and library organizations, and also government bodies, specifically those involved with research funding and dissemination. Formal written discourses examined include published literature, reports and press releases, whereas the informal written discourses examined for this chapter

were largely comprised of blog postings and wiki entries. While the focus of analysis in this chapter is on formal discourses, examination of informal discourses was a key component in helping to determine which elements are critical components of Canadian Open Access.

Though the history of Open Access is rich with empirical details, this chapter is not an attempt to provide an exhaustive account of these factors (an annotated timeline of Open Access in Canada is provided in Appendix 1); rather, it is a close examination of several of the key features and actors that define Open Access in Canada. Following this identification, several representative initiatives and policies currently in place are assessed in terms of their potential 'revolutionary' capacity. This more general overview is followed by a critical discourse analysis of a specific policy, with the goal of uncovering the discursive strategies and ideologies at play in discourses on Open Access in Canada.

A Note on the Concept of 'Revolution'

Though this thesis has previously defined revolution as a drastic and far-reaching change in ways of thinking and behaving (in Chapter 1), a more thorough exploration of the term is required before an assessment of whether Open Access in Canada is revolutionary may be undertaken.

Definitions and models of 'revolution' are most frequently found in studies of history and comparative politics. Tanter and Midlarsky (1967) provide an overview and typology of revolution, and discuss changes in economic development and levels of education with regard to their association with certain characteristics of revolution. Historically, revolutions have been typified by violence, mass participation, changes in the structure of political authority and intense social, political and economic change, and

they have typically been preceded by changes in levels of education, as well as a sharp reversal in economic increases immediately prior to the revolution (Ibid., p. 272).

Tocqueville has differentiated between three types of revolutions, including political revolutions, sudden, violent and transformative revolutions that seek to establish a new political system and social order, and finally, slow but sweeping transformations of societies, which occur over several generations (1955, p. 8). In addition, Tanter and Midlarsky note that the longer the duration of the revolution, “the greater the polarization of the society around the warring factions” (Tanter and Midlarsky, 1967, p. 275). Colburn contends that a revolution should be both process and outcome-based, and defines a revolution as the “sudden, violent, and drastic substitution of one group governing a territorial political entity for another group formerly excluded from the government, *and* an ensuing assault on state and society for the purpose of radically transforming society” (emphasis in original, 1994, p. 6). Snyder confirms this definition, and goes on to further state that revolutions attempt to decide power by force, that they need a target, that agents and ideas matter and that new political and social order established by revolutionaries typically emphasize ideology (1999, pp. 14-20).

Usage of the term ‘revolution’, particularly as it may apply in the networked information economy, has been somewhat ambiguous – even texts which claim to assess the revolutionary nature of the ‘digital revolution’ often fail to fully define what they mean by the term (see, for example, Zysman and Newman, 2006). This being said, in this thesis I draw on a select number of the underlying dimensions of revolutions as discussed in the broader literature in an attempt to establish the criteria through which Open Access as a potential ‘revolutionary’ means may be assessed.

In order for Open Access to be considered revolutionary, its implementation and usage must result in a drastic and far-reaching change in ways of thinking and behaving. In addition, a radical change in power or organizational structures must occur within a relatively short period of time of its introduction and implementation. An Open Access-specific ideology must be present, and the actions of agents and organizations must have an effect on any overarching social, economic or political transfigurations. Finally, the move toward Open Access must result in a shifting balance of power between the various actors. Following a brief identification of key drivers, stakeholders and features of Canadian Open Access, these criteria will be utilized to appraise several recent initiatives undertaken by research libraries and the state, arguably two of the most significant stakeholders in Open Access in Canada.

Identifying Key Drivers, Stakeholders and Features of Canadian Open Access

Drivers

The evolution of the scholarly communication system in Canada – and in turn, the use and growth of Open Access within this system – is shaped by a number of external and internal forces, including those that are economic, political and technological. Economic drivers include fluctuations in the Canadian currency rate as well as increased journal subscription and licencing costs and a trend in decreasing library budgets. As noted by Shearer and Birdsall, Canada is “a ‘net importer’ of information, and thus has a considerably greater need for the research results of other countries with larger populations and economic resources” (2002, p. 5). These factors perhaps help to explain the fairly rapid growth of Open Access in Canada – as of July 2009, the Directory of Open Access Journals lists 133 Open Access journals based in Canada. Open Access

journals situated in Canada have the potential to eliminate concerns about both access and varying monetary rates, though many of these journals have yet to develop citation rankings, let alone the prestige of being a top-ranked journal in the STM fields.

Scholarly communication is clearly impacted by public policy and legislation, especially as these pertain to research creation and dissemination, as well as to private property and ownership rights, with copyright in particular playing a central role. In the traditional academic publishing system, authors are typically required to relinquish their copyright in return for publication. Open Access publishing is a direct challenge to this business model, as it is characteristic for these journals to permit authors to retain their rights, including the right to also deposit their works in online or institutional repositories. An additional challenge to the traditional system comes in the form of the SPARC Canadian Author Addendum, an add-on authors can present to publishers that allows them to retain select rights, such as “the rights to reproduce, reuse, and publicly present the articles they publish for non-commercial purposes” (Author Addendum, 2008). This Addendum is a key example of how research libraries are attempting to modify elements of the scholarly communication system while working within the bounds of current policy and legislation.

Technology also plays a large role in the shaping of the scholarly communication system in Canada. Advances in information and communication technology, including the proliferation of the Internet and increasingly sophisticated means of storing, preserving and publishing information, affect how knowledge is created, communicated and disseminated. Publications created in a digital format have the potential to include moving images, sound or links to other electronic documents and data. Media such as

email, mailing lists and online forums allow for the instant communication of ideas and data. Digital media have also affected the publication process itself, as it now possible for individual articles to be posted electronically as they become available, as opposed to waiting for the entirety of a journal to be finalized before distribution, though this is still common procedure. While the effects of technological innovation are plain to see, the implications for what these changes mean for scholarly communication are not always so clear. Despite the fact that electronic media are facilitating the growth of Open Access publishing and new economic models that address the rapidly escalating costs of scholarly literature, there is little decisive agreement about the direction of scholarly communication and publication in Canada (Shearer and Birdsall, 2002, p. 7).

Stakeholders

Key stakeholders in Open Access in Canada may be identified as follows:

- **Libraries and Library Associations:** without question, libraries and library associations have assumed a dominant role in promoting and advocating for Open Access in Canada. The British Columbia Library Association (BCLA) has been recognized internationally as an early leader in the Open Access movement, having in 2004 adopted a “Resolution on Open Access” (Morrison and Waller, 2008, p. 487). In May 2008, the Canadian Library Association (CLA) approved the “Position Statement on Open Access for Canadian Libraries”, recommending that all Canadian libraries support Open Access. Perhaps most significant, however, have been the actions of the Canadian Association of Research Libraries (CARL), which is comprised of 28 major academic research libraries across Canada plus

Library and Archives Canada, the Canada Institute for Scientific and Technical Information (CISTI) and the Library of Parliament. CARL has been involved in a number of initiatives that support both green and gold Open Access, including its institutional repository program and educational resource *CreateChangeCanada*, as well as through its persistent, public support of state Open Access policies.

- The Canadian Government: the state, and in particular its agencies devoted to research creation, funding and dissemination, has a vested interest in developing policies that promote the public interest; however, as we shall see later in this chapter, the state also operates within a capitalist framework that promotes free markets, industry and intellectual property rights.
- Publishers: publishers using any type of business have a stake in debates over Open Access. Currently, many publishers (both internationally and particularly so in Canada) allow author-initiated Open Access archiving (see SHERPA, 2008).
- Academic Faculty and Other Researchers: while Canada has a number of prominent researchers advocating for Open Access (including but certainly not limited to Stevan Harnad, Jean-Claude Guédon, John Willinsky and Leslie Chan), a significant number of Canadian academics are either unaware – or have only a very small knowledge – of Open Access and related issues (SSHRC and Open Access, 2007). This has serious implications for the future of Open Access in Canada, as the movement

requires mass mobilization on the part of researchers if it is to succeed. Suber (2004) contends that authors who fail to exercise their right to self-archive (whether they are unaware of this right, or simply unwilling to take the time to do so) are a more pressing concern than publishers who do not allow self-archiving. In addition, it should be noted that while for libraries and library associations issues related to relieving financial pressures and facilitating and improving access are of paramount importance, academics are primarily concerned with access to – and the increased impact factor of – their articles.

Features of Canadian Open Access

In many ways, developments in Open Access in Canada parallel the international situation. Libraries, publishers and faculty share many of the same concerns, interests and attitudes as their international counterparts. Issues in scholarly communication, including the “serials crisis”, rapid technological change and increased knowledge output are international phenomena. Policies in development in Canada are similar to policies developed by a host of other countries, including the United States, though Canada is the first country to implement Open Access policies for a majority of its federally funded research. While Open Access practices in Canada correspond to international practices, there is a marked difference in discourses. While it may simply be because Canadian Open Access written discourses are still in their infancy stage, the levels of antagonism and vitriol seen in international discourses (see, for example, the *Nature* debates) are not apparent in the Canadian context. Currently, Canadian discourses are typified by their

hopeful tone and emphasis on the positive. Whether this trend will continue as the amount of scholarship on this issue increases remains to be seen.

Research Libraries and Open Access

Changes in the scholarly communication system have resulted in new challenges, opportunities and roles for research libraries. As explained by Shearer and Birdsall, these changes are the result of a number of external factors, ranging from technological, to economic and to political (2002, p. 4). While Open Access is only one response to the changing scholarly communication system, it is concerned with many of the issues libraries are facing, including technological change, content preservation and the availability of knowledge resources. This section examines two of the major Open Access initiatives enacted by Canadian research libraries. The first is a project that supports the implementation of institutional repositories in research libraries in Canada. Next, I examine the educational website *CreateChangeCanada*, and assess some of the discourses found within the website's text. The following analysis demonstrates that while Open Access initiatives represent a strong and significant response to the changes in the scholarly communication system, they correspond to long-held library interests and paths of action, and as such, cannot truly be considered 'revolutionary'.

The CARL Institutional Repositories Program

CARL began this program in 2003 to assist Canadian institutions with the creation and implementation of institutional repositories (IRs). Briefly, an IR

“is a digital collection of an organization's intellectual output. Institutional repositories centralize, preserve, and make accessible the knowledge generated by academic institutions. IRs also form part of a larger global system of repositories, which are indexed in a standardized way, and searchable using one interface,

providing the foundation for a [sic] new and innovative services” (About the CARL Institutional Repositories Program, 2005).

IRs are linked to the notion of a digital library, an idea that has promulgated since the 1996 AUCC-CARL Task Force on Academic Libraries and Scholarly Communication. The term ‘digital library’, which is both format and technology neutral, is generally taken to mean the collecting, classifying, preserving and facilitating access to digital content, comparable with the library’s function in the non-digital environment. Institutional repositories are an essential facet of green Open Access, and as such, their creation, implementation and use are critically important to the continuation and success of Open Access in Canada.

As of May 2009, twenty-three of the CARL Libraries had implemented IRs, with three others planning to initiate one within the next year. In addition to collecting journal articles, the content being collected for IRs includes theses and dissertations, conference proceedings, images, video, e-books and maps (Shearer, 2009). IRs typically collect content across disciplines, with the number of repositories highest in the areas of social science and the humanities, and lowest in engineering.

While the number of IRs has grown remarkably over the past several years, their implementation and usage have yet to result in a sweeping and far-reaching change in ways of thinking and behaving – a majority of researchers still do not deposit their research in repositories, despite educational efforts on the part of CARL and its member institutions. While repositories do give libraries and researchers more control of research and its dissemination, they must be utilized by a majority of academic staff if their potential to increase access and research diffusion is to be realized. While IRs facilitate access, they have yet to result in a shift in the balance of power between libraries,

academic faculty and publishers. As such, while IRs are rapidly proliferating and indeed are part of a larger transformation in scholarly communication, in and of themselves, they cannot be construed as ‘revolutionary’.

CreateChangeCanada

CreateChangeCanada (CCC) is the Canadian adaptation of the American website *CreateChange*, which was developed by the Association of Research Libraries and SPARC and is supported by the Association of College and Research Libraries. As opposed to the *CARL Institutional Repositories Program*, which is inwardly-focused on assisting libraries implement IRs, CCC is an outwardly-focused educational website aimed at researchers unfamiliar with Open Access or the broader issues in scholarly communication.

Thematically, the website hones in on two points: progress and rewards. The overarching question the site asks its viewers, “Shouldn’t the way we share research be as advanced as the Internet?”, implies that Open Access is a progressive response to changes in technology and scholarly communication (CreateChangeCanada, 2009). The notion of progress is inextricably intertwined with that of sharing, which in turn is linked to rewards. Use of the word “sharing” implies the existence of a moral dimension – “sharing” is associated with the concept “good”, and in this instance, what is good, and also progressive, has been constructed as what is moral. Sharing research, the site claims, will result in greater rewards for the individual researcher. Framing Open Access in terms of the benefits it provides individuals is in stark contrast to much of its body of literature on Open Access, in which proponents tend to emphasize the collective benefits realized in increased access and dissemination. The approach utilized for this website may prove

to have been a canny decision – after all, the literature underscores the importance scholars place on issues such as prestige and impact factor. Tangible benefits such as these are more likely to be persuasive to a researcher than general platitudes of the greater good.

Style and rhetoric play a large role in how the topic at hand – Open Access and its benefits to researchers – has been constructed and subsequently reproduced. The tone of the entire site is rather colloquial, with an emphasis placed on “You” as an individual researcher attempting to look out for “Your” own interests in a rapidly changing digital environment. Instances of over-lexicalization are numerous; for example, the word ‘share’ and its variants are repeated four times within a text of less than one hundred words on the site’s homepage, and recur within most other pages on the site. The site is headlined by a rhetorical question (discussed in the preceding paragraph) in an attempt to draw a conclusionary statement from the facts at hand. Ultimately, this website constructs Open Access as progressive, moral and associated with tangible rewards.

While this website promotes itself as an instrument of education, it is also a slick marketing tool imbued with a high level of ideology about the moral superiority of Open Access. While this type of discussion – or marketing – is in marked contrast to many other discourses on Open Access, the question remains: Is this revolutionary?

Once again, I would not argue that this initiative is ‘revolutionary’ so much as it is an outward expression of long held library interests, namely, promoting research access and dissemination, as well as in assisting faculty. In this instance, relationships remain by and large, the same, especially in that faculty are encouraged to look out for their own interests, and libraries and library associations portrayed in a supportive – and supporting

– role. While this site is a fairly drastic change in terms of how Open Access is presented to researchers, the underlying construction of Open Access as moral and progressive remains intact.

Assessing Open Access Policies of the State

The Canadian government has recently begun to support a variety of green and gold Open Access initiatives through policies enacted by several of its research and funding bodies. These policies are, by and large, still in the infancy stage of their development and implementation – for example, one of the earliest Open Access policies enacted by the state, the *CIHR Policy on Access to Research Outputs*, only came into effect on January 1st, 2008. Nonetheless, an analysis of the state’s policies as they currently exist is critical in determining if the effect Open Access is having on Canada may indeed be considered revolutionary.

This section briefly outlines the status of Open Access policies for both Canada’s three major funding bodies, as well as the recent self-archiving mandate adopted by the National Research Council. This is followed by a critical discourse analysis of the policy adopted by the Canadian Institutes of Health Research (CIHR), the most comprehensive and thoroughly articulated policy of the state. While the previous chapter utilized critical discourse analysis to further understanding of the core assumptions behind the competing discourses seen in the *Nature* debates, this chapter uses the approach to explore how the state mobilizes the rhetoric of Open Access to justify its policies, yet in practice remains committed to the tenets of capitalism and the free market. The analysis demonstrates that despite drawing upon discourses of scientific openness and accessibility to warrant its vision, Open Access policies developed by the state are largely a continuation of

traditional economic and social norms. There is therefore very little about these policies that may be considered truly radical or revolutionary.

A Brief Summary of Open Access Policies of the State

Scholarly research in Canada is supported in large part by research granting councils, which include CIHR, the Social Sciences and Humanities Research Council (SSHRC), and the National Sciences and Engineering Research Council of Canada (NSERC). The National Research Council (NRC), the state's leading research organization, has been broadly tasked to develop science and technology in Canada, with emphasis placed on building innovation and technology capacity and supporting the growth of Canadian industry. Within the past few years, all four of these institutions have worked on the development of Open Access policies, and currently, three of the four have policies in place.

The most recent 'green' policy implemented is that of the NRC. The NRC's policy, announced in late 2008 and implemented January 1st, 2009, is a self-archiving mandate which states that all peer-reviewed research and technical reports published by NRC institutes must be deposited in the newly created institutional repository, the NRC Publications Archive (NPArc). The NRC Research Press, a not-for-profit scientific publisher of peer-reviewed serials and monographs, has policies compliant with many of the top national and international funding bodies, including the US National Institutes of Health and the UK-based Wellcome Trust. Specifically, as of 2009, authors retain the right to "post a copy of their submitted manuscript up to the date of acceptance, or a copy of their accepted or published manuscript on their own Web site or an institutional repository, or their funding body's designated archive, six months after electronic

publication on the NRC Research Press Web site” (Author’s Rights, 2009). In addition to giving authors a high level of archiving rights, as of 2008 NRC Research Press has also given authors the option of choosing to publish their articles in an immediate Open Access format for a fixed fee, termed the *OpenArticle* option. The current base fee, which is subsidized, is set at \$3000 (OpenArticle, 2008).

The policies of the three funding agencies are quite divergent from one another, as one focuses primarily on publication, one only touches on the use of grant funds, and the third concerns itself with the support of Open Access journals. The *CIHR Policy on Access to Research Outputs* stipulates that as of January 1st, 2008, grant recipients of CIHR funding must “make every effort” to either publish their research in peer-reviewed Open Access journals, or to ensure that their research is publicly available via an institutional repository within six months of publication (Policy on Access to Research Outputs, 2007). In addition, CIHR explicitly permits grant funds to be used to pay for the author fees associated with many Open Access journals.

The approach taken by SSHRC in its Open Access initiatives differs markedly from the policies adopted by CIHR. While SSHRC did adopt a policy in 2004 which stated that, in principle, development of its research support programs would be guided by the tenets of Open Access, the agency appeared to retreat from this policy in 2006. Rather than imposing mandatory Open Access requirements, SSHRC announced that it would “take an awareness raising, educational and promotional approach to the implementation” of its Open Access policy (Policy Focus, 2009). In contrast to the CIHR policy, which focuses primarily on researchers and their use of grant funds, the main thrust of SSHRC’s Open Access initiatives lies in its growing support of Open Access

journals. In 2007, SSHRC launched an *Aid to Open-Access Research Journals* pilot program, which issued grants of up to \$25 000 to Open Access journals in the social sciences and humanities (with the stipulation that the editor-in-chief and the majority of the editorial board be affiliated with a Canadian post-secondary institution). SSHRC's 2008 *Aid to Scholarly Journals* competition, however, was open to journals regardless of publishing model or distribution format, including toll access, Open Access and delayed Open Access business models.

NSERC is the only one of the three major funding bodies that does not have an explicit Open Access policy, though it does permit grant funds to be used to pay author fees. While the NSERC Board of Directors discussed a potential Open Access policy in March 2009, a decision was made not to adopt the draft text, though some guiding principles were endorsed. Central to the discussion was the question of ultimate enforcement of policy – whether the onus to comply with an OA mandate rests solely with grant recipients, or if their institutions have a role to play as well. Ultimately, the NSERC Board of Directors mandated “more consultation with universities to develop with them a collective response to the public call for more facilitated access to research results” (D. Leclerc, personal communication, July 22, 2009). Given that the focus of Open Access has primarily been to increase access to scientific research, that Canada's major science and engineering funding body has not adopted a policy is notable.

Even with this relatively brief summary of the Open Access policies of the state, it is readily apparent that no radical changes in power or organizational structure have occurred. While the state is willing to endorse general principles supporting Open Access, and allow its grant recipients to use funds to publish in Open Access journals,

these actions do not fall out of the realm of the normal activities of the state in promoting research creation and dissemination. While SSHRC is willing to provide funding for Open Access journals, for example, it is equally willing to fund journals that restrict access – and while this is a broadening of the playing field, it is not a rupture in social, economic or political norms. Similarly, while the NRC Press gives authors the option of publishing their articles in an Open Access format, it is not mandated and therefore does not represent a drastic change in ways of disseminating research – after all, while an individual article may be Open Access, access to the rest of the journal remains restricted. The most prominent transformation is found in the NRC’s self-archiving mandate; once again, though, this is not revolutionary action so much as it is a reflection of the increasing use of repositories in research institutions across Canada, which in and of themselves do not represent ‘revolution’ so much as they characterize the increased use and sophistication of technology in collecting, storing, managing and disseminating intellectual outputs. While the actions of the state in supporting Open Access may be considered promising, they certainly cannot be termed ‘revolutionary’. This point is explored further in the following critical discourse analysis.

A Critical Discourse Analysis of the ‘CIHR Policy on Access to Research Outputs’

The *CIHR Policy on Access to Research Outputs* is the most comprehensive state policy on Open Access in Canada, with both clearly articulated guiding principles as well as in-depth policy statement. The following analysis is a deconstructive reading and examination of the properties of the text of the policy.

Within the text of the policy, it is possible to see the emergence of two themes, which I shall identify as access and urgency. The predominant theme, naturally, is access,

with variations of the term repeated throughout the short text thirteen times. Access is primarily viewed through the lenses of advancements in science and enhanced applicability of research. The notion of urgency is also readily apparent throughout the text, and it used to convey the message that action must be taken now.

Justification for the policy is found in its guiding principles, which emphasize “CIHR’s core values and its commitment to the highest scientific and ethical standards” (CIHR Policy on Access to Research Outputs, 2007). This statement also features positive self-representation, which further allows the organization to justify its reasoning for this policy – CIHR is committed to the highest standards, and hence, this policy must be of the highest standard, as well. The policy is further legitimated through its explanation that a number of other high status funding agencies, including the U.S. National Institutes of Health and the Wellcome Trust, have recognized the importance of this issue.

The emphasis placed on unrestricted access to research, and in particular peer reviewed journal articles, is high. Within the preamble, CIHR declares that it “strongly supports unrestricted access to research outputs”, and later in the document, in the first line of the policy statement on peer reviewed journal publications, grant recipients are mandated “to make every effort to ensure that their peer-reviewed publications are freely accessible through the Publisher's website (Option #1) or an online repository as soon as possible and in any event within six months of publication (Option #2)” (Ibid.). The policy goes on to state where authors can find information on publishers’ copyright policies, once again emphasizing the importance of research being openly accessible within a maximum of a six month timeframe.

Despite its continual talk of the importance of access, the policy contains a significant caveat buried within the middle of the text. Three-quarters of the way through the entire text, and approximately halfway through the statement on peer reviewed journals, the document seemingly backtracks on itself: “Publications must be freely accessible within six months of publication, where allowable and in accordance with publisher policies” (emphasis added, Ibid.). This statement appears to create a loophole in the text: articles *must* be published in Open Access journals or deposited in an online repository – except where doing so is not allowed by a publisher. For all its talk of “unrestricted access to research outputs” and “embracing and sharing emerging practices”, due to its deference to commercial publishers, the policy as it currently stands has the potential not to enact any meaningful change at all, especially if high status, core publications refuse to give self-archiving rights.

At this point, a question emerges: Why does the reality of this policy not match its profuse level of rhetoric? This issue can be considered through use of critical political economy and an examination of the state's commitment to the tenets of capitalism, including protection of the free market, consumer sovereignty and private property.

By its nature, the state is conflicted – on the one hand, it seeks to promote and protect the public interest, which would include initiatives such as increasing and facilitating access to scientific and medical research. On the other hand, however, “an indispensable job of the state in capitalist society is to maintain the conditions for capitalist enterprise and capitalist accumulation”, which includes preserving the conditions that allow commercial publishing companies to flourish (Duncan, 1989, p. 23). While the state can encourage researchers to publish in Open Access journals or archive

in online repositories, forcing them to do so would not only threaten commercial publishing, but would also potentially undermine the state's role in maintaining capitalism. Demanding that all federally funded research be immediately accessible without charge would be a drastic and far-reaching change in both thought and action. It would result in a radical shift in the balance of power, as traditional publishers could be forced to overhaul their entire business models or be run out of the market. In short, it would indeed qualify as revolutionary action, which in fact is probably why such a directive has not occurred. States operate best in times of stability, and it is unlikely that a state would willingly throw itself into a condition of flux over an issue that directly affects a relatively small number of people – and while the issue of access to publicly funded information indirectly affects all members of society, only a minority of citizens are fully aware of this issue and the related matters at stake.

Consumer sovereignty refers to the idea that the 'consumer is king' – that goods and services are produced to satisfy consumer desires, and that buyers ultimately determine which of these goods and services remain in production. Within the context of scholarly communication and academic publishing, it is evident that scholars, by and large, choose to publish in prestigious, typically high-cost journals. This market, however, is somewhat peculiar in that while academics are the primary consumers of scholarly publications, libraries are the primary purchasers of this material, which has only exacerbated tension in this inelastic market.

Private property and ownership rights are a key facet of a functioning capitalist system, and also figure in the debates and discussions surrounding scholarly communication. The concept of copyright underpins research creation and dissemination.

Protection of rights related to publication, distribution and adaptation of works is seen as an essential condition for the creation of knowledge; this is evident in the propagation and strengthening of copyright laws both in Canada and internationally. Access to – and use of – copyrighted material, however, is a critical component of scholarly communication and the continued creation of information. While the state remains committed to the treatment of information as a commodity through ever-increasing ownership rights and stronger copyright legislation, there is evidence of a slow transformation in the ways individual creators and users view information: for example, through the use and proliferation of Creative Commons licensing, which allow creators to communicate which rights they choose to reserve, and those they waive for the benefit of users and other creators.

Conclusion

This chapter has examined several of the key features and actors that define Open Access in Canada in an attempt to determine the extent to which Open Access may be considered revolutionary. An examination of several research library initiatives demonstrated that Open Access is merely one response, albeit an important one, to changes in the scholarly communication system. As these initiatives further traditional library objectives, including interoperability of electronic systems, education and facilitating access, in a fairly conventional manner, the adoption of Open Access by libraries cannot be seen to constitute a drastic and far-reaching change in ways of thinking or behaving. In addition, the inclusion of Open Access policies and initiatives on the part of libraries, at least at this point in time, has yet to result in a shift in the balance of power. Libraries are still beholden not only to conventional publishers with their ever-

rising subscription costs, but also to their own institution and institution's faculty, who operate within an academic reward system that favours both publishing often and publishing in high status, often exorbitantly priced academic journals.

An assessment of state policy showed that while the state is more than willing to embrace the rhetoric of Open Access, including notions of accessibility and scientific openness, it is not so willing to embrace the reality of a truly Open Access system. This is most likely due to its adherence to a capitalist paradigm that emphasizes property rights over the rights of citizens to access to information. While favourable state policies are an important component in the continuation and success of Open Access journals, the policies currently in place do not represent a radical change, either in thought or in action. The state is acting in a cautious and methodical manner, which is a far cry from the abrupt changes in organizational structure that define revolutions. In addition, the state's policies have not resulted in shifting the balance of power between the various Open Access actors. Indeed, merely the fact that the state is so heavily involved in the creation and development of a robust Canadian Open Access discounts the notion that a 'revolution' ever had even the potential to occur.

The following final chapter presents a unified picture of this thesis, and explores the question of what the move towards Open Access represents in Canada, if it is indeed not characteristic of a 'revolution'. This concluding chapter also identifies lessons learned and best practices, and suggests potential further lines of inquiry.

Conclusion

This thesis set out to accomplish four tasks:

- 1) to situate Open Access in a Canadian context,
- 2) to question whether – and to what extent – the move towards Open Access constitutes a ‘revolution’ in scholarly communication in Canada,
- 3) to examine the production and reproduction of discourses on Open Access, and to uncover the discursive strategies in play in the debate on Open Access, and finally,
- 4) to assess Open Access discourses, practices and policies using a critical political economy of communication approach.

Chapter 1 situated Open Access within the larger context of the “serials crisis” and its impact on scholarly communication. Chapter One also identified my theoretical perspective on issues related to power, commodification and access in relation to both Open Access and to scholarly communication more generally. A critical political economy approach was utilized to discuss the unique and peculiar qualities of information, the problematic aspects of attempting to commoditize information and the competing conceptualization of information as a public good, as well as issues related to capitalism and concentration and the move towards a ‘networked information economy’.

This introduction was followed in Chapter 2 by an extensive literature review. Specifically, it characterized the current body of literature available on Open Access, and noted the shift in relationships between academics, librarians and publishers due to new technologies and business models, the emerging discourse on the role of scholars in debates on scholarly communication and access, and the growing divergence between library and academic interests. The review of the literature demonstrated that due to the

refusal of many commentators on Open Access to meaningfully interact with the other side of the debate's beliefs, arguments and critiques, very little research has been conducted on the theoretical underpinnings of points of view in the debate.

In an attempt to bridge this gap in the literature, Chapter 3 used a critical discourse analysis approach to deconstruct and interpret the competing discourses surrounding Open Access journals and practices. It focused specifically on the series of discussions commissioned in 2004 by *Nature Publishing Group*. The analysis demonstrated that the discourses apparent in the '*Nature Debates*' have been constructed in order to either perpetuate or challenge the dominant world view on academic publishing and more generally on scholarly communication as a whole.

Finally, in Chapter 4, Open Access was situated in the Canadian context through an identification of its key actors, initiatives and features, and included an examination of several representative programs and policies currently in place. Furthermore, this chapter used an integrated critical political economy and critical discourse analysis approach to assess whether Open Access discourses and practices in Canada are revolutionary in nature, with an emphasis on the *CIHR Policy on Access to Research Outputs*. Ultimately, this study suggests that while the push towards Open Access may be seen as part of a larger transformation in scholarly communication, close examination of Open Access discourse and practice reveals that conventional tenets of capitalism, including notions related to private property and commodification, remain intact.

If the move towards Open Access in Canada does not amount to a revolution in scholarly communication, then what does it constitute? I would argue that what we are currently witnessing is the continuation and evolution of the transformation that has been

occurring in scholarly communication over the past several decades. While not 'revolutionary', this transformation remains extremely significant, and issues related to power, commodification and access continue to play out against a backdrop of historical, political, economic and technological change.

Of critical importance are questions of agency and structure. Open Access requires mass mobilization on the part of researchers if it is to succeed as either a business model or social movement; however, researchers – even those who support Open Access – are constrained by an academic reward system that rewards frequent publishing and publications in high status journals. While the AUCC-CARL Task Force spoke of 'renewing the academic reward system', it would appear as though universities are unwilling – or perhaps unable – to do so. As was noted in the preceding chapter, academics, and in particular senior scholars, are unlikely in any significant way to support changes in the scholarly communication system that threaten to undermine what they have spent their entire careers working towards. Any attempt to radically overhaul the current system would likely be met with resistance or widespread confusion and chaos. This being said, individual researchers retain their agency, and the beginnings of a transformation in academic behaviour are slowly becoming apparent, as publications in Open Access journals increase and a growing number of scholars submit their research to institutional repositories. Resolution of the crisis in scholarly communication, however, has the potential to occur only when the cultural and ideological factors associated with the 'publish or perish' regime has been dismantled in favour of a system that focuses on quality (and not merely quality defined as publishing in 'core' journal), and not quantity, of research.

Also of importance are growing concerns about the implications of the commoditization of information, commercialization of scholarly research and public policies of privatization. Open Access can be viewed as an attempt on the part of scientific researchers to reclaim ownership of their research and to protest the growing commercialization of scientific journals in Canada. In turn, this can be seen as part of a broader movement on the part of faculty and librarians to protest the policies of privatization that have led to growing university-industry ties and to an increasing level of commercialization of academic research. In Canada, the rapid decline of public financial support has increasingly resulted in universities relying on private revenues, fees and sponsored research to sustain their operations. While advocates of privatization argue that the public, faculty and universities all benefit from the commercialization of academic research, a segment of the scientific community have begun to protest privatization and the commercialization of research, and argue that encouraging universities to become market actors has serious implications for academic culture and the public interest. They contend that the credibility of universities as institutions that seek to protect the public good has been undermined by the conflict of interests created by university-industry economic relations. Privatization in universities and the subsequent commercialization of academic research represents a drastic shift in public policy from promoting the expansion of the public domain towards increased private control of federally funded research.

Identifying Lessons Learned

This thesis set out to assess whether the move towards Open Access by research libraries and the state constituted a 'revolution'. While this assessment was accomplished, this objective was not met without several challenges. Briefly, I would like to explore several of these, and also discuss best practices identified, in an attempt to assist future researchers examining this topic and broader issues related to it.

The central goal of this thesis – namely, to situate Open Access in a Canadian context – was, in a sense, somewhat broad and sprawling for a thesis completed within this time-frame and scope. Not only are there numerous stakeholders, but also a plethora of initiatives, projects and policies. An entire thesis could examine solely the Open Access policies of the state, for example, or assess the effectiveness of Open Access educational efforts on the part of research libraries. Attempting to cover as much of this spectrum as I could resulted in certain areas receiving a rather minute amount of attention and analysis, even though every point discussed represents a critical component of how Open Access operates in Canada. Researchers examining this topic in the future would be well advised to clearly isolate a small subsection of Canadian Open Access.

While this thesis had no formal mechanism for interviewing key actors (though several stakeholders were spoken to on an informal basis), future researchers would be well advised to consider the interviewing of subjects as an extremely important element in studying Open Access in Canada. As this thesis has noted, there is an extreme dearth of information on Open Access as it operates in Canada in the formal, peer reviewed literature. While discourses, policies and practices can be collected through a systematic monitoring of online communicatory channels, this is extremely time-consuming and can

also result in difficulties in determining just what, precisely, is relevant to the research at hand. Through comprehensive interviewing, ascertaining key elements and features of Open Access may be more easily facilitated.

While several challenges were associated with the writing of this thesis, I have also identified a number of best practices that I feel could assist future researchers in examining this topic. Using critical political economy allowed me to approach the topic in a way previously unseen in the research, and to thoroughly reflect on issues related to power and the interrelationship between structure and agency. A critical political economy perspective also allowed for a consideration of the historical, political and economic factors that have shaped and continue to shape not only how Open Access operates in Canada, but also its future potential as a vehicle for transformation of the scholarly communication system. Finally, I would highly recommend that researchers, regardless of discipline, look to both spoken and written discourses on Open Access as a means of uncovering ideologies and interests that may not be apparent at first glance. As this thesis has illustrated, discourses on Open Access – both on a national and international level – are infused with many deep levels of meaning and significance. Critical discourse analysis is an excellent tool for assessing discursive strategies, and combined with critical political economy it allows for discussion of broader issues related to power, access and commodification.

Prospects for Future Research

This thesis is a first, tentative step towards a more thorough and comprehensive examination of Open Access discourses and practices in Canada. A study such as this – limited both in time and scope – by definition leaves many questions unanswered.

Attempting to track a 'moving object' such as Open Access is particularly time consuming and frustrating. The smallest fact or generalization can require hours of painstaking research to verify. And important information, particularly that which only exists in the digital realm (including, for example, information retrieved from informal sources such as wikis and blogs), has often been modified or deleted with no notice, which only adds to the difficulty of tracking a continually evolving phenomenon such as Open Access. As such, I stress that this thesis should be seen as only a preliminary inquiry into the examination and theorization of Open Access, and particularly of Open Access in Canada.

This being said, there are a number of exciting and potentially fruitful avenues that might be taken in future research endeavours on Open Access. I would especially urge that the following areas be given attention.

First and foremost, there is a critical need for scholarship that examines Open Access through varying types of specific theoretical lenses. As noted in the literature review, it is rare that Open Access is situated within any explicitly theoretical context, and this dearth of theoretical analysis had led to, in many cases, a rather shallow and superficial examination of some of the broader matters that relate to Open Access, including issues of power, commodification and access.

Questions about the competing ideologies surrounding debates on Open Access also require future research. While this thesis performed a critical discourse analysis of three sets of data – the *Nature* discussions, *CreateChangeCanada* and the *CIHR Policy on Access to Research Outputs* – a wide range of discourses remain to be examined, deconstructed and interpreted.

Future research might also aim at a more comprehensive understanding of the activities of the various actors involved with Open Access, both in Canada and abroad. In Canada, for example, an in-depth study of senior academics (along the lines of the study conducted by Nicholas et al. in 2005) to determine their knowledge of Open Access journals and repositories, as well as why or why not they choose to publish in Open Access journals, may be critical in identifying some the difficulties in establishing – and maintaining – Open Access as a viable option to conventional publishing.

Finally, in a time of transition and transformation, an assessment of the potentiality of Open Access to transform scholarly knowledge itself must be undertaken. As articulated by Hall, there is a need to rethink and work out “what modes of legitimation might actually be needed to respond to the specificity and singularity of digital modes of publication” (2008, p. 61). As it currently exists, Open Access operates within the traditional scholarly communication paradigm, which emphasizes conventional methods of peer review – transferred from the traditional model of publishing – to perform the functions of filtration and accreditation. In a time where the boundaries separating authors, editors, consumers and users have been destabilized, however, and where creators have the ability to incorporate sound and moving images into digital texts, thus not merely remediating older forms of media but fundamentally changing them, a consideration of the transformation of knowledge – and with it our relationship to that knowledge – would be a critical step forward in our understanding of the potential avenues of evolution of scholarly communication.

Appendix 1- An Annotated Timeline of Open Access in Canada

1989

- Stevan Harnad launches *Psycology*

1991

- Jean-Claude Guédon launches *Surfaces*

1994

- June 27: Stevan Harnad issues his “subversive proposal” to a Virginia Tech mailing list
- October: Association of Universities and Colleges Canada (AUCC) agrees to establish a joint Task Force with the Canadian Association of Research Libraries (CARL) to examine issues in scholarly communication and their effect on higher education in Canada

1996

- October: Final Report of the AUCC-CARL Task Force on Academic Libraries and Scholarly Communication released

1997

- August 19: Stevan Harnad launches *CogPrints*

2002

- February 14: Budapest Open Access Initiative (BOAI) launches with three Canadian signatories: Stevan Harnad, Jean-Claude Guédon and Leslie Chan
- July: CARL Institutional Repositories Pilot Project launches
- October 3: Legal Information Institutes meeting at the Montreal Law via Internet Conference issues the *Montreal Declaration on Free Access to Law*
- November 8: Public Knowledge Project releases Open Journal Systems, an open source journal management and publishing software

2003

- June 20: *Bethesda Statement on Open Access Publishing* released; includes Canadian signatory Jean-Claude Guédon
- October 22: *The Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities* released with two Canadian signatories: Canadian Library Association and Université du Québec à Montréal, Québec
- December 25: Stevan Harnad launches the Institutional Self-Archiving Policy Registry

2004

- January 20: National Library of Canada starts providing Open Access to doctoral dissertations on deposit at *Theses Canada*

- June 14: Simon Fraser University Library and the Canadian Association of Research Libraries announce the launch of the CARL Institutional Repositories Harvester
- June 19: The British Columbia Library Association adopts *A Resolution on Open Access*

2005

- June: *Open Access Law Canada* launches
- June 17: Canadian Library Association adopts a resolution endorsing Open Access

2006

- April 3: The Canadian Institutes of Health Research (CIHR) announces that it is developing an Open Access policy to CIHR-funded research
- June 21: AlouetteCanada Open Digitization Strategy launches
- October 10: CIHR releases a draft Open Access policy to CIHR-funded research
- November: Athabasca University adopts a policy asking faculty to self-archive peer-reviewed research articles

2007

- February: AlouetteCanada issues a declaration including language that supports Open Access
- April: The Canadian Breast Cancer Research Alliance encourages Open Access for CBCRA-funded research.
- April 4: Social Science and Humanities Research Council launches a funding program to support OA journals.
- April 8: *Open Medicine* launches
- June 29: Canadian Library Association announces that it will convert most of its publications to Open Access
- August 15: Canadian Association of Research Libraries and SPARC announce the release of the *SPARC Canadian Author Addendum*
- August 20: Athabasca University launches Athabasca University Press
- September 4: CIHR announces an Open Access mandate for CIHR-funded research.
- October 10: the University of Ottawa Library, in association with the Canadian Association of Research Libraries, hosts a public seminar entitled *Open Access: the New World of Research Communication*
- October 19: Library and Archives Canada releases a draft digital information strategy for public comments, which calls for Open Access to publicly-funded research.

2008

- February 28: Canadian Association of Research Libraries and SPARC announce the launch of CreateChangeCanada

- May 21: Canadian Library Association executive approve the *Position Statement on Open Access for Canadian Libraries*
- October: Canadian Health Services Research Foundation adopts an Open Access policy for CHSRF-funded research

2009

- January 1: National Research Council (NRC) adopts a self-archiving mandate stating that all peer-reviewed research and technical reports published by NRC institutes must be deposited in the newly created institutional repository, the NRC Publications Archive
- February 5: Québec's Fonds de la Recherche en Santé releases their Policy regarding open access to published research outputs
- March: Natural Sciences and Engineering Research Council of Canada (NSERC) decides not to adopt an Open Access policy at this time, though several guiding principles are endorsed
- May: Michael Geist launches the *Friday Forum - a weekly series of virtual conferences - open access*, an innovative approach to Open Access education
- June 3: National Research Council announces the launch of its institutional repository, the NRC Publications Archive (NPArC)
- July 6: The Canadian Institutes of Health Research, National Research Council - Canada Institute for Scientific and Technical Information (NRC-CISTI) and the U.S. National Library of Medicine announce a partnership to develop PubMedCentral Canada

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