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From Access to Praxis: The Case for Open Access in the Humanities and Social Sciences and the Public Good

Whiteley, Andrea Marie

UNIVERSITY OF CALGARY

From Access to Praxis:
The Case for Open Access in the Humanities and Social Sciences and the Public Good

by

Andrea Marie Whiteley

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Abstract

This dissertation investigates how open access is challenging the renovation of the scholarly communication system, presents an argument why open access is an imperative for the sustainability of the humanities and social sciences disciplines (HSS), and supports the values of knowledge sharing for the benefit of society. The research adopts the position that public citizens are stakeholders in the debate about access to research. It examines the normative basis of access to research, and creates a theoretical vision for knowledge flow between scholars and their publics. The dissertation is informed by scholarship about the knowledge society, definitions of the public good, and a political economy understanding of knowledge. As part of this investigation, the dissertation also details the history of scholarly publishing and the recent history of the Open Access movement. The research employed a mixed methods approach to understand the issues around access to research, using surveys and interviews to gather the views and experiences of knowledge translators and professionals in the social sciences and humanities disciplines. Feedback from research participants contributes to a communication theory centered around the concept of knowledge flow, emphasizing researcher engagement with society, reflexivity as the key to knowledge transfer, the importance of capturing the benefits of HSS research, and ethical research practice. The research findings support the conclusion that without access to research, praxis, or the possibility of turning research into action, is also impeded. Finally, the dissertation also emphasizes that not only instrumental or utility-focused research warrants accessibility, but all research in the humanities and the social sciences -- whether foundational, theoretical, esoteric or critical -- because this research takes society as its subject.

Preface

This thesis is original, unpublished, independent work by the author, Andrea Marie Whiteley. The research reported in Chapters 6-7 were covered by Ethics Certificate #REB16-0428, issued by the University of Calgary Conjoint Faculties Research Ethics Board for the project "Open Access to Social Sciences and Humanities Research and the Public Good" on September 15, 2016.

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I am indebted to my research participants who completed my survey, and those who met with me to share their views and ideas during the research interviews. This input was invaluable for expanding my understanding of the issue of open access and the public good.

I would like to acknowledge the financial support of the Social Sciences and Humanities Research Council, the University of Calgary Department of Communication, Media and Film, and the Graduate Studies Faculty at the University of Calgary without which I could not have completed this work.

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Chapter 1 Introduction

It may be true that open access is a simple idea, in theory. In its real-world implementation and transition, however, it is proving to be messy and contentious.

-- Martin Eve, *Open Access and the Humanitie,s* 2015, p.3.

Open access is a concept that contains all the ingredients for a motherhood and apple pie label – an idea with which no one can easily disagree. Yet, the current notion that "knowledge should be shared for the good of humanity", or "research knowledge paid for by public funding should be publicly accessible," has a fascinating history and many obstacles to implementation because it not only proposes to radically renovate a profitable system that underpins how universities function, but also alter how we conceive of and value knowledge. Renovations are motivated by flaws in a system, and as with any complex process of change, misinformation, stakeholder claims, costs, and resistance to new ideas add to the difficulty of the remodel. This dissertation investigates how open access is challenging the renovation of the scholarly communication system, presents an argument why open access is an imperative for the sustainability of the humanities and social sciences disciplines (HSS), and supports the values of knowledge sharing for the benefit of society.

For the most part, the Open Access (OA) movement has been driven by the steeply rising costs of research journals, or serials, a problem known as the serials crisis, and secondarily by concerns about the public good and access to knowledge. Since the 1980's, university libraries have struggled with balancing journal subscriptions purchases at the expense of other information needs. In Canada, the cost of journal subscriptions for university libraries range between $350,000 to $9 million annually

per institution (MacDonald & Eva, 2018). Over the last few years, university libraries in Canada have started to cancel large portions of subscriptions due to ever rising costs and the weak Canadian dollar.[1]

While rectifying the serials crisis is reason enough to re-evaluate the current system, this research project approaches open access from a broader social perspective. Open access to research answers a social need for knowledge to be disseminated to manage complex private and public problems. This principle is informed by a "knowledge commons" argument. Related to this argument is the belief that democratic nations need well-informed citizens to participate in the democratic process and ensure a healthy public sphere. Another strong justification for OA is that where research is publicly funded, taxpayers should have access to research that they finance. Other arguments such as cost savings, research acceleration, and responding to the digital "knowledge divide" also play a central role in driving the OA movement. Finally, this dissertation strongly argues that researcher to public knowledge flow is strategically important for the sustainability of HSS scholarship.

My argument begins with the premise that HSS research is a public good, and that lack of public access to this knowledge has contributed to the perception of an insulated community, disciplinary silos, and a "talk amongst ourselves" mentality that has led to a separation of scholars from the public, that critics urge needs to be reconciled. To ensure the sustainability of the HSS disciplines, better arguments need to be made about the value of humanities and social sciences research, and more effort needs to be undertaken to increase public awareness of and accessibility to HSS research, particularly through open access initiatives, and more broadly through knowledge mobilization efforts to improve knowledge flow. Kathleen Fitzpatrick (2012) writes, "the more we close our work away from the public, and the more we refuse to engage in dialogue across the boundaries of the academy, the more we undermine that public's willingness to fund our research and our institutions" (p. 353).

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[1] www.**arl**.org/bm~doc/monser06.pdf; http://www.cbc.ca/news/canada/newfoundland-labrador/memorial-university-to-cancel-thousands-of-journal-subscriptions-1.3354711; http://www.cbc.ca/news/canada/newfoundland-labrador/ryerson-mun-journals-library-1.3362662; http://www.cbc.ca/news/canada/ottawa/university-ottawa-library-budget-journal-cuts-1.3815030 ; http://www.cbc.ca/news/canada/calgary/university-calgary-cancels-journal-subscriptions-2017-1.3942774

Jürgen Habermas (1976) calls this problem a "legitimation crisis" where society or publics lose trust in institutions, experts or leaders. If public attitudes towards HSS scholarship are negative, then our legitimacy as a credible source of knowledge is at stake.

My dissertation will address these normative assertions in three ways: by investigating the history of scholarly journals and the open access movement; by exploring the concept of the public good and how openness to humanities and social sciences research can better serve the knowledge needs of society; and by asking the "overlooked" stakeholders, interested citizens outside the university, for their perspectives and input into the problem of access to research. This research focus fills a gap in the OA movement literature, by looking specifically at social sciences and humanities research, and asking for public input (selected, interested publics) into the problem of access to research. While this research is somewhat a critique of the OA movement, arguing for the broadening of the concept of "open access", it is also a way to reinforce the goals of the movement by seeking understanding regarding awareness of HSS research and desire for access to this research among research participants.

Research Question

What are the attitudes towards social sciences and humanities research, perceived needs for open access to this research, and preferred methods of access among selected groups of Canadian citizens?

This research question attempts to understand the connection between access and awareness, dissemination and transfer, and to draw non-scholars into the debate over access to HSS research. The question also allowed me to probe some of the assumptions of the Open Access movement, but also be supportive of the goal of optimizing knowledge dissemination, which is a central goal of open access (Suber, 2012). It guided my survey of knowledge translators, and also helped inform discussions with my interview participants. At the beginning of my PhD journey, I found myself concerned with establishing "proof" that Canadian publics were aware of HSS research and wanted access to it. As my

understanding increased, and my interviews accumulated, I realized the problem of access was far larger than my original compact research question. After conceptualizing the theory of knowledge flow, a broader research question began to guide my inquiry:

> *How can we improve knowledge flow between humanities and social sciences scholars and knowledge users and creators outside of the university?*

This qualitatively oriented question enabled me to probe deeper into the concept of the public good, look at the problem of access as more than a knowledge dissemination problem, and seek solutions that take into account the complete research life cycle and HSS knowledge ecosystem. The evolution of the research question in this study will be explained further in Chapter Five. Many scholars emphasize that the research question often changes throughout a qualitative inquiry (Agee, 2009; Charmaz, 2006; Creswell & Poth, 2018; DeCarlo, 2018; Flick, 2006). However, the above research questions also reflect the tensions involved in a mixed methods approach that tries to balance quantitative and qualitative perspectives.

Definitions

The following brief definitions are an introduction to the topic of open access. More complete descriptions will be offered for some of the terms in subsequent chapters.

Open access

Borrowing from John Willinsky (2006), in his book, *The Access Principle*, the ethical basis for open access is:

> A commitment to the value and quality of research carries with it a responsibility to extend the circulation of this work as far as possible, and ideally to all who are interested in it and all who might profit by it (p. 5).

Open access literature refers to scholarly work that is "digital, online, free of charge, and free of most copyright and licensing restrictions" (Suber, 2012, p. 4). I use the term "open access" (no capitals) when referring to this literature or the above conviction.

Open Access – the social movement

The Open Access movement is an organized effort in the academic community to change how peer-reviewed research articles are published, to allow for open access to journal articles, and sometimes other publications, and to improve the knowledge delivery system. This includes lowering costs for libraries and universities, improving publishing timelines, and responding to problems concerning traditional peer review practices, citation impacts, and academic merit. When referring to the social movement, I use the acronym OA, or Open Access in capitals.

Alma Swan (2006), a frequent contributor to the Open Access debate, believes that "Open Access is a misnomer […] for the issue is about enhancing research dissemination and not, primarily, access" (p. 54). Similarly, Open Access does not address issues of knowledge transfer, only the dissemination of research. While the term "knowledge dissemination" implies access, in the case of scholarly research, the system disseminates only partially. The key issue is that without access, knowledge transfer is also not possible. Another consideration for OA is that while those not affiliated with a university can access journal articles, published works etc. at their local university library, not everyone has geographical access to a well-stocked academic library. OA appeals to the 'knowledge divide' that exists globally as well as between urban and rural places.

Scholarly communication and scholarly publishing

Christine Borgman, (2007) in her work *Scholarship in the digital age: Information, infrastructure, and the internet*, clarifies the difference between scholarly communication and scholarly publishing. Scholarly *communication* is the broad system of communication and information dissemination the academy uses; whereas scholarly *publishing* refers to the publishing industry as well as the "sphere of activities among scholars […] when a document is 'made public' with the intention that it be read by

others" (p. 48). I use the term "academic" publishing and "scholarly" publishing interchangeably, conscious that some might argue that there is a difference.[2]

STM and HSS publishing

The scholarly publishing community refers to the two main branches of publishing as STM, which stands for science technology and medical publishing, and HSS, which represents the humanities and social sciences.

Varieties of Open Access Delivery

Scholars, librarians and publishers do not agree about how open access should be achieved. OA advocates have proposed numerous options for how journals should be disseminated in an open access environment (Crow, 2009; Guedon, 2004; Harnad, Brody, ValliÃ, Carr, Hitchcock, Gingras, Oppenheim, Stamerjohanns, and Hilf, 2004; 2008; Willinsky, 2003a).

***Green Open Access*:** Researchers submit their pre-or post-print research articles to a university or institutional data repository. This method is acknowledged as the cheapest and most effective method of distribution, and is the method most often promoted by OA activists (Harnad et al., 2004; Houghton & Swan, 2013; Morrison, 2012; Suber, 2012).

***Gold Open Access*:** When publishers require an article processing charge (APC) to make an article open, or when the journal's mandate is for complete open access. Often called "author-pay", or supply-side financing, open access fees are sometimes paid by an author's institution or research funder. Some Gold OA journal publishers finance their operations in a number of ways, such as when a learned society or association charges fees to members which then contributes to the cost of publishing a society journal.

***Toll access*:** Used by conventional journals to distribute articles protected by copyright by charging a fee to download a single article. Similar terms such as "pay wall" and "access fee" range in the amount

[2] https://apexcovantage.com/blog/clearing-publishing-classifications/

of $25 – 40 to access a single article, however some publishers' prices have come down. *JStor*, for example, now charges $4 for recent articles. This is a demand-side model for journal publishing as consumers pay for access. Open Access guarantees that journal articles are offered at no cost to the user.

Praxis

In this dissertation, praxis is defined simply as "theory into action." This definition corresponds to Aristotle's description of the main human activities: *theoria* (thinking), *poiesis* (making), and *praxis* (doing).[3] Many philophers, thinkers and revolutionaries have addressed the idea of praxis and focused on the ethical or emancipatory aspects of putting ideas into action (Arendt, [1958] 1998; Freire, 1972; Gramsci,1992).

Scope

My dissertation research critiques the OA movement, investigates access to humanities and social sciences research, and illuminates the notion of the public good. It questions how the public good is defined and served through open access to journal articles specifically, but also access to new knowledge that is produced from research, in general. Discussion of the topic and theoretical analysis extends beyond the scope of OA literature, to address the larger topic of access to knowledge from an historical, economic, sociological, and above-all communications perspective. The scope of my survey and interview research is Canada, with most of my interview participants being residents of Alberta.

My focus on humanities and social science knowledge is based on how research funding is differentiated, how the publishing community makes industrial divisions, as well as the cultural and historical separation between "the two cultures".[4] This dissertation focuses somewhat more closely on the social sciences, rather than the humanities, partially because of lack of time and space, but also

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[3] Aristotle (n.d.). *Nichomachean Ethics*. VI, 5, 1140b7.
[4] C.P. Snow's "two cultures" thesis is discussed in Chapter 2.

because "Open Access and the Humanities" has been dealt with in great detail by Martin Eve (2014), in his book with that title. In addition, my thesis sidesteps the work of the digital humanities community, that addresses open access and the digitization of humanities resources and scholarship. I also acknowledge that HSS practice is extremely diverse and difficult to generalize about except in the shared differences when compared with STM: which is better funded than HSS, takes a more positivist perspective with regard to research orientation, and exhibits more acceptance of open access publishing within its ranks (Todd, 2015). I am also unable to address all of the issues concerning the operationalizing of OA such as the system of merit and evaluation of scholars, peer review, or the debate over open access business models from both libraries', and scholarly publishers' perspectives.

The intended audience for this research is scholars, researchers and students from all disciplines, but particularly from the HSS; those affected by or involved in the OA movement including scholar OA advocates[5], librarians, research funders, and scholarly publishers; members of the public and organizations that have a professional or personal interest in HSS research; research policy makers; and finally, my research participants. I expect the research to be of interest to both a Canadian and an international audience that is aware of the issues around access to research, or wants to know more about the problem.

Stakeholders in the OA debate are often mentioned in OA literature. These include libraries, publishers, scientists, social scientists, humanists, students, early-career researchers, research funders, university administrators, and "the public." My theoretical focus is on the attitudes and rights of stakeholders outside of the university community, which I argue is potentially everyone. Many different kinds of publics could stand to benefit from more access such as research consultants, thinks tanks, and policy makers. However, my actual research project solicited responses to my research

[5] Also note that Elsabry (2017) points out that "It is very difficult to define 'OA Advocates' as a coherent group of people. It is a group that includes researchers, librarians, university administrators, research funders (both public and private), some scholarly publishers and even university students. Nonetheless, since what characterizes all of them is their outspoken support for Open Access, statements and declarations they produce can be a good representation of how they see Open Access and the benefits they expect from it" (p. 35).

questions from what are sometimes called interested publics, or interested citizens: including knowledge translators, knowledge professionals, HSS professionals, non-government organizations (NGOs), and not-for profit organizations (NFPs). I originally sought out "knowledge translators" which I define as those who act as mediators between scholars and the public, able to translate and simplify research knowledge for non-experts.[6] This includes journalists, teachers, research consulting professionals, lawyers and those working in non-governmental organizations. As my research progressed, I decided it would be valuable to include responses from HSS professionals as well, including psychologists, freelance writers, and social workers.

The choice to define my research population as "interested publics", or "knowledge translators", was influenced by research results from a SSHRC report on "Public Views on Social Sciences and Humanities Research" (Ekos, 2008). This survey polled Canadians about their awareness of HSS research, and found that 62 percent of Canadians say they are unfamiliar with research done in the humanities and social sciences. Only 37 percent say they have some degree of familiarity with this research. This survey raises the question whether difficulty of access to HSS research is a reason for this low level of awareness. In addition, considering the low level of awareness, it would be futile for me to poll or interview a general Canadian population about how they engage with HSS research.

Another academic event further motivated my research and served to define my scope. In 2010, Canadian scholars and "stakeholders" gathered to discuss "Social Sciences and Humanities Research as a Public Good: Identifying Research Prospects for Advancing Research Among Academic and Non-Academic Discourse Communities" (Provencal, 2011a). This workshop was sponsored by Social Sciences and Humanities Research Council (SSHRC) and included open access advocates, knowledge mobilization experts, organizations connected to the research community, and non-academic

[6] My definition of knowledge translators, and research sample, is different from what Knight and Lightowler (2010), and Phipps and Morton (2013) refer to as "research brokers" or "knowledge exchange professionals." Research brokers are specifically employed by universities or research institutes to translate university research to the public, or facilitate knowledge exchange between researchers, policy makers or end users of research findings.

organizations interested in research, and knowledge dissemination. Four themes that came out of this workshop initially guided my thinking: open access business models; knowledge mobilization; the engaged university; and knowledge translation and the role of the media. The one thing that seemed to be missing from this workshop was the voices and perspectives of the Canadian public.

Arguing for more public involvement in academic practice comes with many caveats, however. Many lessons can be learned from the public understanding of science literature, where Einsiedel (2006) acknowledges that:

> We have clearly moved from the old days of the deficit frame and thinking of publics as monolithic to viewing publics as active, knowledgeable, playing multiple roles, receiving as well as shaping science. At the same time, we recognize that both views are monolithic. (p. 5)

This dissertation also acknowledges that public views are difficult to ascertain because there is no *one* public, and notions like the public good are similarly complicated by humanity's diversity.

Significance of Research

Access to knowledge is an essential requirement for democracy, and enabling access supports the tenets of freedom and equality, as well as forms the foundation of scientific inquiry. "Communal ownership of science" is one of Robert Merton's (1973[1942]) basic tenets of science, and the open access debate follows in this normative direction (p. 273-5). This dissertation research is significant because it provides social, historical and economic context for the OA movement. It also broadens the debate to include the views of interested publics. Finally, it argues for expanded access to HSS research and a change in how that research is conceptualized, engaged with, and valued. The OA movement, and the larger debate around access to knowledge, has repercussions for how the university functions, how research happens, and how the public stands to benefit.

The importance of this topic is evident in the open access policies created by the research powerhouses of the world, governments and funding bodies. The Canadian Federation of Humanities

and Social Sciences (CFHSS); the Canadian Union of Public Employees who represent HSS scholars; and SSHRC, responsible for funding HSS research in Canada, have all declared their support for OA principles. SSHRC has implemented, along with Canadian Institutes of Health Research (CIHR) and Natural Sciences and Engineering Research Council (NSERC), the Tri-Agency Open Access Policy on Publications, in place since 2015.[7] This policy, while mandatory for all researchers that receive Tri-Agency funding, is presently not enforced. The access to research problem is also of concern to all scholars who are navigating a research dissemination system that is in transition.

Access to research has direct economic and other kinds of benefits. The high costs of some scholarly journal subscriptions, that are directly related to the high profits of the major commercial scholarly publishers, translate to a highly-contested knowledge market. Considering that scholarly publishers own the knowledge stocks created by scholarly researchers, and have a monopoly on this knowledge and control its distribution, this should be reason enough for a critically-minded academy to want to change the status quo. The economic reality of journal publishing should also be taken into account in thinking about the sustainability of our scholarly practices. In addition, preventing access to research may also affect the pace of innovation, or the ability to capture research impacts. This dissertation contributes to the discussion about impacts and takes the position that economic value is not the only measure of research success: solving social problems, creating a thoughtful citizenry, and improving how we experience life, are guiding features of HSS research (Severinson, 2017). Research impacts in the humanities and social sciences need to be better understood, and impacts are directly related to the accessibility of research. For example, the kinds of research impacts discussed with my interview participants include how to better assist youth in the criminal justice system, how to improve mental health, best practices about teaching, how to enable women to gain knowledge about their

[7] http://www.science.gc.ca/eic/site/063.nsf/eng/h_F6765465.html?OpenDocument

finances, how to improve life for people suffering from homelessness or poverty, and how to support the growth and development of families.

Finally, despite many gains, the OA movement has not achieved its goals, and the battle over access continues to rage. Advocates are concerned that the traditional methods of research publishing remain firmly entrenched due to path dependence, strong intellectual property law, and perceptions of prestige and research quality (Altman & Avery, 2015; Eve, 2014; Green, 2018; Lariviere, Haustein & Mongeon, 2015; O'Donnell et al., 2015). This situation calls for more analysis and understanding of the publishing environment, more buy-in from the scholarly community, and an awareness of the needs of the public. For example, my own discipline of communications has not strongly embraced the OA paradigm. In a study by Archambault, Amyot, Deschamps, Nicol, Provencher, Rebout, & Roberge (2014), only 31% of publications in "communication and textual studies" were open access, compared to 71% in biomedical research.

Relevant Literatures

This dissertation is based on a review of relevant literatures that inform the context for the OA movement, the theory behind access to knowledge and the public good, and areas of scholarship that are focused on operationalizing research dissemination and transfer. These literatures can be divided into three groups. The literature on open access publishing forms the basis for discussion, mostly located within library and information studies (LIS) and scholarly publishing fields, informing chapters two and three. My theoretical argument is bolstered by a range of literatures and perspectives on access to knowledge, outside of OA discussions, particularly in my critical analysis of open access and the public good. Several literatures are closely connected to open access, and their influence is referred to throughout the study, and in my conclusions.

Open Access – relevant themes:

- Benefits of open access to research

- Scholar/research attitudes towards OA publishing and self-archiving
- Income/business models for OA implementation
- Research life-cycle models
- OA in the social sciences and humanities
- History of OA movement and the crisis in scholarly publishing

Literatures for critical and theoretical discussion of OA:

- Communications history - history of scholarly communication and communications monopolies
- Literature on intellectual property and copyright
- Evolution of the university and role of public intellectuals
- Research policy
- Economics of knowledge
- Sociology of knowledge
- Critical political economy of communication

Areas of inquiry that incorporate open access principles:

- Engaged Scholarship
- Open science/scholarship
- Knowledge mobilization (KMb)
- Research Impacts

HSS research has the potential to be more open to diverse publics, prioritize community-based research, and incorporate many kinds of feedback from the public into the research process. This kind of reorientation is already at work in many disciplines and areas of research. Scholars are widening their vision for openness in arguments for open science and open scholarship (Tennant et al., 2019), scholarship about HSS research impacts (Bastow, Dunleavy & Tinkler, 2014; Bate, 2011), and knowledge mobilization (Kischuk, 2013; Anderson and McLachlan, 2016). Canadian scholars are

actively working to promote open access (Willinsky, 2006; Harnad,1994; 2004), open scholarship (Shultz and Kajner, 2013), knowledge mobilization (Phipps, Cummings, Pepler, Craig & Cardinal, 2016; Cooper, 2014) and digital humanities initiatives (Sinatra, 2015; Schreibman, Siemens, & Unsworth, 2015).

Outline of Dissertation

Chapter 2: The Pre-History of Open Access Set Within the History of Scholarly Publishing

The historical review and analysis of the development of scholarly journals since 1665 sets the stage for why the crisis in scholarly publishing happened in the 1980s. This crisis was the major motivation that led to the Open Access movement in the twenty-first century.

Chapter 3: The Open Access Movement and Other Curious Minds

This chapter discusses open access in greater detail, from the perspective of the humanities and the social sciences, and argues that interested citizens and publics are important stakeholders in the debate about access to research.

Chapter 4: How Knowledge Flow Serves the Public Good

Chapter four provides a meta-theoretical explanation for how open access to HSS research serves the public good. It defines the public good, the unique features of knowledge, the emancipatory potential in tacit knowledge, and the methodological imperative of the double hermeneutic to create a theory of knowledge flow to support open access principles.

Chapter 5: Methodology

The chapter describes the methodology, data gathering methods, research sample, and methods of analysis. It details how the surveys and interviews with knowledge translators, HSS professionals and interested citizens were carried out.

Chapter 6: Survey Analysis

Chapter six details the findings from my survey of 119 respondents, including members of the public, knowledge translators and a smaller NGO/NFP sample. Findings support the conclusions that, among my sample, almost everyone does "research", people find innovative ways to satisfy their knowledge needs, non-scholars are open to reading journal articles, and attitudes towards experts are mostly positive.

Chapter 7: Interview Analysis

The interviews of knowledge translators and HSS professionals were very influential in conceptualizing knowledge flow theory, changing my analytical focus from a one-way knowledge translation perspective to a multi-way knowledge sharing vision. Interviewees were from a range of backgrounds, were involved in, or exposed to research in their professional lives, and possessed a wealth of tacit knowledge that they were willing to share. The interviews resulted in ten key themes around knowledge access and flow between the scholarly community and my selected publics, summarized by two categories: barriers to knowledge flow and improving knowledge flow.

Chapter 8: Conclusion

Conclusion

This dissertation raises difficult questions about ultimate goals of the open access movement: If we make access to HSS research open, will the public (non-scholars) benefit? Will non-scholars be able to use research knowledge? Will people choose journal articles over cat videos? Clearly, governments, research funders, and many post-secondary institutions already believe that open access will benefit society, judging by the numbers of mandates and policies requiring open access. The difficulty of forecasting behaviour when public awareness of this research in Canada is low, however, should not be a deterrent for promoting knowledge flow. The overall goal of this dissertation is to improve the system of knowledge dissemination that prevents publics from accessing research, by asking those publics about their views and their needs. Asking these questions might be interpreted as an instrumental or

utility-focused inquiry, however, if a renovation is planned, all stakeholders should be able to voice their ideas to promote the best possible outcome.

This research presents a case that open access publishing is a basic requirement for improving knowledge flow from the academy to society, and argues that the social sciences and humanities disciplines in particular have an obligation to promote knowledge flow in our world, because our area of inquiry is humanity. Evaluating research dissemination from the perspective of public stakeholders provides more all-encompassing justifications for open access to HSS research that accounts for the complete research life cycle. I argue that my research question and methodology stands in the gaps between dissemination, translation and feedback. Dissemination is the first step required before translation can happen. If interested publics cannot even access scholarly research, there is no sense in talking about research transfer or impacts. In addition, if non-scholars are not aware of the value of HSS research, there will be no demand from possible publics for this knowledge. Finally, if feedback from research participants, interested citizens and other publics is not incorporated into changing research dissemination models, scholars will have missed an opportunity to improve knowledge flow, promote inclusive research communities, and remodel research practices for the public good.

Chapter Two

The Pre-History of Open Access Set Within the History of Scholarly Publishing

He who receives an idea from me, receives instruction himself without lessening mine; as he who lights a taper at mine, receives light without darkening me.[8]

--Letter from Thomas Jefferson to Isaac MacPherson, 13 August, 1813, *Writings* 13:333--35

This chapter discusses the historical antecedents of the Open Access movement before and including the serials crisis, focusing on the initial freer flow of research knowledge to the public, in some ways, and the suppression of that flow as time progressed. To date, only a few discussions of open access have included any historical analysis of journal publishing before the twentieth century to contextualize the problem (Fyfe, Coate, Curry, Lawson, Moxham, and Røstvik, 2017[9]; Guédon, 2001[10]; Willinsky, Provençal, Jankowski, & Jones, 2013; Willinsky, 2018[11]). An historical review is important to show how notions of the public good helped to urge on the cause of OA, but were not the primary motivating factor, and to highlight the relationship between scholars, publishers and librarians, that changed significantly. A. J. Meadows (2008), in his book *Communicating Research*, emphasizes the importance of the history of research communication because "the way in which research communication is organized today often reflects decisions made in the past" (p.10). While the OA movement was a direct response to the serials crisis in scholarly publishing, mostly affecting the community of research libraries and scholarly publishers, but also the wider academy, many factors led to the current state of transition and upheaval. By briefly tracing the early history of scholarly journals, this chapter discusses how early journal correspondence was motivated by a need to improve communication efficiency; how

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[8] http://press-pubs.uchicago.edu/founders/documents/a1_8_8s12.html

[9] Note this resource was very recently found in my last edit of my complete version of my dissertation. Clearly, more interest in the longer history of OA has recently appeared in the literature.

[10] This work is not a peer reviewed publication, but published by the Association of Learned Libraries.

[11] Note that Willinsky's book, *The Intellectual Properties of Learning: A Prehistory from Saint Jerome to John Locke*, was published after my first draft of this chapter. I was pleased that his far better researched and detailed work came along to supplement the claims I was making about the importance of connecting the OA movement to the long history of scholarly publishing. His historical analysis ends almost where mine begins.

this correspondence originally included and was dependent on a wider public readership; how the separation of journals into sciences and humanities disciplines was part of this origin story; and how marketization and the relationship between publishers, librarians and the academy led to the present-day crisis in scholarly publishing, otherwise known as the serials crisis.[12] This chapter begins to answer the critical questions regarding how scholars became beholden to publishers for the dissemination of their ideas, how the connections between scholars and the public diverged, and how digitization and high profits resulted in further motivation to control the flow of knowledge.

Brief History of Scholarly Journal Communication

Understanding the motivations for journal communication, the role non-scholars played in early scholarly communities, and the complexity of this early communications history will illuminate the problem of open access in a more critical and informed manner. This complex history is shaped by the diffusion of the printing press, the creation of copyright, and the evolution of the purpose of universities. The first journals were created for practical and scholarly reasons and were motivated by commerce, increasing efficiency, and even patriotism. The *Journal des Sçavans*[13] is credited with being the first journal publication, appearing in France on January 5, 1665. Soon after, the *Philosophical Transactions*[14], first published in March 1665 in England, was the debut of journal publishing in English. These first journals were the beginning of a long and generally congenial relationship between scholars and publishers. This relationship allowed scholars to focus on the business of knowledge creation, rather than its dissemination, helped to advance scientific knowledge by building on previous discoveries, differentiated expert contributions to science from popular notions or

[12] While this exercise might be interpreted as a socio-technical analysis of the history of journals, I see it more as supporting the critical theory perspective that acknowledges the importance of historical analysis and understanding in the critical process.
[13] The title was later changed to *Journal des Savants* (Banks, 2010).
[14] The full title of the first English language journal was *Philosophical Transactions: giving some accompt of the present Undertakings, Studies and Labours of the Ingenious in many considerable parts of the World.* (Meadows 2008, p. 6).

expressions, and established the convention of peer review and merit evaluation (Meadows, 2008; Merton, 1973).

The complicated and fascinating history of these journals demonstrate the complexity of journal communication from the outset. Dennis de Sallo conceived of the *Journal des Sçavans* as a special kind of news pamphlet, modelled after the *Gazette* of Paris, but thought of as a "literary journal" that recorded events, reviewed books, and appealed to "a public that was interested in discussion, that savoured irony and appreciated good writing, and was not on the whole afraid of controversy" (Brown, 1972, p. 368). The first scientific journal written in English[15], and focusing more on scientific discussions and discoveries, was the flagship of the Royal Society of London[16]. Not unlike today, the *Philosophical Transactions* was an innovation in communication that came from the need to make a labour-intensive and slow system of communication, that relied on letter mail correspondence, more efficient. The primary goal of this new medium was to improve communication amongst the group of seventeenth-century individuals and scholars that were keenly interested in the latest developments and discoveries in science and culture (Meadows 2008, p.7).

Historians point out that both of the original publishers of the first journals hoped to profit economically from this new communication format, although profit was not the reason journal communication survived through the centuries. Both de Sallo and Oldenberg saw the utility of creating a scholarly journal as a means to fulfilling a demand for new knowledge (Banks, 2009; Brown, 1972; Meadows, 2008; McDougall-Waters et al, 2015). While profit, communal debate, and efficiency were all motivating factors, Meadows (2008) believes that the "need to communicate with a growing clientele interested in new developments in as efficient way as possible" to be the strongest catalyst (p. 7). McDougall-Waters, Moxham, & Fyfe (2015), in a publication celebrating the 350th anniversary of *Philosophical Transactions*, detail how the journal adapted through the centuries. In the beginning, the

[15] Note that Latin and French articles were also published in the *Phil Trans* (Banks 2009)
[16] The name 'Royal Society' came from the patronage of King Charles II in 1662.

journal was the pet project of Oldenburg who often wrote the articles, personally and financially supported the journal's operation, and mostly struggled to make ends meet. In the 1750s, the Royal Society took over full responsibility for the journal. In the eighteenth-century, the Society struggled to publish the journal as it consistently operated at a deficit. By the mid-nineteenth century, processes for submission, reviewing and editing became more formalized. This corresponded with the increasing professionalization of science. In the late 19th and early 20th centuries, disciplinary-based learned societies proliferated, and often acted as journal publishers for their members. Given their status as non-profit organizations, these organizations rarely charged enough for periodical subscriptions to turn a profit from their journals, particularly in the HSS, where print-runs were low and costs to publish high, and many societies struggled to maintain their publications.[17] Then finally, in the mid-twentieth century, "learned society publishing started to be considered as an income stream rather than a charitable expenditure" (McDougall-Waters et al., pp. 4, 23). Amazingly, not until 1948 would *Phil Trans* actually start to turn a profit, due to an increased interest in scientific research and a surge in subscriptions. Up until this time the journal was a sort of labour of love for the Royal Society, and often a source of contention, as a result. Completing the history, *Phil Trans* published their first online journal in 1997, and have made their back issues up to 1943 open access.

Various scholars and historians emphasize the importance of learned societies in the history of scholarly journal communication.[18] Pedersen (1996) describes how a new class of citizens who were wealthy, educated "culturally alert and conscious of the value of higher education" contributed to the formation of "academies" in Italy in the sixteenth century (p. 480).[19] McNeely (2009) shows that these

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[17] An exception being the American Chemical Society – In 2014, the American Chemical Society reported revenue of $531 million principally generated through its Publications Division and the Chemical Abstracts Service (CAS) Division *https://www.acs.org/content/acs/en/about/aboutacs/financial/overview.html*

[18] McNeely (2009) points out that many of these studies focus on the role of learned societies and academies in the rise of the scientific revolution and overlook their humanist origins, or neglect to give credit to the "humanistic academy" for shaping modern science (Daston, 1991, 1998; Shapin, 1988, 1994).

[19] The first scholarly society is considered to be the Platonic Academy of Florence, sponsored by Cosimo de Medici in 1442 (Willinsky, 2018, p. 212).

"pre-scientific academies of the late Renaissance" included women in their midst, focused initially more on literary pursuits, and provided an alternative space for adult education (p. 230). Willinsky (2018) echoes this point as the first academies showed keen interest in both natural history (what we would call science), and "humanist studies", and "broke down the traditional boundary between patron and learned to be found in monastery and university" (p. 212).

By the 17th century, the learned society model had proliferated throughout Europe, and the audience for journal publications was diverse and included many lay non-scholars (Willinsky, 2018). Interested citizens comprised a good deal of the original membership of the Royal Society in England, and were keenly supportive of the development of science and new discoveries in all fields of inquiry. David Kronick (1962), in his detailed history of the rise of journals in the 17th and 18th century, points out that "the gap between the scientist and educated layman had not yet become great enough to create a communications barrier between them" (p. 239).[20] Banks (2012) calculated that in the late 17th and 18th centuries, at least 50% of the Royal Society members were from the leisure class (para. x). Daston (1998) makes an important point that the Royal Society and its members resisted being classified as a scientific academy and "not until the 1870s could the Fellows of the Royal Society be described as mostly 'professional scientists'" (para.vii).

As an example of the importance of the educated upper classes to the development of scientific correspondence, General Samuel Wegg, the Governor of the Hudson's Bay Company, was also a strategic patron for the Royal Society (Ruggles, 1978). He promoted the collection of geographic and natural history data from the New World, and also served as treasurer of the Society, showing himself "to be in the ranks of those seeking to increase both trade and knowledge" (Ruggles, p. 2). Valle (1999) describes the various groups milling about the early Royal Society – the serious "natural philosophers";

[20] Note Kuhn's (1962) argument that the reason scientific correspondence of the 17th and early 18th century was accessible to the layman was because it was the beginning of where medieval scientific concepts were being replaced by new paradigms in science such as concepts like electricity, gravity etc. and the practice of science became based on observation and fact.

the "virtuosi", or "those mainly interested in curious facts and in the unsystematic collection of specimens of various kinds"; and the "exoteric community" that he separates into a more dedicated group of educated men, and the "genteel London public" who attended Royal Society meetings because it was fashionable (p. 111). Numerous authors (David, 1997; Dobbs, 1990; Eamon, 1990) have also shown that the scientific revolution in the seventeenth century, saw the rise of "open science" because scientific discoveries were shared among the greater public, rather than discussed only among a small learned community (in Mokyr, 2004, pp. 35 – 36). The openness of early scientific communities was a key factor in the high levels of innovation of this time period as well. The proliferation of both scholarly and professional societies in the 17th – 20th century resulted in the growth of journal publishing, the construction of libraries, and the development of professional standards, to name just a few of the benefits (Meadows, 2008, p.10).

This early, positive sense of "openness" must not be taken too literally, however, because barriers of class, education, and exclusion still existed throughout the period. In addition, Pedersen (1996) points out that during the Enlightenment, the periodicals of the academies enabled a wide-range of people to stay current on scientific and scholarly progress, but the learned societies caused a separation between teaching and research, as scientists drew away from universities, and formed their communities within the wider and more permissive society boundaries (pp. 485-87).

Another relevant feature in the early development of journals regards the different approaches to content. *Philosophical Transactions* is considered the first scientific journal, reporting on the observation of phenomenon, new discoveries and results of experiments, and avoiding religion or politics; whereas the *Journal des Sçavans* is considered the first humanities journal in terms of content, publishing book reviews, and articles on religion, history and art (Banks, 2009, para.87; Meadows, 2008, pp. 6-7).[21] This early distinction between the sciences and humanities audiences, by the 20th

[21] By contrast, Guédon (2001) sees the Journal des sçavans more as scientific journalism, akin to *Scientific American* publishing more news-like content, than as a journal recording new scientific knowledge.

century, had become what C.P. Snow (1963) has called the "two cultures", referring to another kind of communications barrier between scientists and humanities scholars, between those who think and work in quantitative or positivist terms and those who respond better to qualitative or evaluative descriptions or research. Meadows (2008) points out the numerous differences in how communication differs in scientific versus humanities journals. For example, humanities journal articles have "less information content" in their titles, fewer authors, rarely contain abstracts, and use different approaches to editing than science journals (pp. 11-13). Another publishing distinction that has changed over the centuries between the two spheres is that in the humanities today, scholarly monographs are often more important than journal articles; whereas the reverse is true in the sciences, although this was not always the case (Meadows 2008, p. 17).[22] An important difference when it comes to journal publishing is the longevity or value of humanities journal articles versus STM articles, where the former generally retain their importance and currency for longer periods of time than the latter, that might lose their value in a matter of months (Borgman 2007, p. 63; Kronick, 1962).

The development of the journal article cannot be separated from the parallel histories of the printing press, the development of copyright, and the evolution of the university, although space does not permit more than a mention of their significance. Universities in England and Europe owned and operated some of the earliest presses, and were authorized to print books, manuscripts and journals at a time when this practice was strictly controlled by political and religious rulers. The business of printing was politically charged and often dangerous.[23] The Sorbonne had the first university press in 1470, Cambridge University press started in 1584 and the Oxford University Press was given permission to

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[22] Before and for some time after the rise of journal communication, the book was the most important form of communicating scientific knowledge, and scientists such as Copernicus, who published *On the Revolutions of the Celestial Spheres* in 1543, and Francis Bacon who wrote *Novum Organum Scientiarum* in 1620, circulated their ideas in manuscripts and private letters before publishing the larger works officially.

[23] For example, see Charles II "An Act for preventing the frequent abuses in printing seditious treasonable and unlicensed Bookes and Pamphlets and for regulating of Printing and Printing Presses". https://www.british-history.ac.uk/statutes-realm/vol5/pp428-435. Henry VIII constantly changed his mind about what texts were permissible, to be printed or owned, such as whether Bibles in the vernacular would be allowed in the home or owners punishable by death.

operate in 1586 (Eisenstein, 1979). The printing press, and the use of the vernacular, enabled the wide dissemination of knowledge to "all strata of society" (Pedersen 1996, p. 459). Whereas the invention of the printing press is credited with helping to fuel the fire of various revolutions from the 15th century onward (Eisenstein, 1979), it took almost two hundred years from the time of the printing of the Gutenberg Bible in 1552 to the creation of the first journal publication, as books were the primary mode of scholarly communication at the time.

Although the universities of the seventeenth century cannot be given credit for the creation of the scholarly journal, universities very quickly adopted the new communications medium to support and advance scientific inquiry and humanist scholarship. In the 1600s, the university had been in existence for 500 years in Europe[24] and was well on the way to becoming the modern institution we know today, guided by concepts of humanism, intellectual freedom and collegial fraternity (Rüegg, 1996; Willinsky, 2018). These concepts were central to the purpose and motivation of scholarly journal communication, and the function and purpose of the university became firmly entwined with the support of scholarly publishing in the ensuing centuries. By the 18th century, learned and professional societies proliferated both within and outside the university. As knowledge expanded and inquiry became more specialized, journals also became a way for scholars to define their communities and spheres of influence (Kuhn, 1962,[25]; Merton, 1973; Meadows, 2008). Stichweh (2001) locates the development of scientific disciplines in the 19th century. Meadows (2008) describes how, also in the 19th century, university posts required both research and teaching ability, and this led to the creation of the doctoral degree, the formation of graduate schools, and proliferation of research personnel at universities and in industry thus adding to research output and the production of knowledge, requiring

[24] The University of Bologna is considered the first university, founded in 1088.

[25] "It is sometimes just its reception of a paradigm that transforms a group […] into a profession, or at least a discipline.[…]the formation of specialized journals, the foundation of specialists' societies, and the claim for a special place in the curriculum have usually been associated with a group's first reception of a single paradigm" (Kuhn, 1962, p.19).

the publication of more journal articles (pp. 24 – 25).

The long view of open access is also intertwined with the history of copyright. Guédon (2001) points out that early journals served as a kind of "public registry of intellectual property", helping to establish who should be given credit for a scientific concept or law (pp. 6-7). Willinsky emphasizes that the legislation that established copyright in England, the Statute of Anne in 1710, "gives pride of place to learning", as evidenced by the title "An Act for the Encouragement of Learning, by Vesting Copies of Printed Books in the Authors or Purchasers of Such Copies, during the Times Therein Mentioned" (pp. 7-8). Along those same lines, in 1789, the United States Constitution enshrined the special importance of "the Progress of Science and the useful Arts" in the intellectual property clause.[26] Willinsky (2018) emphasizes that "learning was front and center at the birth of the current legal sense of intellectual property" (p.8). Lessig (2004) explains, however, that even with the passing of the Statute of Anne, controversy over copyright continued as booksellers tried to maintain their "monopoly rights" to copy works amidst increasing public demand and competition between publishers for access to knowledge. This dispute led to the concept of the "public domain" that was used to argue that limited terms for copyright were a proper interpretation of the Statute and that booksellers right to perpetual ownership was not in the public interest (pp. 85-94). While copyright is meant to strike a balance between the rights of intellectual property creators (authors) and users (readers), publishers proved tenacious middlemen from the start.

This short history only brushes past the centuries to illustrate the evolution of scholarly journal communication, exemplified by *Phil Trans,* as a preface to the changes to the scholarly journal as a communication medium in the twentieth century. The diverse community of scholars, scientists, patrons and interested citizens were an important feature in the early development of science, and

[26] Article I, Section 8, Clause 8, of the United States Constitution gives Congress the enumerated power "To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries."

humanist scholarship. At that time, while new research knowledge may have flowed more easily towards interested citizens in some ways, other barriers existed, such as the whims and tempers of monarchs, class and educational barriers, and the less than lucrative job of running a journal.

Marketization and the End of the Love Affair in the Twentieth Century

Research journal publishing, for the first 300 years, was hardly a profitable affair, but it was a genial one. The ability to capitalize on the journal publishing market at a profitable rate of return was a hoped-for goal of the original research journals, but was finally perfected by the science publisher Robert Maxwell. Various factors had been developing for centuries, and have contributed to the seemingly rapid and extreme economic changes to journal publishing that took place in the mid-twentieth century: the unique relationship between publishers and scholars; the separation of HSS publishing and scholarship from STM publishing and scholarship; and digitization of text and rise of the internet. Unlike the first two, however, the third factor has followed a rapid trajectory, versus an evolutionary one. These factors have resulted in what critical theorists might call the commodification of research, but can be more carefully explained as the marketization of the scholarly journal industry.

Since the 17th century, when scholarly communities realized that using journals to communicate with group members was far more efficient than sending individual letter mail, publishers have been providing a valuable service for researchers by removing at least part of the burden of dissemination from their list of scholarly responsibilities. Librarians too, have played a vital role in archiving and distributing information for the good of the academic community and the public. Scholarly publishers have been exempt from the requirement to pay royalties back to journal authors because of the unique "academic custom for scholars to write journal articles for impact rather than money" (Suber 2012, p. 10). Suber calls this a "lucky accident" for Open Access, but it has also been a lucky accident for publishers. Since the first journals, the link between scholars, librarians and publishers has been the common mission of disseminating knowledge (Mullen, 2009; Rossiter, 2016). While publishing was

always important to career advancement and the circulation of knowledge, the increasing importance of research and the creation of new knowledge, as the defining measure of success for scientists and scholars, made researchers and universities ever more dependent on publishers (commercial or non-profit) for disseminating research results. The relationship between scholars and publishers was cemented further in the 20th century as the system of merit evaluation for scholars became increasingly tied to publication in prestigious journals.

In the latter twentieth century, the relationships that held the "research life cycle" together – scholar, publisher, librarian -- began to sour due to various factors: the changing journal market and the drive for profits, the increase in journals and journal articles, and the rise of computers and the internet. In the last two decades, the serials crisis, or the crisis in scholarly publishing, alienated the library community, as well as HSS scholars, from commercial publishers, as journal prices climbed, and HSS resources were the first to be cut.

In an article by Andrew Odlyzko (1999), entitled "Competition and cooperation: Libraries and publishers in the transition to electronic journals", he predicted that "for the publishers to protect their revenues and profits, they will have to usurp much of the role and resources of libraries. Further, publishers' success is likely to retard the development of an even more efficient system" (para.7). Arguably, Odlyzko's prediction has come true as the shared objective of knowledge dissemination has been diluted by the market imperative of competition and profit.

Slater and Tonkiss (2001), in their book *Market Society*, define marketization as "the permeation of market exchange as a social principal" (p. 25). This central feature of capitalism structures interaction, and is difficult to question given its hegemonic hold on our belief systems. Hesmondhalgh (2013), in his analysis of the cultural industries, employs the marketization concept to explain how most aspects of culture have been subsumed by the dictates of capital markets. Marketization is slightly less value-laden than the Marxist concept of commodification, where the capitalist market system always results in personal alienation and the loss of community.

Marketization is a more descriptive concept, being "a long-term process taking place over many centuries, involving commodification, a growing use of money as the basis of exchange, and an increasing division of labour" (pp. 127-128). Hesmondhalgh argues further that "there is nothing wrong with markets in themselves. They can potentially act, in certain cases and in certain social systems, as efficient and equitable allocators of resources" (p.128). This perspective influenced the neoliberal policies of the 1980s onward that assumed that loose government regulation of markets, privatization, and strong intellectual property rights was the best way to structure markets, including "knowledge" markets.

An example of the social effects of marketization is found in the story of Robert Maxwell and Pergamon Press. After WWII, a group of commercial publishers, led flamboyantly by Maxwell, began to realize the market value of scientific publishing. This increase in value was partially due to the increased demand and government interest in scientific research that skyrocketed in the wake of the Cold War, coupled with a growth in journals output that was straining the resources of non-profit journal publishers (Cox, 2002; Henderson, 2004). Up to that point, the journal market had been highly subsidized and run mostly by learned/scholarly societies and associations that published disciplinary journal articles for their members (Larivière, Haustein & Mongeon, 2015). Henderson (2004), a colleague of Maxwell's, describes how Maxwell seized opportunities in the educational publishing market by taking over the operations of prestigious association-run journals, and then substantially increasing subscription prices for libraries and individual subscribers. Initially, this process was innocently viewed as the outsourcing of the publishing function of the society, as demands on volunteer editors and unpaid or low-paid publishing staff were increasing due to the rising number of journal article submissions. Maxwell succeeded as the "hero of science dissemination" because he was able to cherry pick the best journals with strong reputations, and build further on their success by controlling production. In doing so, Maxwell and his contemporaries started the battle between librarians and publishers when the former found that they had little bargaining power over pricing, and the latter

realized that demand for journals was fortuitously inelastic (Cope & Phillips, 2014; Henderson, 2004, para. 34; Johnson, 2000; Suber, 2012; Thatcher, 1997, para. X)[27]. This meant that libraries were obligated to purchase journal subscriptions, regardless of the price, due to the demands of scholars for access to the knowledge they needed. The increase in subscription pricing, rising many times higher than inflation, resulted in further animosity towards publishers, as Johnson (2000) describes how "the emergent economic model replaced the traditional 'circle of gifts' between scholars and their societies, not with a real market economy but with a dysfunctional hybrid" (para. 9).

Maxwell's example set scholarly publishing free, in a sense, to operate according to "market principals", while still benefitting from the 300 years of cooperation and good will that had been established with the academic community.[28] On the one hand, Maxwell's entrepreneurialism resulted in the amassing of a large fortune. On the other, "Maxwell's braggadocio came to personify evil in librarians' account of the library crisis" (Henderson 2004, para 32). While commercial scholarly journals, beginning with the *Philosophical Transactions*, had been operating according to market principles (supply and demand) since their inception, owning the rights to journal articles, and using the free labour of scholars for centuries, relationships soured when values began to clearly diverge. Henderson points out further that "crowing about profits is hardly a sin in the real world of commerce, [but] it is alien to the Ivory Tower of academe where income and expenditures are always considered separately and 'profit' is never mentioned" (Henderson 2004, para. 32). The sin of profit, in the case of journal publishers, was not that they commodified journal communication, but that they were able to

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[27] Tenopir and King (2000) show how by the 1990s, commercial publishers captured 40% of the journal output, scientific/professional societies accounted for 25% and university presses and educational publishers for 16% (p. 60).

[28] Note that Anderson (2013, May 1) calls the scholarly publishing market "distorted" and "weird" because "author services are provided in a more-or-less normally competitive marketplace, because authors have a meaningful choice of venues for their work. Services to libraries, however, are not. The moderating pressures that competition exerts on price increases in more conventionally competitive environments do not apply in the journals marketplace. If a publisher decides to double what it charges a customer for access, the customer does not have the option of going to a competitor for a functionally similar product." His other argument that this results in "signal distortion" between libraries and publishers is very weak. The publishers cannot pretend to not have heard from libraries that their prices were too high for many years. https://scholarlykitchen.sspnet.org/2013/05/14/signal-distortion-why-the-scholarly-communication-economy-is-so-weird/

profit so grandly from a system originally based on gift exchange and free labour. It is interesting to compare *Phil Trans'* first publisher, Oldenberg, whose eagerness to connect with scholars around the world, resulted in him being accused of spying for the Dutch, and thrown in the Tower of London (McDougall-Waters et al., 2015); to Maxwell's rise to fame and fortune from the 1960s – 90s, and descent into infamy where he became "the man everyone loves to hate" (Henderson 2004, para.32). Maxwell's life ended with his tragic death, falling from the deck of his yacht.[29]

Another consequence of marketization has been the consolidation of scholarly publishers over the last two decades. In the 21st century, the journal publishing market, under the imperative of shareholder demands and profit margins, has seen considerable corporate consolidation, resulting in five major commercial scholarly publishers that dominate both the sciences and social sciences journal markets (Larivière, et al. 2015; Munroe, 2007). Note that this consolidation trend is not unlike what has happened in other communication and cultural industries where there have been similar concerns over monopoly control of information (Bagdikian, 2014; Herman & McChesney, 1997; Noam, 2009; Winseck, 2011). Market consolidation, explained further below, has made changes in the scholarly publishing economy even more difficult, as the publishing oligopoly continues to own the most prestigious journals, and control how they are disseminated.

The rise of the number of journals and journal articles being published has also created pressures within the scholarly publishing industry and between scholars and publishers, even before the advent of open access publishing. In 1965, Derek John de Solla Price demonstrated that the number of journals were doubling every fifteen years, though he seemed to question the need for this amount of research output in his landmark book on the history of science, saying:

[29] He fell from the deck of his yacht and drowned. Henderson (2004) speculates that it could have been an accident, suicide, or murder but nothing has been proven.

> I am tempted to conclude that a very large fraction of the alleged 35,000 journals now current must be reckoned as merely a distant background noise, and as very far from central or strategic in any of the knitted strips from which the cloth of science is woven. (1986 [1963], p. 118)

Since then, Bornmann and Mutz (2015) have shown that the publishing growth rate has increased to 9%, thus doubling every 9 years (in Van Noorden, 2014).[30] The catch-22 in Price's comment in 1963 about "distant background noise", whose volume is reaching a crescendo in 2019, is that the bureaucratic imperative for scholars to publish in order to get hired, stay employed, and advance in their careers, is driving the journal market that keeps scholars on the absurd publishing juggernaut rattling noisily along the road to knowledge.

This "data deluge" is significant, as Borgman (2007) points out, because it is also "pushing efforts" to create technological systems for organizing and analyzing this knowledge, as well as pulling scholars towards using new data analysis instruments (p. 6). What Price documented as an explosion of scholarly information in the decades following the war – Maxwell scanned for areas of high profitability. In addition, for-profit publishers invested in digitization and technological systems that enabled better searching and access for their subscribers.[31] [32] Willinsky (1998), citing Irving Louis Horowitz, points out that the real political problem of the late 20th century is "much less the *amount* of scientific information and technical material available than the *integration and accessibility* of the value of that information" (my emphasis; n.p.). Finally, Meadows (2008) makes two relevant points with regard to this trend towards "information overload": first, he shows that the feeling of being overwhelmed by information is not new (citing a chemist from 1826); and second, points out that scholars have adapted to the growth of information by specializing, responsible for only their small

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[30] The authors analyzed 755 million references in 38 million publications, including papers, books, datasets and websites, from 1980 to 2012.

[31] One of the benefits of OA is the ability to data mine article content, and strict copyright terms place barriers on growing demands for "big data" analysis.

[32] SINTEF. (2013, May 22). Big Data, for better or worse: 90% of world's data generated over last two years. *Science Daily*. Retrieved May 14, 2015 from www.sciencedaily.com/releases/2013/05/130522085217.htm

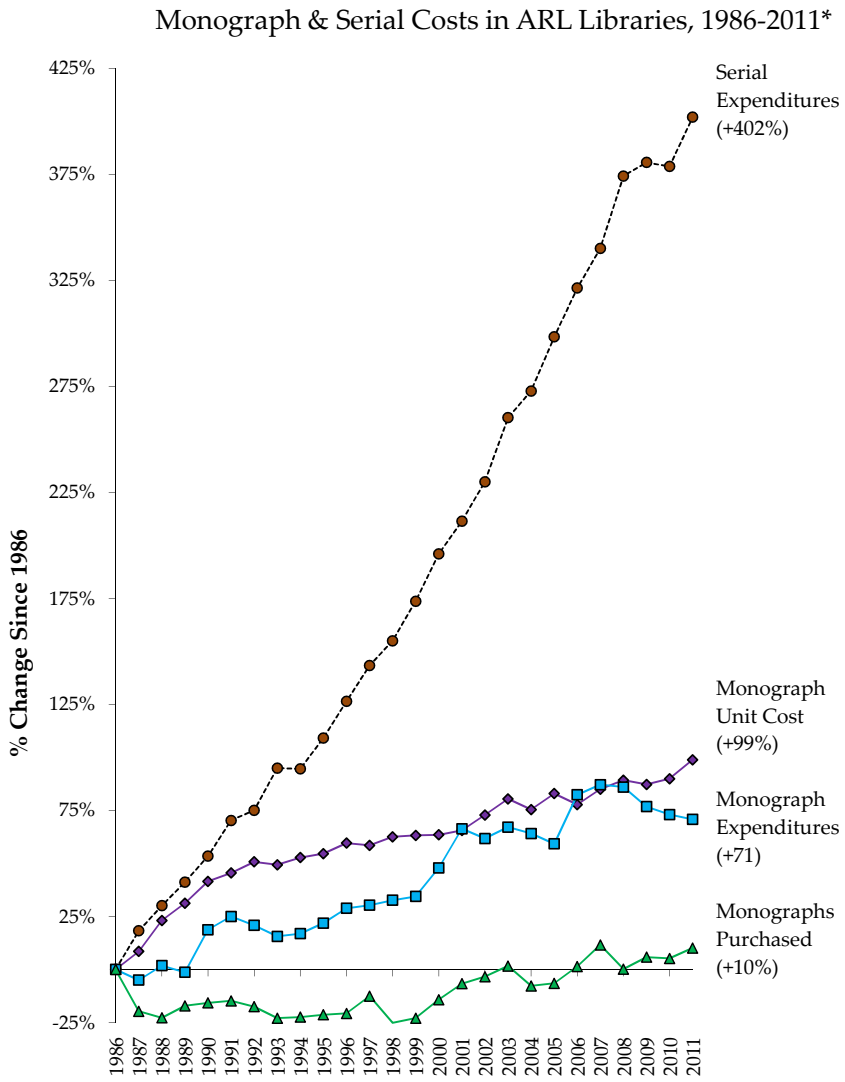
domain of knowledge in comparison to a whole discipline, such as in the past (pp.18-20).

The Serials Crisis is a Big Deal

Guédon (2001) shares the opinion that "being conscious of slow and deep historical movements is what thinking historically is all about, and we need the scale of this historical thinking to make sense of the serial pricing crisis" (p. 11). The Open Access movement can be understood as both a reaction to, and solution for, the serials crisis. The serials crisis, what some call chronic inflation, or "chronic illness" (Thatcher, 1997), others "greed" (Monbiot, 2011), and still others "good business",[33] came about as a result of the increased commercialization of journal publishing in the latter half of the twentieth century. In the graph below, the Association of Research Libraries has shown how the costs of journal subscriptions have increased by 300% over monographs since 1986, and that the annualized costs of journals rose 3.8 % higher than the consumer price index (Suber, 2012, p. 18; Ware and Mabe, 2015, p. 68).

[33] See any of Joseph Esposito's blog posts on the *Scholarly Kitchen* https://scholarlykitchen.sspnet.org/author/jesposito/page/2/

Figure 2.1 Monograph & Serial Costs in ARL Libraries, 1986 - 2011



NOTE: Data for monograph and serials expenditures was not collected in 2011-12.

Source: *ARL Statistics 2010-11* Association of Research Libraries, Washington, D.C.
*Includes electronic resources from 1999-2011.

The phenomenon is more aptly termed "the crisis in scholarly publishing" because the ever-rising costs of journals (serials) have had sweeping repercussions on the entire scholarly publishing industry (Eve, 2014, p. 171). This crisis has had major negative repercussions particularly for scholars in the humanities and social sciences. As far back as 1975, Bernard Fry and Herbert White noticed that the ratio of journal to book expenditures was decreasing, with more library budgets being spent on journal

subscriptions (in Thatcher 1997, para.x). This was the beginning of what would become a competition for library budgets between the STM disciplines and HSS, and between journal subscriptions, as their prices rose, and book purchasing. Michael Gorman, the Dean of Library Sciences at California State University at Fresno, lamented that library budgets for books have become "essentially, what is left over when the other materials budgets are determined" (Gorman, 2002, p. 266). Martin Eve, in his book *Open Access and the Humanities*, explains how prioritizing journals over book purchasing evolved partially from libraries' investment in science, technology and medical research journals compared to humanities monograph publishing. While the "serials crisis" seemed at first to be a problem of library budgets, this crisis forced choices to be made along disciplinary lines, drawing HSS scholars into the issue. Accordingly, the average prices of STM journals increased more than 600% between 1982 and 2002, whereas the prices of journals in HSS fields rose 250% (Bogart, 2002, p. 393).[34] Considering that promotion and tenure for humanists and social scientists often hinge on publishing of monographs (and secondarily of serials), the market for these books declined as libraries were obligated to spend more on purchasing journal subscriptions. This in turn has affected the viability and operations of university presses that publish scholarly works and rely on libraries as customers (Eve, 2014; Lorimer, 2013; McGuigan & Russell, 2008).[35]

Mergers and consolidation in the academic publishing industry – a spotlight on Elsevier and Taylor & Francis

The unusual economic features of the commercial scholarly journal publishing industry that Robert Maxwell profited from in the mid-twentieth century, continue to benefit the journal publishing

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[34] Note that a more in –depth discussion of book publishing, purchasing and pricing is not possible here, but refer to Association for Library and Technical Services, who publish extensive annual price indices http://www.ala.org/alcts/resources/collect/serials/spi.

[35] Both Lorimer (2013) and Eve (2014) detail how the digitization of monographs has been a positive for academic publishers, as on-line versions get more views than hard copies and also lead to more sales. Due to the scope of this dissertation, the problem of monographs within OA publishing business models is not investigated. Understanding who downloads and even purchases online monographs would be a helpful addition to scholarship about OA and the public good, however.

industry, and have resulted in unsustainable economic repercussions for the academy. Relations between publishers and the library community have become increasingly strained due to rising prices, and libraries have been consciously mobilizing against the monopoly power of publishers since at least the 1990s. Chressanthis & Chressanthis (1993) in an analysis of "Publisher monopoly power and third-degree price discrimination of scholarly journals" recommended that "research libraries need to combat the monopoly power of publishers by forming their own association of buyers of academic journals" (p.29).

Numerous critics and observers have voiced concerns regarding the high profits the large commercial publishers are reaping from journal publishing, arguably a direct result of low input costs i.e. free labour, combined with increased pricing and bundling practices, that have enabled a small group of publishers to dominate the industry (Eve, 2012; Beverungen, Böhm & Land, 2012; Fyfe et al, 2017; Morrison, 2012; Lariviere, Haustein & Mongeon, 2015; Lipscombe, 2001; Malakoff & Francisco, 2003; McCabe, 2001; McGuigan & Russell, 2009; Schmitt, 2014; Thompson, 2005; Ware and Mabe, 2012, 2015). In an article by McGuigan and Russell (2008) the authors compared the profit margins of the publisher Elsevier with those of "all periodical publishers."

Table 2.1: Operating Profit Margins

Table 1: Operating Profit Margins

Year	Elsevier Science & Medical	Total Elsevier Journals	All Periodical Publishers*
1998	35.9	25.7	4.9
1999	35.4	23.4	4.7
2000	36.4	21.0	4.3

*Industrial ratios based upon accounting periods from April 1 of year listed to March 31 of following year.
Reprinted from: "The business of academic publishing: A strategic analysis of the academic journal publishing industry and its impact on the future of scholarly publishing", by McGuigan, G., & Russell, D. (2008). *Electronic Journal of Academic and Special Librarianship*. 9(3), n.p.

McGuigan and Russell comment further that:

> We believe the publisher adds relatively little value to the publishing process. We are not attempting to dismiss what 7,000 people at REL [Reed-Elsevier] do for a living. We are simply

> observing that if the process really were as complex, costly and value-added as the publishers protest that it is, 40% margins wouldn't be available (n.p.)

To put this profit margin level into perspective, Chen (2014) shows that among the most profitable industries, pharmaceutical companies achieve a 30% profit margin, and savings banks an average of 24%. These high profits have allowed the large commercial publishers to further consolidate the market, as profits have been reinvested in acquisitions, buying up individual journals and publishers, resulting in what some have called a publishing oligopoly. Morrison (2012) points out that these profits levels were consistent during the middle of the global recession when universities were under severe financial pressures. Fyfe et al. (2017) rationalize that publishers have also employed typical business strategies such as trying to achieve economies of scale, and increasing penetration into international markets which may have also increased profits (p.9). Presently, the scholarly publishing oligopoly consists of Elsevier (RELX), Wiley-Blackwell, Springer, Taylor & Francis (Informa) and Sage.[36]

Currently, the publisher commonly known as Elsevier is the source of much controversy in the academy, owing to the increasing awareness of inconsistent peer review amongst its journals (Bohannon, 2012), and large profits margins, coupled with the growth of open access mandates for institutions (Grens, 2019). Elsevier built its publishing empire by continuing Robert Maxwell's practice of buying up of individual journals, and acquiring Maxwell's Pergamon Press in 1991. In 1987, Elsevier attempted a hostile takeover of Kluwer Publishing, but was prevented from doing so by Kluwer which joined forces with Wolters Samson[37]. In 1992, Reed International (British trade book and magazine publisher) and Elsevier (Netherlands-based scientific publisher) merged to become Reed-Elsevier. In the 21st century, the company has continued to purchase related businesses in the publishing, data analytics, and consulting industries; this conglomerate rebranding itself as RELX in

[36] These are the top five as outlined by Larivière, Haustein & Mongeon, 2015.
[37] From Wolters-Kluwer history: http://www.fundinguniverse.com/company-histories/wolters-kluwer-nv-history/

2015. Some of their high-profile publishing acquisitions in the HSS include Harcourt Publishing in 2010, Mendeley in 2013, and Social Science Research Network (SSRN) in 2016. Recently, research institutions around the world are using their buying power and renegotiating or rejecting "Big Deal" publishing agreements (see discussion below) with Elsevier and other top five publishers, including the University of California at Berkeley, Florida State University, Temple University, and universities in France, Norway, Germany and Sweden.[38] So far, this loss of business, however, does not seem to have damaged Elsevier's bottom line.

The following tables update data on the profitability of two of the largest commercial scholarly publishers Elsevier STM (parent company RELX) and Taylor & Francis (parent company Informa). These two companies were chosen for comparison as Elsevier is considered the most notorious player in the scholarly publishing oligopoly, and Taylor & Francis publishes a large proportion of HSS journals, and has also been a leader in open access adoption (Informa PLC, 2019).

Table 2.2: Revenue and Profits for Taylor & Francis 2014 - 2018

Year	Revenue	Adjusted operating profit	Profit Margin
2014	£408.9	£150.0	36.7%
2015	£447.4	£164.8	36.8%
2016	£490.4	£187.2	38.2%
2017	£530.0 million	£208.0 million	39.2%
2018	£533.2 million	£198.4 million	37.2%

***Figures are from scholarly publishing Division of Informa PLC [39]**

Table 2.3: Revenue and Profits for Elsevier STM 2014 - 2018

Year	Revenue	Adjusted Operating Profit	Profit Margin
2014	£2,048	£762 million	36.6 %
2015	£2,070	£760 million	36.7 %
2016	£2,320 million	£853 million	36.7 %
2017	£2, 478 million	£913 million	36.8 %
2018	£2,583 million	£942 million	36.4%

[38] https://sparcopen.org/our-work/big-deal-cancellation-tracking/
[39] From Informa Financial Statements 2014 – 2018 https://informa.com/investors/annual-report/

***Figures are from scholarly publishing division, Elsevier STM of RELX[40]**

While care must be taken when using measures like "adjusted operating profit", as the definition of how profit is calculated can vary between companies or industries; different ways of valuing the big five publishers' profits still result in an extremely high profit margin on a consistent basis (see public comments to blog post by Anderson, 2013). "Adjusted operating profit" is not a generally accepted accounting principle (GAAP), but rather a number used to inform shareholders about how well a company is faring financially.

In its 2018 Annual Report, Elsevier boasts that it is now publishing 60% more articles than a decade ago, and has achieved 18% of the share of global research output (RELX 2018 Annual Report, p. 14). Taylor & Francis is proud to acknowledge its business plan to adopt OA policies and create OA journals, though their hybrid practices of charging authors to publish OA, while at the same time charging libraries for subscriptions to these same journals, have resulted in a library backlash against "double dipping" (Esposito, 2016; Brembs, 2016; Fox & Brainard, 2019).[41] Even though they are now part of large conglomerates, the journal divisions of both companies bring in higher profits than the other business divisions. For example, in 2018, 40% of RELX's profits result from their Elsevier STM division, and subscriptions represent 52% of RELX's revenue.[42] Taylor and Francis represents 22.5% of parent company Informa's revenue, and 27% of profits as reported in their 2018 financial statements.

Both Elsevier and Taylor & Francis exhibit consistent growth and high profit margins despite increased competition, economic downturns, and possible disruption from open access publishing. These profit margins are in line with those pointed out in *The Economist* (May 28, 2011)*, The Guardian (*Monbiot*,* 2011, August 29)*, Nature* News (VanNoorden, 2013), and *The Huffington Post*

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[40] From RELX Financial Statements 2014 – 2018 https://www.relx.com/investors/annual-reports/2018

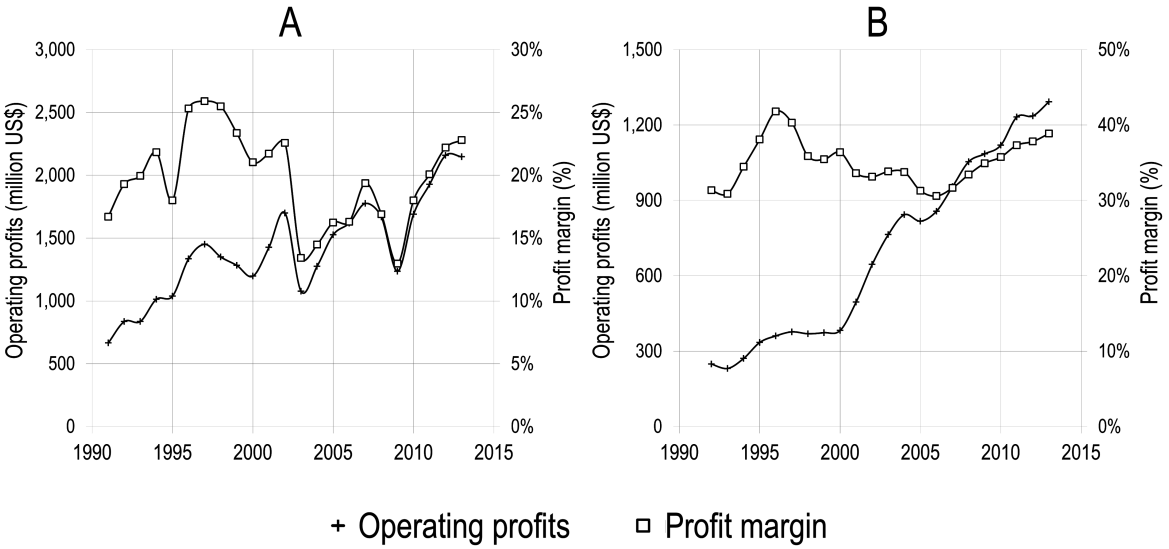
[41] https://bib.umontreal.ca/communications/nouvelles/nouvelle/cancellations-for-journals-published-by-taylor-and-francis
See also: https://sparcopen.org/our-work/big-deal-cancellation-tracking/

[42] Note that RELX also owns LexisNexis, a law and business database accessed through subscriptions.

(December 23, 2014), as well as Larivière, Haustein & Mongeon's (2015) 20-year data plotting Elsevier's profits and profit margins shown below for comparison, which have not dipped below 30% in the last thirty years.

Figure 2.2: Elsevier's Operating Profit Margins 1991 - 2013

Figure 7: **Operating profits (million USD) and profit margin of Reed-Elsevier as a whole (A) and of its Scientific, Technical & Medical division (B), 1991–2013**



Compilation by the authors based on the annual reports of Reed-Elsevier. (http://www.reedelsevier.com/investorcentre/pages/home.aspx) Numbers for the Scientific, Technical & Medical division were only available in GBP; conversion to USD was performed using historical conversion rates from http://www.oanda.com. https://doi.org/10.1371/journal.pone.0127502.g007
Note: Reprinted from "The oligopoly of academic publishers in the digital era," by Larivière, V., Haustein, S., & Mongeon, P. (2015).*PloS one*, *10*(6), e0127502.[43]

McCabe (2001) explains that the successful consolidation strategy of the journal industry lies in the fact that "because most companies' journal assets were highly differentiated, most if not all mergers appeared to be harmless. As a consequence, over the past decade or so, antitrust activity in the academic and legal publishing markets has been very quiet" (p. 158). Writing at the outset of the digital revolution, McCabe also pointed out that publishers could adopt a growth strategy where large

[43] Retrieved from: https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0127502&version=meter+at+null&module=meter-Links&pgtype=article&contentId=&mediaId=&referrer=&priority=true&action=click&contentCollection=meter-links-click

publishers could buy up small ones to avoid anti-trust legislation against mergers of large companies that obviously threaten competition.

The strategy of "adding relatively small numbers of journals at frequent intervals" (McCabe, p. 165) was adopted by Taylor & Francis. The company has in fact accelerated this practice, as Taylor & Francis (Informa) has continued to add companies to its publishing portfolio, 17 publishing-related purchases having been made between 2015 – 2017.[44]

The consolidation of the publishing industry is problematic from an economic perspective because it reduces competition and enables companies to control the scholarly publishing market, and by extension, pricing. The large publishers' high profit margins are problematic from the perspective of scholars because scholars are enabling these high profits through their free labour; and from the perspective of librarians, the large profits are problematic because pricing of journals is unfair (See Chapter Four section on the scholarly publishing as a failed market). Finally, consolidation is problematic not only because it has enabled high profits, but also in terms of the majority of scientific output these publishers control.

Larivière, Haustein and Mongeon (2015) provide ample evidence for this trend in their article "The oligopoly of academic publishers in the digital era." The research team analyzed 45 million documents between 1973 and 2013 to demonstrate that "the top five most prolific publishers account for more than 50% of all papers published in 2013" (p. 1). The authors argue that profits jumped when publishers digitized journal distribution as printing was no longer a major cost for them. During an annual shareholder meeting, Informa executive Christoph Chesher announced that regarding publishing in the field of education, "Taylor & Francis is the market leader, publishing 27% of all articles in the field. We hold a 32% share of citations, demonstrating that the research we publish is referenced widely by those in this field" (Informa PLC, 2019, p. 78).

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[44] See "Taylor & Francis" Wikipedia entry and https://www.webcitation.org/67OtiNRT5?url=http://www.ulib.niu.edu/publishers/TaylorFrancis.htm

More concerning for the HSS disciplines, these five publishers, Reed-Elsevier, Wiley-Blackwell, Springer, Taylor & Francis and Sage, control 70% of papers being published in the social sciences. Larivière, Haustein and Mongeon (2015) point out, however, that the publishing oligopoly does not have such a strong influence on publications in the arts and humanities, where only 20% of papers are published by the big five. Also, scholarship in these disciplines rely more on book publication, and journals are often run on small budgets and are owned by scholarly societies.

Esposito (2018, March 8), a blogger for *The Scholarly Kitchen,* asks the question:

> If the name of the game is to have a dominant market share in academic libraries, why don't the major STM publishers simply acquire more commercial journal publishers? They would if they could. The fact is that there are not many publishers left to buy; they have all pretty much been gobbled up already.

He then predicts that scholarly publishers, now that they have cherry picked the journal publishing market, may turn to acquiring textbook publishers and other data mining and analytics tools or services, allowing them more vertical integration. The problem of slim pickings, however, is concerning, especially for the social sciences, where the market share for journals (70%) is already at an extremely high level.

Companies strive for high profit margins and control of their market; however, knowing that these profit margins are achievable because publishers receive their content for free, and do not reward the creators of journal content, is one bone of contention for scholars. Librarians are advocating for change because the journal subscriptions are overpriced and these prices have contributed to high profit margins. Another metric for comparison that could fuel the fires of open access is the remuneration for executive directors of the big five scholarly publishers. While these directors manage large conglomerates, of which the scholarly publishing division might play one part, these generous salaries are in indication of an extremely rosy financial picture for each business entity.

Table 2.4 : Executive Director and CEO Salaries for Informa and RELX 2015 - 2018

Publisher	2018 Base Salary	2018 Salary +benefits +bonus +shares	2017 Base Salary	2017 Salary +benefits +bonus +shares	2016 Base Salary	2016 Salary +benefits +bonus +shares	2015 Base Salary	2015 Salary +benefits +bonus +shares
Informa PLC								
S. Carter	£829,398	4,074,868	825,271	4,132,219	817, 100	3,291,476	808,962	2,083,275
G. Wright	£472,912	2,053,762	470,559	2,047,157	465, 900	1,618, 839	459,000	1,128,689
RELX								
E. Engstrom	£1,218,000	8,414,000	1,218,000	8,748,000	1,160,000	10,563,000	1131,000	11,416,000
N. Luff	£ 717,000	4,398,000	700,000	4,394,000	683,000	4,974,000	666,000	3,513,000

Salaries UK Pound Sterling[45]

These salaries might not be unusual for corporate remuneration of CEOs of large conglomerates, where Bloomberg (Smith & Kuntz, 2013) reported that Fortune 500 CEOs were paid 204 times that of the average worker. What makes compensation of scholarly publishing executives different is the knowledge that the scholarly journal publishing business model depends heavily on the free labour of researchers for its success. These compensation levels can also be compared to other publishing salaries, where in 2014, the average salary (for men) was about $70,000 U.S.; and for women $51,000, based on a survey of the publishing industry by Publishing Weekly. Also in 2014, the top reported salary in the survey, for a VP Finance or Controller position was $255,000 U.S (Milliot, 2015).

Commercial publishers did not merely raise the prices, they made those prices nigh-impossible to negotiate. Enabled by the digitization of content, commercial publishers began to introduce "Big Deal"[46] package purchasing, that negotiated differential price agreements with universities in exchange for access to their complete list of online journal content. This pricing scheme added to the adversarial relationship between libraries and big commercial publishers because libraries had little negotiating power, prices for subscriptions continued to rise, libraries were forced to accept content they might not have wanted, and publishers were able to easily monitor unauthorized electronic access of their

[45] Base salaries for 2018 in Canadian dollars according to the Bank of Canada rate on August 19, 2019 are $1,338,067.79 (Carter); 762,948.93(Wright); 1,964,999.40 (Engstrom); 1,156,736.10 (Luff)

[46] Kenneth Frazier (2001) coined the term "the Big Deal" and argued that, although the big deal might seem like a benefit to individual university libraries, it will harm the academic community overall (in Bergstrom et al, 2014, p. 9426).

copyrighted material and fined universities that breached contracts (Bergstrom 2010; Bergstrom et al 2014).[47]

One of the main ways that libraries have dealt with the changes to the scholarly publishing industry is through organized collective action. McGuigan and Russell (2008) call the creation of buyer consortia or alliances a "time-honored strategy that addresses the problem of publisher concentration" (para.x). The Scholarly Publishing and Academic Resources Coalition (SPARC)[49], The association of European Research Libraries (LIBER) [50], and the Canadian Association of Research Libraries (CARL), have been instrumental in supporting and promoting OA and other concerns in their membership. According to Ware and Mabe (2012) consortia arose to improve efficiency, centralize purchasing, and improve purchasing power, and that over 5000 libraries worldwide are part of such organizations (pp. 18-19). Also, an extraordinary amount of scholarship on OA has come from within the information sciences and library community, in terms of publishing, conferences and other resources. Hahn, Burright and Duggan (2011) point out that librarians have gained tremendous expertise regarding copyright and are poised to become "more than foot soldiers in this revolution by adopting systematic strategies to address faculty lack of awareness, by negotiating their author rights and establishing IRs for publishing faculty work" (p. 26). Finally, research libraries have shared knowledge about pricing, created content repositories like *Synergies* and *Erudit* in Canada, and even taken on publishing functions themselves (Collister, Deliyannides, & Dyas-Correia, 2014; Read, 2008; Walters, 2012).

Conclusion

This brief historical review was written with the awareness that further detailed study is

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[47] Bergstrom, Courant, McAfee and Williams (2014) determined the pricing of Big Deal contracts through Freedom of Information Act requests as the costs of these packages were protected by non-disclosure clauses signed by institutions. Note that Anderson (2017) acknowledges the recent massive library cancellations as a reaction to Big Deal pricing, and admits that "hardly anyone ever believed that the Big Deal was going to be a sustainable arrangement for the long run." https://scholarlykitchen.sspnet.org/2017/02/21/forbidden-forecast-thinking-open-access-library-subscriptions/

[49] https://sparcopen.org/who-we-are/

[50] http://libereurope.eu/

required to explain the origins and legacy of journal publishing within the university as an institution, and the external effects on wider society, in the context of the access to research debate. To date, no review or analysis of the open access movement has gone into deep historical detail that scrutinizes the development of scholarly publishing from its inception to the present day, and the greater context for the current upheaval in the system. Understanding the history of scholarly journal communication is important as early journal correspondence was motivated by a need to improve communication efficiency, included and was dependent on a wider public readership, and resulted in the early separation of journals into sciences and humanities disciplines. The origin story is further contextualized by understanding the forces of marketization and the relationship between publishers and the academy which created the present-day crisis in scholarly publishing, otherwise known as the serials crisis, which supports the argument that relations between publishers and libraries have become more competitive rather than cooperative as a result of marketization. Clearly, more foresight was needed to understand how decisions about research dissemination would be affected by privatization, a sentiment echoed by the Pew Roundtable (1998) that declared (unhelpfully) that the serials crisis should have been addressed thirty years previously.[51]

Any historical account that attempts to describe the communication of research through the centuries must acknowledge the social and economic complexity of scholarly communication (Borgman, 2007; Meadows, 2008; Merton, 1973). This complexity stems partially from the practical and theoretical needs of different disciplines; increasing specialization within disciplines; the professionalization of research; changes to the university as an institution; the myriad public and private forms of communication that exists between researchers and between scholars and the public;

[51] "The broader lesson is that the ripest moment for creating a system of scholarly discourse in printed form that might serve institutions and their faculty in a fair and cost-effective manner occurred some 30 years ago. At that time universities might have exercised a stronger hand in shaping the publication system and the disposition of rights to intellectual property created on their own campuses." (Pew, 1998, p. 4)

socio-political effects such as the French Revolution[52], the two World Wars[53] or the global recession of the early 21st century; and changing communications technologies. Despite this complexity and the destabilization of technological change, Borgman (2007) points out that "the purposes of scholarly communication remain remarkably stable" (p. 48), and Ware and Mabe (2015) also remind us reassuringly that "the underlying needs of researchers remain largely unchanged" (p. 14). In the next chapter, I take up in more detail the similarly complex recent history of Open Access as a solution to the serials crisis, and as a reaction to the enclosure of knowledge, what might be thought of as the narrow and broad context of the problem of research dissemination.

[52] The *Journal des Sçavans* ceased publication during the French Revolution.
[53] The number of research publications declined in the periods between the two World Wars (Meadows 2008, p.19)

Chapter Three

Open Access, the Humanities and Social Sciences, and the Public

Open access could be the next step in a tradition that includes the printing press and penny post, public libraries and public schools. It is a tradition bent on increasing the democratic circulation of knowledge.

--John Willinsky, *The Access Principle,* 2006*,* p.30

Initially, the crisis in scholarly publishing seemed to be merely a concern for libraries and the scholarly publishing industry. Today, awareness has penetrated the academic community, though arguably deep understanding of the issues is still not widespread. This chapter broadens the discussion beyond the library, beyond the academic community, to include the greater public in the access to knowledge debate. I maintain that the lack of engagement with public stakeholders was one of the missteps in the OA movement. Only by reaching beyond the boundaries of the university, and interrogating the problem of access on a grander scale, can the public good goals of the OA movement truly be realized. Before tackling the grand vision, however, I must first address Open Access, the social movement, with greater granularity.

In this chapter, I will discuss the recent history of the OA movement, where most discussions of open access begin[54], when the Academy realized that research distribution was not just a library problem, and the OA movement mobilized to address the issue of access to research. This discussion takes a non-linear approach to the story, emphasizing cultural aspects of this development rather than technical. Focusing on the seeds of the movement shows that motivation for open access falls into two main categories that are not mutually exclusive: the view that an expensive and inefficient system needed to be overhauled, and the notion that knowledge should be democratized, that is, flow freely for the public good. Arguments in support of OA differ regarding whether they are renovation focused or normative; take a systems perspective or a culture perspective; address scholars' attitudes, the library's role, or research policy. The OA movement is also part of a larger ethos, founded on the notion of openness and freedom, which I call "open discourse." These arguments and attitudes enabled the operationalizing of the OA concept, as well as the growth of OA publishing, as the weight of arguments for openness permeated the STM disciplines, and to a lesser extent the humanities and social

[54] Peter Suber's open access timeline beings in 1966. https://legacy.earlham.edu/~peters/fos/timeline.htm

sciences. Although the numbers of OA journal articles continue to grow, researcher attitudes indicate that lack of understanding and awareness are still an issue in the academic community, particularly in the HSS disciplines. Returning to the problem of engagement with public stakeholders, this leads to the discussion about the changing audience, or market, for journal communication. Finally, despite the apparent success of the OA movement, evidenced by the ever-growing numbers of OA articles, journals, mega-journals and resources, the question remains whether the renovations to the scholarly communication system have proved a success, or whether the renovation project is really just beginning.

Not Just a Library Problem

Initially, the plight of libraries was not well-known or understood outside of the library community. In 1998, the Pew Higher Education Roundtable described the quandary of rising costs and declining access ironically as "the library's problem", lamenting that the greater academic community needed to understand the repercussions of ignoring this problem (p. 1). In the 1990s, the serials crisis was an everyday concern of the research library community and the above Pew report called the problem "old news" (Pew Higher Education Roundtable, 1998, p.2). Further, the "talk amongst ourselves" culture promoted by modern journal communication may be one reason why the greater academic population, especially in the HSS, was not aware of the challenge facing libraries. Initially, scholars remained ignorant of the problems resulting from the marketization of journal publishing, perhaps because scientists had divested themselves of the responsibility for research dissemination back in 1765. Scholars outside of library and information studies were not reading the journal articles discussing the issue, though scholarship on the subject was prolific.[55]

The lag between the serials crisis of the Eighties and the OA movement of the 2000s, also did not precipitate change in the way that a crisis usually does. The use of the word "crisis" has in itself, become somewhat of a cliché in OA literature. It is commonplace to read an article on open access that

[55] Note that some scholars that were involved in publishing as journal editors, or on editorial boards, would have been aware, and this would have been one more way the knowledge of the problems flowed from the library to the research community. See Alonso, C. J. (2003). Editor's column: Having a spine—Facing the crisis in scholarly publishing. *PMLA*, *118*(2), 217-223; Townsend, R. B. (2003). History and the future of scholarly publishing. *Perspectives*, *41*(3); and Davis, P. M., & Walters, W. H. (2011). The impact of free access to the scientific literature: a review of recent research. *Journal of the Medical Library Association: JMLA*, *99*(3), 208.

opens with concerns about scholarly communication being in a state of crisis and upheaval (Harvey, Bailey, Becker, & Putnam 1972; Branin & Case, 1998; Burgard & Easton, 1999; Houghton, 2001; Gorman, 2002; Alonso, Davidson, Unsworth, & Withey, 2003; Suber, 2003; Gross & Ryan, 2015).

Ten years after the Pew Roundtable, in a Canadian study by researchers Greyson, Vezina, Morrison, Taylor and Black (2009) the gap between university research libraries and university administration on the implementation and support for OA policies was still wide. The researchers conducted interviews in 21 universities across Canada and concluded that "librarians feel a strong sense of mandate to carry out open access-related activities and provide research supports, while research administrators have a lower sense of mandate and awareness and instead focus largely on assisting researchers with securing grant funding" (p. 1). By 2019[56], however, the tide seems to be changing. The Registry of Open Access Repository Mandates and Policies (*ROARMAP*) tracks the number of OA policies around the world. There are 732 universities or research institutes that have created OA policies, and 85 research funders. Note however, that the University of Calgary OA policy is a mandate (rather than a policy) created by the Academic Council of Libraries and Cultural Resources at the University of Calgary, with no stringent requirements for researchers to comply.[57] Canada's Tri-Council OA policy also has no formal compliance requirements or enforcement, although they do have an open access policy that requires all researchers who receive Tri-council funding to publish their research findings in an open access format within twelve months of publication.[58] Larivière and Sugimoto (2018) have shown that SSHRC-funded researchers are the least compliant (23%) among a sample of research funders in Canada and the US that have mandated open access, including the National Institutes of Health, the Gates Foundation, CIHR and NSERC.

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[56] As of April 3, 2019. https://roarmap.eprints.org/
[57] http://library.ucalgary.ca/oa-mandate. Also note that the mandate was not endorsed by the University of Calgary administration.
[58] http://www.science.gc.ca/eic/site/063.nsf/eng/h_F6765465.html?OpenDocument

While support from the greater scholarly research community may have been initially slow in coming, when scholars became aware and engaged with the problems of journal publishing, this seemed to provide the needed spark to set the OA movement's torch burning. Laakso, Welling, Bukvova, Nyman, Björk, & Hedlund (2011), in a quantitative study of the development of OA journal publishing, confirm that during the early years, or "pioneering years" from 1993 – 1999, of open access publishing, "OA journals were almost exclusively founded by scholars or groups of scholars and published on technically simple platforms" (p.8). The next phase of development from 2000 – 2004 are designated as "the innovation years", where "strong growth was maintained for both published OA journals and articles" (p. 9). The third phase up to 2009 they designated as the "consolidation years", where they paint a very positive picture of the growth of OA publishing. According to Crawford (2001), who carried out an earlier informal bibliometric study on the emergence of OA journals, these earlier journals had a high chance of failing after the "arc of enthusiasm" petered out after 2- 5 years, and the difficulties of a business model based entirely on free labour realized (p. 188). Crawford also intimates that for-profit publishers and others, himself included, were dubious whether these open access journals, founded on idealistic notions, could be sustained. He was pleasantly surprised that the majority in his analysis had survived (57%). He also prophesied that:

> Just as there is no such thing as 'the serials crisis', there is no such thing as the solution. Scholars will not unanimously flock to *utopian* [my emphasis] concepts that all papers should be distributed from 'preprint' archives or that 'scholarly skywriting' will save the day (120).

Crawford was referring to two important early examples of open access enthusiasm: Stevan Harnad's article "*Scholarly Skywriting* and the Prepublication Continuum of Scientific Inquiry," published in 1990, and the arXiv repository created by Paul Ginsparg for physics pre-prints in 1991 (Ginsparg, 1997). While Ginsparg acknowledges that the arXiv resource was well-suited to research and scholarship in physics, where researchers were already sharing pre-prints through fax, hard copy, or file transfer protocol over the early Internet, the motivation for the repository came from practical or

technological improvements that this system enabled, rather than out of a sense of frustration with the state of scholarly publishing, or even less from a sense of ethical responsibility to share knowledge with humanity (Ginsparg 2009, 2011).[59] Contrary to Crawford's (2001) prediction, arXiv has grown to house 1,537,725 e-prints in Physics, Mathematics, Computer Science, Quantitative Biology, Quantitative Finance and Statistics.[60]

The enthusiasm for the concept of open access is evident, however, in Harnad's writing, who calls his blog "Open Access Archevangelism."[61] One of the primary founders and promoters of the Open Access movement, he wrote what is noted as the first proposal for open access publishing, entitled "A subversive proposal."[62] This proposal for a conference paper in November 1994 was subversive because it recommended that all "esoteric" scholars, by which Harnad meant those who were publishing papers for their own specialized research communities, self-publish their pre-prints like the physics community was doing. Eventually this practice would free researchers and scholars from the "Faustian bargain" with publishers, and:

> The subversion will be complete, because the (esoteric -- no-market) 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 (para. 5).

Harnad's position is very important from the point of view of the flow of knowledge. He assumes that there is no market for most kinds of scholarly knowledge, and therefore this kind of knowledge should flow freely "for the benefit of us all." His use of the term "esoteric" refers to:

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[59] Another subject-based repository is RePEc that archived bibliographic details for Economics journal articles (Ware and Mabe 2012).
[60] https://arxiv.org/ as of May 14, 2019.
[61] http://openaccess.eprints.org/
[62] https://eprints.soton.ac.uk/253351/

> Scientific and scholarly publication (but that is the lion's share of the academic corpus anyway), namely, that body of work for which the author does not and never has expected to SELL the words (1994, para. X).

Though I agree with his simple and brilliant plan for the green road to open access, I take issue with his definition of "esoteric", and question his elitist assumptions about the level of interest or ability of non-scholars to interpret this knowledge. He defines the term in another article, as:

> "Written only for a small number of fellow experts": Scientific and scholarly research has become increasingly specialized. There are few individuals with the expertise or interest to follow and understand what is being published in any given subspecialty. Yet it is the pursuit of this specialized expertise that has brought us all the benefits of science and scholarship: These esoteric pursuits are what are revealing the mysteries of the atom, the gene, the cancer cell, our language, our past, and human nature itself (1995, p. 285).

Anecdotally, I have encountered this attitude amongst scholars and non-scholars questioning whether non-specialists are capable of understanding specialist knowledge, and therefore nullifying the need for public access and denying that this should be the motivation for open access. This debate regarding the democratization of knowledge is central to the Open Access movement: should expert knowledge resources be available to all or only to those who can interpret them or put them to use? The former attitude might be defined as an elitist attitude, aimed at controlling and limiting access outside the research community. The latter attitude takes an egalitarian, populist approach to the problem, refraining from assuming that non-specialists are disinterested or unable to understand research. Open access debates appeal to democracy, rejecting technocracy. James Boyle (2011[2007]), in his chapter in Charlotte Hess and Elinor Ostrom's influential book, *Understanding Knowledge as a Commons,* further delineates the elite/popular dichotomy:

> In one sense, the question I describe here is fundamental to the division between the progressive and populist impulses in American politics. The progressive notes the dangers of collective

> irrationality, of lack of understanding, of availability of cascades that violently spew perceptions of risk and benefit. He puts faith in the expertise of technocratic specialists working for the public interest, but isolated from public pressure and hubbub. The populist, by contrast, is skeptical of claims that restrict knowledge, decision-making, or power to an elite group. He sees the experts being subject to their own versions of narrowness and prejudice. Their own cascades. Most sensible people acknowledge that each of these perspectives on the world has important truths to offer. The question is where the balance is to be drawn. (p. 132)

The communications scholar Peter Dahlgren (2009) makes the essential point that "one cannot act successfully as a citizen in the absence of knowledge, even if the exact kind and extent of knowledge deemed necessary for civic engagement has long been debated" (p. 76). He alludes to the debate between Walter Lippmann and John Dewey, who through a series of exchanges in the 1920s, argued whether elite trained professionals should make political decisions (Lippman), or whether political decision-making should be left to the will of the people and the democratic process (Dewey). Central to this argument is the notion that an active, educated citizenry is essential for democracy. This is a strong argument in favour of access to research knowledge for the good of the public.[63]

While Harnad might have a point about the specialist nature of scholarly research, there are other excellent reasons why the public should have access to scholarly research. Boyle points out that historically, promoting public access to knowledge has had positive consequences, such as when the Bible was translated into the vernacular, and the development of public education. It is also important for scholars to keep in mind that the sustainability of "esoteric" projects depends on external or government funding that rests on the perception that this research somehow, eventually, serves the public good. This argument will be addressed further in my next chapter. Finally, the perspective that "no one cares about my arcane research" might also reflect the feelings of an introvert or contemplative

[63] I addressed this perspective on open access in my PhD candidacy exams.

personality type. It is difficult to face scrutiny of one's life project – however, this is a question that would be better answered by a dissertation in the psychology of open access. Stehr and Ruser (2017) comment that:

> Social scientists are inclined to lament the marginal impact their intellectual efforts have on society, and they look with enormous envy across the divide of the so-called two cultures, wondering how and when they will be able to achieve the same kind of useful success and societal prestige the natural sciences and technology enjoy in most societies. (p. 26)

A less political dichotomy, however, might understand the issue of access as one of 'audience', versus 'market.' Whether HSS research appeals to a public audience is perhaps less value-laden, than whether there is a market for HSS research. Using the concept of audience also switches the focus from a discussion about economics to a discussion about culture. An educated audience, for example, would be more equipped to interpret research. It is difficult, however, to separate audience from market. Just as the first journals naturally diverged because they appealed to different audiences, the publishers also hoped they would find a market for their publications. The argument that citizens have a right to access research, however, overshadows arguments about audience and market. From a critical perspective, stakeholders are empowered to contribute to issues that affect them, more so than audiences who are mostly passive observers, or consumers who are constrained from participating by their finances. This question will be revisited in the final chapter, after the views of my participant stakeholders have been presented.

Clearly Harnad (2007) does not think there is a market for HSS research, nor does it matter. He has made his position clear stating that:

> The primary, fundamental and universal rationale for OA and OA mandates, in all disciplines, including biomedicine, is *researcher-to- researcher access* (including pure and applied researchers, as well as practitioners, if any; not *public access* (nor even educational access) […]

> Direct public access of course comes with the OA territory, but that is not the sole or primary ethical justification for OA, even in biomedical research. (p. 33).

This attitude from one of the leading founders of the movement may be an underlying reason why there is a dearth of research on OA and the public good, in comparison to the overwhelming amount of publications addressing how to change the system. Regardless of Harnad's attitude, throughout his career, he has continued to fight tirelessly for scholars to take the "green road" to open access, that is, self-archiving in institutional or disciplinary repositories (Harnad, 1999; 2001; Harnad & Brody, 2004; Harnad et al., 2004, 2008).[64]

The Open Access Movement and Other Curious Minds

The Open Access movement could be said to have started officially with the signing of the Budapest Open Access Initiative, on February 14, 2002, a document signed by sixteen scholars and open access advocates.[65] The term "Open Access" was coined at that meeting and the initiative funded by the Open Society Institute.[66] Since the Budapest Initiative, two other international statements have been released, the Bethesda Statement on Open Access Publishing (Apr. 11, 2003)[67], and the Berlin Declaration on Open Access (Oct. 22, 2003) and many other supportive statements.[68] The inspiring opening statement of the Budapest Initiative is considered the guiding text for the movement:

> An old tradition and a new technology have converged to make possible an unprecedented public good. The old tradition is the willingness of scientists and scholars to publish the fruits of

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[64] These few citations represent only a tiny sample of the contributions Dr. Harnad has made to the Open Access movement. A search of his publications in Google Scholar reveals over 700 publications (some duplicate, not all peer reviewed) with literally hundreds of articles devoted to the topic of open access.
[65] Note that Canadians Stevan Harnad and Jean-Claude Guedon were part of this group.
[66] This organization is funded by George Soros, a billionaire, market investor and funder of liberal causes.
[67] http://legacy.earlham.edu/~peters/fos/bethesda.htm
[68] While these three guiding statements may be considered the manifestos of the movement, the Open Access Directory and the OA Tracking project maintain a wiki database of OA supporting documents. For example, the OA Tracking project record 452 declarations made since 1964, that support OA http://tagteam.harvard.edu/hubs/oatp/tag/oa.declarations. As of July 27, 2017.

> their research in scholarly journals without payment, for the sake of inquiry and knowledge. The new technology is the internet. The public good they make possible is the world-wide electronic distribution of the peer-reviewed journal literature and completely free and unrestricted access to it by all scientists, scholars, teachers, students, *and other curious minds* [my emphasis]. Removing access barriers to this literature will accelerate research, enrich education, share the learning of the rich with the poor and the poor with the rich, make this literature as useful as it can be, and lay the foundation for uniting humanity in a common intellectual conversation and quest for knowledge.

My dissertation research focuses on the "other curious minds" in this statement, mentioned last, almost as an afterthought; although the "public good" assumptions of the movement are first and foremost in this mission statement of the OA movement.

Success, according to the Budapest Initiative, is achieved when access barriers to research literature are removed, which will "accelerate research, enrich education, share the learning of the rich with the poor and the poor with the rich, make this literature as useful as it can be, and lay the foundation for uniting humanity in a common intellectual conversation and quest for knowledge." This inclusive statement contrasts with Harnad's (1994) definition of "esoteric research," and is a central example of the public good values that justify the OA movement.

Peter Suber, in his book *Open Access* (2012), refers to the "utopian concepts" that underpin the OA movement, calling OA a "beautiful opportunity" (p. 44). While the serials crisis may have been the problem that prompted the renovation of the scholarly journal industry, Suber reminds the reader that "there are good reasons to pursue OA anyway" (p. 48). These "good reasons" motivated the creation of resources and tools in advance of what was to become the Open Access Movement. Initiatives like the Public Library of Science (PLoS) and the Public Knowledge Project (PKP), were motivated by the belief in the wide circulation of knowledge for the benefit of all. In 1998, John

Willinsky started the Public Knowledge Project, "dedicated to improving the scholarly and public quality of research," and created the Open Journal Systems open source software in 2001.[69] In 2000, researchers Harold Varmus, Patrick Brown and Michael Eisen announced the creation of the Public Library of Science (PLoS), that would "vastly increase the accessibility and utility of the scientific literature, enhance scientific productivity, and catalyze integration of the disparate communities of knowledge and ideas in biomedical sciences."[70] In their open letter they pledged to make their work open, and asked others to do the same. This petition was signed by almost 34,000 scientists from 180 nations.

Suber (2012) also weighs in on the debate about public access to research. He points out that "OA allows us to provide access to everyone who cares to have access, without patronizing guesswork about who really wants it, who really deserves it, and who would really benefit from it" (p. 116). Regarding access for professional researchers, Suber argues matter-of-factly that providing access for everyone is cheaper and easier than blocking access (p. 119), and that finally "OA benefits research directly and benefits everyone else indirectly by benefitting researchers" (p. 188).

While advocates in the OA movement may have focused on the need for and benefits of researcher to researcher access, researcher to public access may be strategically more important. The public good is a major motivating factor in the creation of policy to support OA. In Canada's Tri-Agency statement on OA, the text emphasizes that:

> Societal advancement is made possible through widespread and barrier-free access to cutting-edge research and knowledge, enabling researchers, scholars, clinicians, policymakers, private sector and not-for-profit organizations and the public to use and build on this knowledge.[71]

Elsabry (2017) undertook a quantitative analysis of "Claims About Benefits of Open Access to

[69] https://pkp.sfu.ca/about/history/
[70] https://www.plos.org/open-letter
[71] http://www.science.gc.ca/eic/site/063.nsf/eng/h_F6765465.html?OpenDocument

Society (Beyond Academia)," analyzing 164 documents about OA including declarations, policies and journal editorials. The researcher found that "as expected, all declarations assume that researchers are the main beneficiaries," that only three declarations made reference to "society" and the public, and that "the issue of societal impact of Open Access was not strong on the agenda of most OA advocates who drafted them" (p. 36, 37). By contrast, in his analysis of OA *policies*, Elsabry found that 40% of policy documents make claims about the positive benefits of OA to the public. These benefits include increased awareness, benefits to culture, public understanding of science, taxpayer rights, public accountability, and the ability to scrutinize research funding (p. 39). Also interesting are the 47% of policies that make reference to benefits to the economy using innovation arguments (p. 39). His analysis also separates the public from professional researchers, who also stand to benefit from OA especially in terms of research transfer and uptake, but are mentioned in only 14% of the policies. Finally, Elsabry concludes that:

> The issue of societal benefits of Open Access can prove to be very complex and manifold. However, approaching it in the right way can take the debate on access to research to a whole new level, by reframing it as a social issue, rather than one that is just relevant to researchers. (p. 43).

This dissertation interrogates the "societal benefits" argument of open access, despite the complexity and controversy, by looking at the problem from the perspective of citizens.

Willinsky (2006), in his book *The Access Principle*, has been one of the most vocal and effective supporters in the OA movement of the connection between open access and the public. He argues that "public access to research literature should not be dismissed as an incidental side-effect of the open access movement" (p. 126). He compares the drive for public access to research to the 19th century public library movement, and suggests that the effects of open access may be on the same scale as the printing press, penny post, and public education (p.112). He puts forward a number of reasons why access to research for the public is important:

- Public demand for access to medical research helps people understand and take better control of their health (p.113).
- Organizations that engage in research outside of the academy, such as non-profit agencies and non-governmental organizations need the latest academic research to stay abreast of issues and solve problems (p. 112)
- Both scholars and those working in NGOs in developing countries need open access to contribute to global scholarship, "to further their efforts and improve the quality of their work" (p. 112).
- OA would enable members of the public to verify knowledge claims, as "this public access to research might provide a slight democratic check on the tyranny of expertise, as the experts' sources can be verified and countered" (p. 114).

Willinsky's book has been highly influential in my work, as he hypothesizes that public access to research "may lead in turn to greater public support for research and scholarship" (p. 111). His vision for the sharing of knowledge includes more than simply changing the copyright restrictions on journal articles to allow for public viewing. His access principle is:

> A commitment to the value and quality carries with it a responsibility to extend the circulation of this work as far as possible, and ideally to all who are interested in it and all who might profit by it. (p. xii)

He suggests that scholars also pay attention to writing styles (referencing "academese"), and work to organize and index their scholarship better so that it can be found and used (p. 125). Willinsky's vision in this work, however inspiring, refers mostly to a system of one-way knowledge dissemination from experts to the public. In this sense, OA *is* comparable to an information delivery system, like the "penny post."

As a social movement, OA has inspired more than changes to the research knowledge delivery system, motivating passionate publications and sometimes even encouraging advocates to take drastic measures to promote public access to knowledge. Many OA advocates have published numerous journal articles, blogs and op-eds to promote the OA cause. Scholars already mentioned including Peter Suber, Director of the Harvard Open Access Project, Stevan Harnad, and John Willinsky, Director of the Public Knowledge Project, have been tireless contributors to the argument in favour of OA.[72] Like Willinsky, some advocates have not stopped at writing about OA, but have also created resources to promote access. Martin Eve has written *Open Access and the Humanities* (2014) and created the Open Library of Humanities.[73] Others have promoted the cause through journalism and YouTube videos. Richard Poynder, an independent journalist, has been following the OA movement for fifteen years, interviewing every OA scholar, innovator and spokesperson for his blog, "Open and Shut." Bjorn Brembs' slideshow (2009), with 36, 330 views, a viral presentation by academic standards, asks "what is wrong with scholarly publishing today?" His humorous slides accuse scholars of allowing their work to be appropriated, repeating the theme of "a public good in private hands."[74] Piled Higher and Deeper PhD Comics has produced a video on "Open Access Explained"[75] and Reason TV has made "How Open-Access Journals are Transforming Science."[76]

Other advocates have shown their commitment by opposing the publishing industry. In 2012, mathematician Timothy Gowers started a campaign to boycott commercial publisher Elsevier, to protest their business practices, which included high subscription rates, and shoddy peer review. "The Cost of Knowledge" campaign gathered 16699 signatures, and led to the media labelling of the "Academic Spring" referring to the rise of the OA movement.[77] Unfortunately, however, researchers

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[72] https://cyber.harvard.edu/~psuber/wiki/Writings_on_open_access
[73] https://www.openlibhums.org/
[74] https://www.slideshare.net/brembs/whats-wrong-with-scholarly-publishing-today-ii
[75] https://www.youtube.com/watch?v=L5rVH1KGBCY , 376,880 views
[76] https://www.youtube.com/watch?v=gKoxnl_STPw, 12,540 views
[77] *Jha, Alok (9 April 2012). "Wellcome Trust joins 'academic spring' to open up science | Science | The Guardian". The Guardian. London: GMG. ISSN 0261-3077. OCLC 60623878. Retrieved 22 April 2012*

Heyman, Moors and Storms (2016) found that 23% of signatories subsequently published in an Elsevier journal after signing the petition. In retrospect, the reference to "academic spring" was certainly a misnomer, eliciting nothing close to the revolutionary fervor found in the "Prague Spring" or "Arab Spring." The lack of revolutionary characteristics may be owing to the generalized lack of scholarly awareness and concern, particularly in the social sciences and humanities disciplines. This lack of engagement is certainly one of the most puzzling given that the scholarly community is highly attuned to the critique of injustice.

Sci-Hub is a website and data repository, estimated to contain 82 million pirated journal articles (Willinsky, 2018). It was started by Kazakhstan graduate student, Alexandra Elbakyan in 2011, frustrated by her inability to access research she needed for her studies. In 2015 Sci-Hub and Elbakyan were sued by Elsevier and again in 2017, by the American Chemical Society. In 2016, the website claimed to be receiving over 200, 000 requests per day.[78]

In 2010, Aaron Swartz, an activist and Harvard fellow at the Safra Research Lab on Institutional Corruption, illegally downloaded almost 5 million journal articles from the JSTOR database, a non-profit digital library.[79] He was subsequently arrested and charged with wire fraud and violations of the Computer Fraud and Abuse Act, which carried a maximum fine of $1 million and up to 50 years in prison.[80] In 2013, after rejecting a plea bargain from prosecutors for a lighter sentence, he committed suicide. His story has been featured in two documentaries including "The Internet's Own Boy: The Story of Aaron Swartz,"[81] and "Killswitch: The Battle to Control the Internet."[82]

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[78] https://en.wikipedia.org/wiki/Sci-Hub#cite_note-Bohannon-4
[79] In 2016, JSTOR reported revenue of $89 million U.S. with profit of almost $2 million. Net income for 2015 was $3.8, 2014, $8.5 million and for 2013, $11.2 million dollars. https://projects.propublica.org/nonprofits/organizations/133857105
[80] https://en.wikipedia.org/wiki/Aaron_Swartz
[81] Knappenberger, B. (2014). The Internet's Own Boy: The Story of Aaron Swartz. https://www.youtube.com/watch?v=M85UvH0TRPc
[82] Ali Akbarzadeh (2016). Killswitch: The Battle to Control the Internet." https://www.youtube.com/watch?v=M85UvH0TRPc

The question remains why these examples of dedication and sacrifice to the Open Access cause have not sparked a mass reaction from the academic community. More study into Open Access the social movement is warranted to understand the growth and development of the cause, and would be particularly relevant in our current age where access to knowledge is essential for engaging in the sometimes battlefield-like public sphere.

Open Discourse and Open Access

A discussion of the history of OA would not be complete without an understanding of the cultural environment that has influenced the growth of the movement. For example, considering that most of the literature lies within the library and information studies field, it is hardly surprising that many analyses of OA take a technological determinist position that assumes that changes to scholarly communication have been "driven principally by technology and economics" (Ware & Mabe, 2012; p 14). The website, open-access.net points out that open source new publishing software, such as EPrints[83] and OJS[84], were a "prerequisite" for the creation of open access databases and resources. Laakso et al (2011) write in their opening paragraph that "Open Access is a new technology-enabled business model, which is gaining increasing acceptance" (p.1). This faith in technology translates to a belief that the system can be changed if only we find the right business models (Beverungen, Böhm, & Land, 2012; Kennison & Norberg, 2014; Schimmer, Geschuhn, & Vogler, 2015; OPERA, 2018). By contrast, the Budapest Initiative credits the convergence of "an old tradition and a new technology […] to make possible an unprecedented public good. The old tradition is the willingness of scientists and scholars to publish the fruits of their research in scholarly journals without payment, for the sake of inquiry and knowledge. The new technology is the internet." This statement acknowledges both cultural *and* technological forces that make an alternative knowledge dissemination system possible.

[83] http://www.eprints.org/uk/index.php/openaccess/
[84] https://pkp.sfu.ca/ojs/

To solve the problem of access to research requires faith in technology *and* the good will of researchers themselves. This faith can be better understood within the broader category of "open discourse" or the academic, policy, industry and public sphere discussions that acknowledge the power potential in the sharing of information and culture in the age of digital technologies and the internet.

Discourse, according to linguist Norman Fairclough (1992), refers to the "different ways of structuring areas of knowledge and social practice" (p. 3). Fairclough gives the example of the use of the dominant discourse in health care based on "medical science" that makes assumptions about how medicine should be practiced. Open discourse is an important aspect of internet culture, based on a techno-liberal philosophy that includes a myriad of concepts and movements such as the free culture movement (Lessig, 2004), open-source community (Benkler, 2006; DiBona, Ockman and Stone, 1999; Söderberg, 2015), open science (Nosek et al., 2014; Friesike, Widenmayer, Gassmann, & Schildhauer, 2015), open data (Van den Eynden, et al., 2016; Kitchin, 2014), open education (Atkins, Brown & Hammond, 2007; Seely-Brown & Adler, 2008), and the open government movement (Janssen, Charalabidis, Zuiderwijk, 2012; McDermott, 2010).

Suber (2012) also shows how *culture and technology* combined to create an ecology wired for open access. He argues that "a scholarly custom that evolved in the 17th century frees scholars to take advantage of the access revolution in the 20th and 21st" (p. 20). Suber (2012) calls this the "access revolution," and Eve (2014) calls it the "open ethos" (16). Open access can exist because there is no direct financial incentive to publish research articles, and therefore the economic protections of copyright are of little use to scholars. Perhaps more importantly, there is also no strong incentive to publish open access unless one holds the convictions that incentivize open discourse, that information should be free, and knowledge shared.[85] Open access differs from other kinds of openness, like

[85] One of the reasons for the increase in OA publishing in STM fields is possibly because of the higher awareness of the citation advantage associated with it (Antelman, 2004; Archambault et al., 2016; Davis and Walters, 2011; Gargouri et al., 2010; Lewis, 2018; Ottaviani, 2016). Harnad (2007) has shown, however, that major citation advantages also exist in most HSS subjects including sociology, psychology, law, management, and business that surpass those in biology (p. 32).

Napster, or forms of digital sharing that take away royalties from content creators, because of the unique position of researchers as creators of knowledge. It is a movement to take back ownership, and the ability to distribute works, and to do so more efficiently. Scholars are faced with different intellectual property concerns than other kinds of writers, because they are compensated through salaries rather than from royalties from published journal articles. This allows scholars to participate in a gift economy where they have the choice to give their works away for free.

Open discourse has followed a familiar pattern of early excitement over the possibilities of new technologies, followed by caution, as cultural and social effects of the technologies become evident. When Stewart Brand (1985), the founder of the *Whole Earth Review,* quipped that "information wants to be free,"[86] and twenty-three years later Clay Shirky (2007) opined on how "the internet runs on love", their statements illustrate the positive perspective behind open discourse. This culture of openness that has been hailed as an opportunity enabled by technology, a cause for activism, and simply a better way to operate, is increasingly under scrutiny as some of the claims for openness have not resulted in hoped-for realities (Crow and Longford, 2010; Keen, 2007; Lanier, 2010; Morozov, 2011; Mosco, 2005; Weller, 2014). Open discourse has not evolved as a simple dichotomy, however, with optimists and pessimists taking white and black positions. Recently, the realization that the grip of intellectual property is stronger than the handshake of sharing has driven some open discourse activists to acknowledge the shortcomings of their causes, at least partially (Eve, 2014; Fleischer, 2008; Poynder, 2017; Stallman, 2010).

Not all discourse about open access is favourable. Oppositional or critical discourse can be found in the *Scholarly Kitchen* blog, in scholarly publishing journals such as *Scholarly and Research Communication*, and among those who fear the "wild west" of predatory publishing (Beall, 2012;

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[86] The full quote is: "On the one hand *information wants* to be expensive, because it's so valuable. The right *information* in the right place just changes your life. On the other hand, *information wants to be free*, because the cost of getting it out is getting lower and lower all the time. So, you have these two fighting against each other" (p. 49). This quote has been taken out of context within open discourse to encourage open source platforms and copyright infringement.

Pickler, Noyes, Perry, Roe, Watson & Hayter, 2014).[87] Those in favour of OA tend to be academics or librarians; those against often work in the scholarly publishing industry, though some scholars also oppose it. Ironically, while large scholarly publishers scoff at the sharing ethos inherent in open access[88], they have also embraced the notion of openness by shifting when and who pays for it. Over the last five years, publishers have promoted gold open access, which provides publishers with another revenue stream while enabling access to those on the wrong side of the knowledge divide. A critical discourse analysis of commercial publisher responses to open access would be an important addition to OA literature.

In 2005, Willinsky lamented that these various open discourses have not collaboratively joined forces. The open source movement, open science movement and Open Access movement are united in their resistance to the restriction of knowledge and information, yet "the strong sense of convergence among these open initiatives has yet to be fully realized, to the detriment of the larger, common issue" (p.1). Since that statement, much progress has been made.[89] Some analyses of the open science movement subsumes other categories beneath its purview, such as open access, open data, and open methodology (David, 2004; Vicente-Saez and Martinez-Fuentes, 2018).[90] A non-profit group called Open Knowledge International, started in 2014, has 38 working groups around openness. The Scholarly Publishing and Academic Resources Coalition (SPARC) also promotes adoption of open access, open education and open data practices. In the academic community, open discourses in different fields are just beginning to connect in an interdisciplinary way, and stand to benefit from their

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[87] https://scholarlykitchen.sspnet.org/

[88] William Gunn, a Director at Elsevier commented on Twitter that "Yes, everyone should have rainbows, unicorns, & puppies delivered to their doorstep by volunteers. Y'all keep wishing for that, I'll keep working on producing the best knowledge and distributing it as best we can." This comment prompted outrage in the OA community. https://twitter.com/mrgunn/status/1028812448063664129?lang=en; http://fossilsandshit.com/elsevier-open-science-monitor-response/

[89] See for example, the Wikipedia entry for open science, which claims that the six principles of open sciences are: open data, open source, open methodology, open access and open educational resources. https://en.wikipedia.org/wiki/Open_science

[90] https://figshare.com/articles/Open_Science_Taxonomy/1508606 Pontika et al (2015).

common cultural and philosophical perspectives. For example, scholarship on research impacts and knowledge mobilization bolsters the open access cause, and vice versa (Chapter Four). The sociology of knowledge and the economics of knowledge also have ways of understanding access to knowledge that could hybridize discussion. Recently, a large group of scholars led by Jonathan Tennant have worked to create a meta-strategy around openness (Tennant et al., 2019). These literatures and their connections to OA will be explored further in Chapter Four.

Another aspect of scholarly culture that has contributed to the need for open access is what I call the "talk amongst ourselves" culture prevalent within the university. Harnad's (1994) attitude exemplifies the "talk amongst ourselves perspective." This is the arguably natural tendency for researchers interested in the same subjects to discuss findings amongst themselves. As discussed briefly in Chapter Two, as a result of the increasing specialization of research and scholarship, disciplines formed, research communities became more insulated from each other and from professional practice, and disciplinary silos prevented interdisciplinary sharing of knowledge. While specialization has been occurring since the ancient Greeks (Dirks, 1996 in Cohen & Lloyd, 2014), and the university community is aware of the perils of disciplinary silos (Wilson, 1998; Goodman & Blake, 2006), the separation of scholars from (at least) professional practice is preventable.

This cultural tendency is also something held up by critics outside the university community as what is wrong with the institution and its practitioners. The "talk amongst ourselves" culture is related to the "ivory tower mentality", where scholars remain cloistered away working in their specialized niches, away from the practical concerns of life. Shapin (2012) traces the origins of the myth of the ivory tower and its modern-usage metaphor as a place where academics retreat from public life and useful scholarship. He also argues that there have always been arguments for and against the active versus the contemplative life of scholarship, but that the contemporary ivory tower connotations are always negative. Shapin also evaluates the ivory tower metaphor as a feature of the two cultures dichotomy in the university environment. He laments that:

> Our public arguments are more and more about the Ivory Tower status of science because we care less and less about the worth of art. The series going from religion to art to science is suggestive of many stories about modernization, secularization, democratization and the commodification of culture, just as the attachment of the Ivory Tower to universities in the middle of the twentieth century seems to acknowledge the rise of the research university as modern society's all-purpose storehouse of real and potential value. (p. 25)

Operationalizing Open Access and the Problem of Who Pays

Despite that "information wants to be free", and that scholars working in ivory towers willingly give ownership of their works away to publishers, there are costs involved in the complicated task of disseminating knowledge. For the last two decades, open access has prompted the creation of new business models for journal publishing, new journal formats, alternatives to traditional peer review, and repercussions for archiving and data mining. Initially, it was thought that OA publication could proceed along two paths: what Harnad et al. (2004) called the green and the gold roads. Since that time, the landscape has become almost as complicated as the freeway system around Los Angeles county.

Briefly, the green and gold road allow open access at different points in the research life cycle and may result in different long term outcomes for scholarly publishing. The green road is a system of OA distribution where researchers submit, or "self-archive" their pre-or post-print research articles to an institutional or subject repository (or one's own website). This method is acknowledged as the cheapest and arguably the most effective method of distribution, and is the method often promoted by OA activists (Houghton & Oppenheim, 2010; Morrison, 2012; Suber, 2012; Harnad et al., 2004). Kim (2010) points out that institutional repository access is better suited for public access, whereas articles packaged in journal format are better for academics. Critics of the green road charge that it will affect the long-term viability of all publishers, not just the large commercial ones (Lorimer, 2014; Anderson,

2017, February 21). It stands to reason that if articles are available freely online then buying subscriptions to journals will no longer be necessary. To date, however, many scholars are not aware of this option for open access via institutional repositories, nor of the benefits for archiving their publications in this way (Kim, 2010; Gross & Ryan, 2015; Lovett et al., 2017; Yang & Li, 2015).

The publishing community's response to green road open access has been the imposition of "embargo periods" in copyright agreements. This is the period of time where an article cannot be posted or shared so that publishers can "extract value" from the publication in the short term where immediate access is the most valued. These periods range from six months to four years. Over the last five years, federal and private funding institutions have responded to the debate over publisher rights to profit taking and have mostly agreed that a one year embargo period is a fair time limit after which an article must be made open access (Suber, 2014; Baldwin & Pinfield, 2018).

Gold Open Access is when publishers enable access to a finished version of a journal article either through fees charged to the author (article processing charges, or APCs), or when the journal's mandate is for complete Open Access, financed in other ways. Often called "author-pay" Suber (2012) points out that this is a misnomer as OA fees are mostly paid by an author's institution. This method is also "supply side" OA financing, because Open Access is made available by the supplier. Eve (2014) points out that (at the time of writing) the majority of gold open access venues did not use APCs for their financing. Since that time, Morrison et al. (2017) have shown that APCs are still mostly used by the large commercial publishers and mega journals and that numerous small open access journals are providing gold open access in other ways.

A problem that has arisen with this new pricing system has been the practice of "double-dipping" among hybrid OA journals. As discussed briefly in Chapter Two, during this time of transitional pricing, journals have been gathering subscriptions from libraries, while at the same time charging very expensive APCs to authors (Björk & Solomon, 2014a, 2014b). Libraries are attempting to fight this practice, and opposing the Big Deal practice. Recently, universities around the world have

cancelled their subscriptions to companies that are double dipping on charges to the academic community, as well as cancelling their Big Deal packages in recognition of the lack of value and unfair price increases (Anderson, 2017, May 1). SPARC has recently started keeping a record of universities that have made large-scale cancellations, with a rash of cancellations of Elsevier journals in 2019 in Germany, the U.S., and Norway. [91]

The invention of article processing charges to promote open access has also resulted in the rise of the mega journal, such as the hugely successful Public Library of Science (PLoS). These mega journals grew out of the huge demand for publishing OA in the sciences and have become financially successful in a very short time. Many of the commercial publishers have also developed their own mega journals such as Sage Open, and Springer Plus. These mega journals are criticized for having lower standards of acceptance (Spezi, Wakeling, Pinfield, Creaser, Fry & Willett, 2017), changing the research landscape (Björk, 2018), and even promoting "predatory journal" practices (Beall, 2012).

In the final analysis, creating a system for open access comes down to who will pay and how much. West, Bergstrom and Bergstrom (2014) outline clearly that academic journals need to cover their costs by receiving funding from authors (APCs), readers (subscriptions), or sponsors (grants) and that many publishers use all three to survive. A lively debate within the scholarly community over how much it costs to publish a journal article, has revealed the complexity of arguments that justify high APCs and high profit margins (Van Noorden, 2013; Björk & Solomon, 2014). Houghton et al. (2009) calculated that global self-archiving (green road OA) could result in a forty-fold benefit-cost ratio over the present system, but then his subsequent research report on "Going for Gold" partially led to the Finch Inquiry in the United Kingdom (Swan & Houghton, 2012).[92] Altman and Avery (2015), in their

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[91] https://sparcopen.org/our-work/big-deal-cancellation-tracking/

[92] In 2012, a controversial report financed by the UK government and the UK Publishing Association (Finch, 2012) verified that OA would cut gross expenditure on research and development but supported Gold OA in the form of article processing fees as the best option. This report started a firestorm in the UK media and among OA advocates who were promoting institutional repositories (Green OA) rather than author pay solutions (Gold OA). They argued that supporting Gold OA would take away research funding from researchers depositing it into the publishers' bottom lines, and the report was heavily influenced by the powerful UK publishing lobby. In response, the UK House of Lords conducted a public inquiry

article "Information wants someone else to pay for it: laws of information economics and scholarly publishing," provide a detailed economic analysis of scholarly journal publishing. They acknowledge that "we are witnessing changes not only in the scale, volume, inputs and forms of scholarly communication, but also to the audiences and uses as well" (n.p.). Kennison and Norberg (2014) detail a plan suited specifically to HSS disciplines, and acknowledge that:

> The transition to OA from subscription-based society publishing operations in humanities and social sciences (the so-called HSS disciplines) has been particularly difficult, for reasons that expose the limitations of the most popular current OA funding models: in HSS, articles are not the only publication type of value or even the most valued type of publication; external funding for research is minimal or non-existent; many (if not most) societies consider their publications to be the primary benefit they offer their members and find it difficult to imagine how they would support their society's activities if their current publishing operation were to change (p. 6).

Their plan proposes to create a fund for HSS learned societies to support non-profit publishing within their fields. SSHRC already supplies funding to HSS publishers in Canada, but this plan would see universities contributing to the fund as well.

Tremendous Growth of OA

The almost two decades following the Budapest OA Declaration has seen tremendous growth in OA research, resources and awareness in the scholarly community. Heather Morrison, in her weblog series, "The dramatic growth of open access," documents the growing numbers of OA publications using various metrics and in different disciplines.[93] Since 2003, scholarly organizations such as the

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into the Finch Report. While the outcry from the research community prompted an inquiry, and the policy was reworded so that green OA was considered the 'preference', since that time, the Gold option has been promoted within the publishing community.

[93] http://poeticeconomics.blogspot.ca/search/label/dramatic%20growth%20of%20open%20access

Modern Language Association[94], the Canadian Federation of Humanities and Social Sciences, the EU and the Australian Research Council have held symposia, developed policies and promoted OA to their members. In general, the huge amount of quantitative scholarship investigating OA and providing evidence in favour of OA journal publishing is perhaps not surprising of a social movement born in the academy.

The growth of OA journal articles published is perhaps the most important metric when measuring the growth of the social movement. The Directory of Open Access journals (DOAJ) counts 13,198 OA journals, and 3,974,586 OA articles on its website.[95] In my first version of this chapter (June 12, 2017), the numbers were 9486 OA journals and 2,514,172 OA articles! The wiki, "OA by the Numbers" demonstrates many other ways of determining how many open access articles exist.[96] For example, 4.4. million articles are archived at PubMed Central, and OAIster an OA repository, has created a "union catalog" of more than 50 million OA records.[97] Success of the movement, however, may not be measured simply by counting.

Unfortunately, the growth of OA metric does not address important aspects of research such as quality or value. Indeed, some researchers assume that OA journals are lower quality, with less stringent peer review (Shen and Björk, 2015; Todd, 2015). The term "predatory journal" was coined by Jeffrey Beall (2012; 2015) to describe open access journals that aggressively solicit authors for papers, neglect the peer review process or perform it perfunctorily, charge author fees for publishing, and have little or no credibility. Beall has been a fierce critic of open access, believing that the "open-access movement has fostered the creation of numerous predatory publishers and standalone journals, increasing the amount of research misconduct in scholarly publications and the amount of pseudo-

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[94] Ryan, J., Avelar, I., Fleissner, J., Lashmet, D. E., Miller, J. H., Pike, K. H., . . . Tatlock, L. (2002). The future of scholarly publishing: MLA ad hoc committee on the future of scholarly publishing. *Journal of Scholarly Publishing, 34*(2), 65-82.

[95] https://doaj.org/ In June 12, 2017 the numbers were 9486 OA journals and 2,514,172 OA articles on its website. On May 15, 2019 the numbers were 13,198 journals and 3,974,586.

[96] http://oad.simmons.edu/oadwiki/OA_by_the_numbers

[97] http://www.oclc.org/en/oaister.html

science that is published as if it were authentic science" (p. 589). Beall compiled a list of predatory journals and his diatribe was publicized widely both among the scholarly community and in the mainstream media.[98] John Bohannon's (2013) critique of peer review among OA journals has also cast a dark shadow on OA journals. He staged a "sting operation" where he submitted a spoof article to over 300 OA journals to see if it would get accepted for publication. His research pointed out that researchers needed to be wary about the OA journals they publish in, but also that peer review is problematic among mainstream publishers as journals published by Elsevier, Wolters Kluwer and Sage also accepted the paper.

For a conference presentation in 2015, I did a media analysis using the Canadian Newsstand Complete data base, to determine the mainstream news coverage of the open access issue. From January 1, 2014, to April 30, 2015, there were 258 hits of "open access", out of which 39 contained references to the OA movement, and 5 of those were about predatory publishers written by journalist Tom Spears for newspapers across the country (Spears, 2014).

Since that time, a number of resources have been created to help scholars choose credible journals in which to publish, such as http://thinkchecksubmit.org/ and the Directory of Open Access Journals (DOAJ) that regularly reviews their journal listing for predatory practices.[99] Recently, the U.S. Federal Trade Commission (FTC) successfully sued OMICS International, an open access publisher, for "alleging that they published articles without standard peer review, misrepresented numerous scientists as editors, and made multiple deceptive claims towards researchers." The publisher has been fined $50 million (Zimmer, 2017; Timmer, 2019).

Researchers' Attitudes Towards OA in the HSS

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[98] Recently Beall's list was shut down due to threats of litigation. https://www.insidehighered.com/news/2017/01/18/librarians-list-predatory-journals-reportedly-removed-due-threats-and-politics

[99] Note that several of the journals were on DOAJ's list of OA journals, and since that time the organization has stepped up their efforts to de-list predatory publishers.

Researcher attitudes in the humanities and social sciences towards OA vary greatly and are complicated by a number of factors. Martin Eve points out in his book, *Open Access and the Humanities: Contexts, Controversies, and the Future* (2014), that academics are not completely altruistically motivated to give their work away for free, but rather, rewards for academic labour are intertwined with the publishing industry, and academic merit is based on publishing in the most prestigious journals. He considers various options to the current peer review system, which he calls "the elephant in the room" in discussions about OA (p. 137). To draw on another apt cliché, research publications are the feathers in the caps of scholars, and as symbols of prestige and success, have evolved as the currency and symbolic capital of the scholarly career. Eve also addresses the discussions in the HSS community that voice objections over the suitability of OA for humanities scholarship. Some academics have expressed concern that paying a fee to publish compromises academic integrity (Mandler, 2014). Osborne (2013), a Professor of Ancient History, argues in *Debating Open Access* that there should be a fee to access journal articles just as there is a fee to access higher education that allows one to decipher the research. Wickham (2013), in another chapter in the above-mentioned volume, points out the difficulties specific to HSS disciplines, and how UK funding requirements conflict with EU OA policy. Sabaratnam and Kirby (2012) have called OA gold road publishing "pay to say," and feel it is a threat to academic freedom (in Todd, 2015). Another area of debate is among non-English language HSS scholars, whose journals may not be able to survive the world of OA publishing. A gathering of French scholars in 2013, concluded that:

> In the fields of the social sciences and humanities, the European Commission's plans would eventually lead to the disappearance of the vast majority of journals published in French, and hence also of the publishers who produce them. The implementation of a measure that obliges academics and researchers to distribute their work free of charge would cut off the income that

these publishers currently receive from subscriptions by libraries and individual purchases – and this income is essential for covering the cost of producing quality publications.[100]

Eve (2014) also points out that many academics in the HSS object to the use of article processing charges (APCs) for supply-side journal financing (gold OA), as these researchers are typically not funded as well as their STM counterparts, particularly in developing countries, and would have to pay out of pocket (p. 32).

Several surveys of academics about the awareness of and attitudes towards OA have also garnered complicated and even contradictory results. Alma Swan, a publishing consultant, administered a survey in 2006 on "The culture of Open Access: researchers' views and responses." The first survey demonstrated that "the principle of Open Access is a very strong motivator", scholars who publish OA will continue to do so, and scholars who aren't convinced yet have many fears or concerns about OA. These include quality control, peer review, copyright issues and the sustainability of scholarly publishing and learned societies. Swan comments that "these, by the way, are all baseless concerns when examined carefully in the light of evidence" (interview with Swan in Poynder, 2005).

The publisher Taylor & Francis also surveyed its authors in 2013 about their views on OA and received a response rate of 19% with a confidence interval of 0.84. The survey was also "skewed towards social sciences and humanities", as that is their publication focus. 70% of respondents strongly or moderately agreed that "it is important to me that the general public can access and read my research, in addition to my research community and academic colleagues," and 66% strongly or moderately agreed that "research outputs should be free for everyone to read online"; yet, 56 % of respondents rarely or never "actively choose to publish in Open Access Journals," and only 9% always

[100] http://www.openaccess-shs.info/press-release/ . This debate in France and other EU countries continues, http://www.openaccess-shs.info/open-access-and-french-language-humanities-and-social-science-journals/ and affects many other small publishing markets, including Canada.

or often choose to do so.[101] Other questions regarding institutional and funder policies, awareness of different Creative Commons licenses, and others reveal that many respondents lack understanding of open access. Rowley et al. (2017) further analyze the Taylor and Francis survey data, and conclude that researchers value the wider circulation and faster publication possible from OA publication, but want to ensure there is rigorous peer-review, and prevent commercial re-use of their work (pp. 1208-1209). They also conclude that "attitudes are more consistent across the academic community than might be assumed from some of the current debates" (p. 1201).

A survey conducted by Yates, Gibson, McDonald, & Stephenson (2015), "Faculty attitudes towards open access publishing: Brock and Laurier University Libraries exploratory survey on Open Access publishing beliefs and practices," indicate that there are many differences between disciplines and faculties regarding publishing practices and attitudes towards OA. For example, health science researchers are the most likely to publish OA, whereas, business faculty the least, followed by arts and humanities faculty. Social science scholars and science scholars were much closer in their likelihood to publish OA, but the vast majority of those surveyed would not use their grant money to pay article processing charges to publish in OA journals.

The table below details concerns about OA among humanities and social science scholars. This chart draws on work by Eller, Gunn, Scott-Lichter, Lippincott, Nixon, Seminara, and Schonfeld (2017) (p. 2-4). [103]

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[101] www.tandfonline.com/openaccess/opensurvey

[103] Note that the Canadian environment for publishing OA is somewhat supportive for individual researchers, where funding is sometimes available at the university level, and at the funding agency level to publish OA, and SSHRC policy mandates OA for funded research projects. The University of Calgary has discontinued its Scholars Fund to help pay for article processing charges. Christie Hurrell of the UofC library indicated that requests for APC funding from HSS scholars were rare, mostly from anthropology or psychology.

Table 3.1 Open Access Considerations for Humanities and Social Sciences

	Social Science	**Humanities**
Publishing Standard	Journal publishing essential for tenure and promotion	Monograph publishing vital for tenure and promotion Journal publishing secondary
Attitude towards OA	OA models not very strong Perception that OA of lower quality SS societies see OA as 'cannibalizing' content from learned society publishers SSHRC mandates OA	OA is confused with vanity publishing Perception that OA low quality Confusion of OA "openness" with plagiarism
Success Stories	Social Science Research Network[104], Research Papers in Economics (RePEc)	Digital Humanities initiatives are very active and engaged with OA practices MLA Commons, Open Library of the Humanities

Finally, another survey to establish academic understanding and attitudes towards research publishing, distributed by publisher Palgrave Macmillan (2015) found that only 24% of HSS respondents listed "the option to publish OA" as an important choice of where to publish. For my argument, the important finding from this study is the response to "Thinking about your most recent paper, who would you most want to be made aware of your published research?" Out of 21377 (HSS and STM) respondents, almost 90% of respondents replied "researchers in my field" with less than 10% of researchers interested in reaching interest groups, industry or policy-makers. Almost 20% felt they wanted to reach "practitioners in their field." At risk of stating the obvious, this confirms that scholars write journal articles almost exclusively with a peer-to-peer audience in mind.

[104] Recently purchased by Elsevier (Pike, 2016).

The Public as Stakeholders in Access to Research

The awareness and engagement level of citizens that are not connected to libraries or a research community, regarding open access, has been far more difficult to gauge. In the U.S., the lobby group the Alliance for Taxpayer Access (ATA) was created to pressure the government to adopt open access policies. This organization was administered by SPARC, which makes the ATA look suspiciously like an alliance for librarians supporting open access. Nonetheless, for the last decade, they played a role in promoting citizen engagement by providing updates on access policies and encouraging letter writing campaigns, finally succeeding when the Access to Science and Technology Research Act (FASTR) was passed in July 2015.[105]

Some polls and surveys on OA have included public (non-academic) stakeholders in their survey population, but most target those directly involved in the OA debate. A Harris Interactive random poll (2006) asked three questions related to open access and reported that "large majorities of U.S. adults support easy – and free – access to federally-funded research findings on health issues and other topics."[106] The EU Digital Agenda public consultation on scientific information in the digital age (2011)[107], reported that 27.5 % of respondents (314) identified as citizens, and included NGOs, industries, charities, learned societies and scientific and professional associations (EU 2012, p. 9). Including learned societies in the category of "citizens", however, is somewhat misleading. 90% of respondents to this survey agreed that publicly funded research should be open access (p.5). Many "stakeholder surveys", however, do not define the public as stakeholders in their survey population. The *MedOANet Survey of OA Stakeholders* (2012), included funders, policy makers, institutions and publishers in their survey. In Canada, the Tri-Agency funding council solicited stakeholder responses

[105] http://thehill.com/policy/technology/249755-senate-panel-passes-bill-to-give-public-access-to-more-research
[106] http://www.harrisinteractive.com/harris_poll/index.asp?PID=671
[107] http://ec.europa.eu/research/consultations/scientific_information/consultation_en.htm

to their "Draft Tri-Agency Open Access Policy"[108] and received 201 submissions with none from non-academic citizens.

Some research has been conducted into what happens when people outside of the university community are given access to scholarly research databases. In a two-year pilot conducted by JSTOR, an HSS archive of scholarly material, sixteen high schools were given access to the database. The study found that there was a "very positive impact on students' scholarship" and teachers felt it "refreshed their teaching" (in Willinsky, 2018, p. 322).[109] Willinsky (2003b) conducted a study with 25 Canadian government policy makers about their online use of research. Though this study was conducted over 15 years ago, the concerns remain largely the same. While policy makers use the internet for their research needs, they tend to stick to OA sources. More commonly, they rely on personal connections with researchers and experts to inform them and translate information for them. Willinsky concludes that:

> Improving policymakers access to research has to be balanced by similar improvements in public access. This represents the democratic check on research's political impact factor, but it also promises to raise the level of public deliberation and the very quality of democratic processes (p.12).

In another study, Willinsky and other researchers (Moorhead, Holzmeyer, Maggio, Steinberg & Willinsky, 2015) studied the experiences of 400 physicians and public health staff who were given access to a scholarly research database for a year. One-third of the physicians, and two-thirds of the public health staff accessed articles weekly from the database (in Willinsky, 2018, p. 323). Finally, in a very convincing example of the success of open access in reaching the public, Joan Pablo Alperin (2015) studied the scholarly publishing environment in Latin America, where he found that 16-25% of readers of journal articles are from outside the academy.

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[108] http://www.nserc-crsng.gc.ca/NSERC-CRSNG/policies-politiques/OpenAccess-LibreAcces_eng.asp

[109] Presumably, this pilot was not conducted to promote OA, but rather to promote subscriptions of their database to schools.

Shaking up the OA Movement

In 2017, OA blogger Richard Poynder stirred up the OA community by concluding that:

> [W]hile the OA movement has succeeded in persuading research institutions and funders of the merits of open access, it *has failed to win the hearts and minds of most researchers*. More importantly, it is not achieving its objectives. There are various reasons for this, but above all it is because OA advocates underestimated the extent to which copyright would subvert their cause. That is the argument I make in the text below, and I include a personal case study that demonstrates the kind of problems copyright poses for open access. I also argue that in underestimating the extent to which copyright would be a barrier to their objectives, OA advocates have enabled legacy publishers to appropriate the movement for their own benefit, rather than for the benefit of the research community, and to pervert both the practice and the concept of open access. (n.p.)

His article details the extremely confusing copyright issues that have materialized as a result of different options available for OA publishing and offered by commercial publishers in their consistent attempt to retain ownership of knowledge. Francis Dodds (2018a; 2018b) details how part of the problem is the unwillingness or lack of awareness among scholars themselves regarding ownership and copyright of their research, reinforcing Poynder's point that OA *"has failed to win the hearts and minds of most researchers."*

The OA movement has won the hearts of policy makers and research funders, however. With disregard for the strong-arm of commercial publishing, the EU and numerous other funding organizations[110] have recently put forward "Plan S", which stands for "shock." It requires all funded researchers to submit their publications to OA repositories by 2020, that all researchers will retain their copyright to their publications, and that there will be no embargo period for manuscripts. They also

[110] List of funding organizations included in Plan S: https://www.scienceeurope.org/wp-content/uploads/2018/09/cOAlitionS_National_Funders.pdf as well as the Gates Foundation and Wellcome Trust.

commit "to fundamentally revise the incentive and reward system of science, using the San Francisco Declaration on Research Assessment (DORA)4 as a starting point" (Schiltz, 2018, n.p.). This is a major brave step forward for OA, though critics point out that "Plan S could harm learned societies and they will likely not be able to continue their activities."[111]

Conclusion

The relatively recent history of the open access movement has generated an extraordinary amount of scholarship on open access and its merits. While many of these arguments for open access presumed that access to research would benefit the public, this has not been the primary motivating factor. Functionally, the serials crisis prompted librarians and those in the LIS community to speak out about the unfair pricing practices in the scholarly publishing market. The silos within academic publishing, or the networks of information dissemination, did not distribute broadly enough, in the early years of the serials crisis. Development of OA as a concept within information science and library science has also been mainly about how to renovate the system, and secondarily about the public good. The influence of open discourse on the movement has broadened the argument to include public benefits; however, most policy documents do not go far enough in acknowledging the public as *stakeholders* in the debate. Recently with the announcement of Plan S, research funders have decidedly overridden concerns about the slow evolution to an OA research dissemination environment, advising instead to "shock" the system. Once again, like in the early years of journal publishing, non-scholars are potential members of the audience. No longer is the OA movement just a debate, but a competitive force within scholarly publishing that demands new approaches to peer review, merit evaluation, journal article format, and even the research process. While Plan S may seem like the battle for open has won a

[111] https://eu-life.eu/article/eu-life-reacts-plan-s-support-open-access-and-10-keyrecommendations

decisive victory, the larger war for access to knowledge is never-ending. In the next chapter, I will discuss the concept of the public good as a theory, and as a basis for the economic and practical organization of research dissemination, and the argument that open access to journal articles is just the first step to improving research knowledge flow.

Chapter Four

Open Access, Knowledge Society and the Public Good

> If a public or a social good is defined as one that can be used by additional persons without causing any additional cost, then knowledge is such a good of the purest type.
>
> --Fritz Machlup, 1984, "The economics of information and human capital", p. 59.

> The noblest motive is the public good.[112]
>
> --Misattributed to Virgil. Window on the Ceiling of the Library of Congress

This chapter takes a step back from the micro-analysis of the open access movement to broaden the scope of discussion and provide a meta-theoretical understanding of the access to knowledge debate. In an attempt to arrive at a suitable theory to describe OA and the public good, this chapter weaves theoretical traditions together under a knowledge society framework,[113] including the political economy of communication, the sociology of knowledge, the economics of knowledge, and communications history. It is a "metatheoretical" analysis, because it appeals to theories about knowledge, the role of research as knowledge, and the importance of putting theory into practice. The chapter argues that open access enables praxis, as access to research allows for the application of that research for the benefit of the public good. While this chapter comes fourth in the overall work, the reading, writing and contemplation of it has happened throughout the dissertation journey. Indeed, the theory chapter required deep revision sometime after the survey and during the interviews phase of my research, because of the feedback I received from my participants.

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[112] This quote is an excellent example of the importance of common knowledge to preserve history and promote understanding. Although this quote is most often attributed to Virgil (*Aeneid* 6.823) it is actually a mistranslation of the words "*Vincet amor patriae*", properly translated as "Love of country shall prevail". Thus, it is both a misattribution, and a mistranslation, discovered thanks to an anonymous author in Wikiquote which pointed me to the facts unearthed by Willis Goth Regier, *Quotology* (2010), pp. 40–41. https://en.wikiquote.org/wiki/Virgil

[113] Like an umbrella to protect me from the deluge of challenges that will come from the many intellectual traditions that have attempted to understand KNOWLEDGE.

Using the concept of the public good and a political economy understanding of knowledge, I introduce the theory of knowledge as a public good to argue for the improved *flow* of knowledge from the research community to the public, and also from the greater community *back* to the university, as will be discussed in my results chapters. Knowledge flow, a simple communications concept, is essential for communication, knowledge transfer, and the ability to address complex social problems. I propose that improving the flow requires an understanding of the nature of knowledge, an awakening to the possibilities for tacit and explicit knowledge in the HSS, counteracting monopolies of knowledge by adopting alternative forms of communication, and encouraging reflexive relationships with practitioners, knowledge translators, research subjects and publics. To date, there has been no comprehensive *theoretical* analysis of open access as a public good, though the benefits of access to scholarship for the public are appealed to frequently to justify OA policy.

In the first section I outline how my project is situated within political economy of communication (PEC) theory, discuss some of the key figures and concepts, and provide a brief history of how the idea of the information society led to deeper analysis of information and knowledge in the communications field. This analysis has culminated in knowledge society theory, in the work of Nico Stehr and others, which comes the closest to providing the tools I need for my analysis. The second section sets the theoretical stage for the discussion of "the public good", where I define the "uncommon commodity" of knowledge, and how the characteristics of knowledge contribute to its ability to be shared publicly. Arguments for access can be expressed as a public good, a common good, and a merit good and these arguments overlap significantly. In the third section, I address the similarities and differences between knowledge and information, the concepts of tacit and codified knowledge, and the metaphors of knowledge stocks and flows. Understanding the concept of tacit and codified is essential for my use of the theoretical metaphors of stocks and flows of knowledge. This opens the way to a discussion of my central theoretical concept of *flow,* that emphasizes a reflexive, multi-way dispersion of knowledge, predicated on Anthony Giddens' concept of the double hermeneutic. Open access is one

way to improve the flow of knowledge to those outside of the academy; however, from a theoretical perspective, and based on the results of my research with interested publics, to fully capture the possibilities for knowledge sharing scholars need to engage more and in different ways with publics as well as be open to feedback from the greater community. Finally, my argument maintains that the problems of open or closed access in the humanities and social sciences cannot ultimately be met by a reconfiguration of the system, but rather by a change in attitude and practice on the part of scholars themselves. This attitude will determine whether academic "elites" can regain the trust among publics that increasingly demand inclusion, equality, discursiveness, reciprocity, and substantiation of knowledge claims.

Understanding Political Economy of Communications

Political economy is one of the major theoretical approaches in the study of communications. This section briefly reviews this approach and some of its key ideas and theorists. Specifically, I will introduce Harold Innis' concept of the "monopoly of knowledge", Dallas Smythe's notion of administrative and critical research, and the theory of the information society through the work of sociologist Daniel Bell, and others working in the economics or sociology of knowledge tradition.

The political economy of communications (PEC) began in the 1940s as a response to the growth of communications industries, the increasing behaviourist approach to the social sciences, the movement towards a New World Information and Communication Order, and the rise of the Information Society (Mosco, 2009). Simply, political economy of communications focuses on the allocation and exercise of power in communications contexts. PEC theorists Golding and Murdock (2005) point out that this theoretical perspective has a values base, as it "engages with basic moral questions of justice, equity and the public good" (p. 61). Most often, however, PEC has critiqued economic power wielded within a capitalist framework. The analysis of communications from an

economic perspective requires a deep understanding of the history and approaches within political economy and within communications. Garnham (2011) reviews the major topics covered by the political economy of communications approach. The chart in Appendix 1 summarizes these topics, their concerns and approaches, and examples of the scholars involved, drawing also from Mosco (2009 [1996]) and Hesmondhalgh (2013). These topics can be loosely described as the "cultural industries", "government policy and regulation of communication industries", "mass media, media ownership and democracy", and "information society/knowledge economy discourse". My project is informed by theories and critiques within the topics of "Information Society and the Knowledge Economy", and somewhat by "Cultural Industries." This dissertation adds to the political economy of communication intellectual heritage by deepening some of the concerns that have already been addressed by researchers. This research project is also more aligned with what Hesmondhalgh (2013) calls the sociological version of political economy, as scholarly publishing might also be considered a cultural industry that needs to be understood from an economics, cultural studies and sociological perspective (p. 61). Open Access is different from other PEC analyses of access, however, for rather than focusing on access to communications technologies (phones, computers, the internet), I employ PEC to look at access to knowledge. While many scholars have worked to abolish the "digital divide" (Fuchs & Horak, 2008; Mansell, 2002, Norris, 2001; Van Dijk & Hacker, 2003), the OA debate can also be framed in terms of a "knowledge divide" right in our midst.[114]

The political economy approach is characterized by disputes and challenges to mainstream economics. Dallas Smythe (1977, 1981), one of the founders of this theoretical approach, contended that the whole discipline of economics neglected communication, a "blindspot" for economists, both

[114] As another example of how mainstream communication has neglected analysis of OA, in an ICA Preconference on the Digital Divide I presented on "Open Access and the Academic Knowledge Gap." None of the other papers presented addressed the problem of the knowledge divide, between have and have not universities, and research rich and poor countries.

Marxist and capitalist (See also Bell, 1980 [1979], p. 506). Mosco (2009 [1996]) wrote that "in the drive to become a mathematical and parsimonious science, economics shed most of the fundamental characteristics that characterize political economy" (p. 46), which meant disassociating analysis from political science, sociology and moral philosophy (p. 47). Wasko, Murdock and Sousa (2011), in their introduction to *The Handbook of Political Economy of Communications*, and Mosco (1996) outline the ways that PEC differs from a mainstream economics approach. Political economy takes a more holistic focus that looks beyond the market; includes society and culture; realizes the importance of historical awareness; conducts research that is ethically motivated, concerned with social justice and democratic practice (values-based analysis); and finally, "critical analysis places its practitioners under an obligation to follow the logic of their analysis through into practical action for change" (Wasko et al, 2011, p. 2). Hesmondhalgh (2013) adds, tongue-in-cheek, "you don't have to be a Marxist to work here, [but] it helps" (p. 43).

While PEC scholars might critique economics approaches, this tradition allows me to engage economics concepts to understand knowledge and the public good. I was especially drawn to PEC as a theory because of its emphasis on the ultimate goal of *praxis*; however, some aspects of this theoretical approach stand in my way of putting theory into action. For example, the problem of Open Access cannot easily be solved by adopting a neo-Marxist approach to knowledge dissemination.[115] Morrison (2012) points out that open access cannot easily be addressed by a bipartisan approach of left versus right (pp. 49 – 50)[116]. Garnham (2011) cautions against such political reductionism as this has resulted in critical political economy becoming "a euphemism for a vague, crude, and unself-questioning form of Marxism, linked to a gestural and self-satisfied, if often paranoid, radicalism" (p. 42). He further

[115] A neo-Marxist approach might involve turning the distribution of all research publications over to publicly funded universities, or university libraries taking over the publishing function, de-privatizing/nationalizing the scholarly publishing market.

[116] OA appeals to right-wing political perspectives with promises to increase the pace of innovation and the left-wing perspectives by creating a knowledge commons where shared access overcomes class-based privilege.

advises that "we have to accept […] that the processes of development of capitalist modernity are complex and their outcomes always uncertain" (p. 60). Mosco (2009) is careful to point out, as well, that modern economics has not been united in the free market-centered approach, but has been characterized by debates and struggles around the necessity of government intervention in the light of market failures and negative externalities (p. 48). My analysis takes neither a neo-Marxist critical approach, nor a mainstream economics approach, but rather takes a critical stance between this dichotomy that simply emphasizes "we can do better." This approach is firmly rooted in Craig's (1999) description of the constitutive branch of communication theory, that is "presented as a practical response to contemporary social problems" (p. 126).

With respect to an economics orientation that is neither neo-Marxist, nor neo-liberal, my approach may be closest to the institutional branch of modern economics that adopted a dynamic understanding of economics. This approach recognizes that the economy is *evolving*, rather than governed by universal laws; and that conflict, while a defining feature of market relationships, is more complex than the Marxist view of class struggle (Babe 1995, p. 75). Thorstein Veblen is credited as the founder of this approach, and other institutional economists (and "New" Institutional economists) include John R. Commons (1934), John Kenneth Galbraith, Ronald Coase, and Elinor Ostrom (2009). Brue and Grant (2013), in their book *Evolution of Economic Thought,* point out that institutional economics deals with "social processes, social relationships, and society in all its facets" and contributed to the critique of neoclassical economics (p. 397, 405).

Harold Innis should also be given credit as a foundational institutionalist, perhaps the first to practice political economy of communications from an institutional or evolutionary economics standpoint (Melody 1987, p.1322). His concept of the monopoly of knowledge, that contends that control of the media of communication -- from cuneiform in ancient Egypt, to computers in the present

day -- confers great power on those who own, or master those technologies.[117] In sweeping macro-analysis, Innis explains the evolutionary process of communication from the oral, to the written, to the printed word. His theory influenced a prolific theoretical approach to communications rooted in a critical analysis of the history of communication media. Melody (1987) emphasizes the importance of Innis's work to both the study of communications and the economy, for Innis "recognized that economic incentives and market forces have powerful influences on communication patterns and information flows, which cannot be ignored in any realistic analysis of communication and economic development" (p. 1323).

The problem of open access can be loosely analysed using Innis's concept of the monopoly of knowledge, which will contribute to my argument later in the chapter. In the "Introduction" to Innis' *The Bias of Communication* (2006 [1951]), editors Paul Heyer and David Crowley write that "at the very moment when monopolies seem shattered, they reassert themselves" (p. xx). The accumulation of power over scholarly research reached an apex in the serials crisis, where librarians and OA advocates first revolted against the economic control of journal distribution, and the Open Access movement was born. With the establishment of article processing charges and the increasingly well-travelled gold road to open access being chosen by scholars, the large scholarly publishers seem to have been able to reassert their monopoly over university produced research. But the story does not end here, for the oral tradition remains alive even when new technologies seem to eclipse discourse. The oral tradition, through dialogue, challenges the emergence of monopolies of knowledge, and when wider sections of society have access to knowledge, they gain the ability to bypass the controlling power of institutions (pp. xvii).

As a social movement, Open Access challenges scholars to decide whether they will participate in a more publicly engaged form of scholarship. Many PEC theorists have contributed to the discussion

[117] Innis' writings did not address the computer.

regarding the role of intellectuals and the usefulness of the university, engagement being a primary principal for the critical scholar (Jacoby, 1987; Garnham, 1995; Herman & Chomsky, 2002; Giddens, 1998; Dahlgren, 2013; Posner, 2001). For example, Innis (2006 [1951]) has many things to say about the social sciences and the natural sciences, the 'usefulness' of the university, and bias and objectivity. Salter and Dahl (1999), in an article about Innis's thoughts on the scholar as public intellectual, summarize his views: "the university was accountable and relevant, he indicated, when it spawned reflection and dialogue" (p. 114).[118] Innis's essay, "Minerva's Owl," emphasized the cyclical nature of and relationship between new communication technologies, power structures, and the relative freedom of intellectual activity, where "with a weakening of protection of organized force, scholars put forth greater efforts and in a sense the flowering of culture comes before its collapse" (2006 [1951], p. 5).[119] Smythe and Van Dihn (1983) also reflected on the role of the intellectual, and concluded that PEC scholars needed to focus their efforts on critical rather than "administrative" research, the latter having overtaken the study of communication in North America in the latter twentieth century (in Mansell, 1995)[120]. Unlike Innis, who was careful to acknowledge the power of bias over the scholar, Smythe's strong neo-Marxism set the direction for PEC scholars who followed his example. This approach, according to Mansell (1995), was "to interrogate the systemic character of capitalism as it was expressed through the means and structures of communication" (p. 7). In this sense, Mansell (1995) shows how Smythe was working "against the flow" of communication scholarship of the time. Further, Smythe and Dihn outlined the list of important areas where critical communications research, or "research/action" is needed:

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[118] The article details Innis' somewhat contradictory perspective on the role of scholars in influencing public policy. He felt that on the one hand, scholars needed to control bias in their own thinking and actions, and on the other, that the scholar needed to challenge institutional bias without getting directly involved in policy making.

[119] Perhaps we are experiencing such a flowering today with the tremendous growth of journal articles.

[120] Nordenstreng (2004), in the introduction to the update for communications studies, "Ferment in the Field", comments that the contemporary distinction between critical and administrative research "should not be vulgarized by identifying critical research only with basic theorising and administrative research only with applied data gathering and processing. Both theoretical and empirical research can be critical as well as administrative" (p. 14).

> The demystification of 'technology' and science; the necessary relationship between theory and practice; the decentralization of control of communications; the democratization of communications institutions and practices; mass mobilization of organization and action; and the paramount significance of communications for peace. (127)

This dissertation addresses at least three of these concerns, arguing that open access is a necessary practice to help turn academic theory into action, that scholars should be concerned about who controls the communication of research, and that citizens are stakeholders in the debate about access to knowledge, which is clearly a democratization of knowledge problem.

In the latter twentieth century and early twenty-first, claims regarding the growth of the information society, driven by information and communications technologies (ICTs), dominated the attention of political economists of communication, sociologists, and futurists (Naisbitt, 1982; Kumar, 1995; Fuchs, 2007; Garnham, 2000; Masuda, 1980; Mansell & Steinmueller, 2000; Mansell, 2009; Melody, 1985; Schiller, 2007). Various related theories describe the social transformation from the industrial period to a new era that has been called *post-industrial society, information society*, *knowledge economy*, and the *network society.* While these labels were created by theorists who emphasized different aspects of social change, the umbrella term that I will use in this analysis is *knowledge society*. Generally, economists Fritz Machlup (1962), and Marc Porat and Michael Rubin (1977) are credited with providing the first empirical evidence that major changes in labour and employment were taking place, demonstrating how information-related occupations were increasing while manufacturing occupations were declining in the U.S. economy. Mansell (2009)[121] looks to earlier instances of an interest in communication and control for the origins of the information society perspective, found in Norbert Wiener's (1948) work on cybernetics and Claude Shannon's and Warren Weaver's work on a mathematical theory of communication (Shannon, 1948; Weaver, 1953). Beniger

[121] The collection I refer to here, edited by Mansell (2009), *The Information Society: Critical Concepts in Sociology*, costs $1600 on Amazon.

(1986) traces the origins of the information society thesis in the "control revolution," even further back to the industrial revolution. The control revolution enabled:

> A complex of rapid changes in the technological and economic arrangements by which information is collected, stored, processed, and communicated and through which formal or programmed decisions can affect societal control (pp. 426-27).

But it was Daniel Bell's book, *The Coming of Post-Industrial Society: A Venture in Social Forecasting* (1973) that caused considerable excitement and debate inside and outside of academia (Duff, 1998; Bryson, Daniels, Henry, and Pollard, 2000; May & Perry, 2011).

Daniel Bell's (1973) thesis in *The Coming of Post-Industrial Society*, that Western economies were entering a new phase of information and information-related production, became the significant focus of critique from PEC theorists. Bell (1980 [1979]) defined information and knowledge systematically or "structurally", where data is unstructured, information is organized data, and knowledge is "a set of reasoned judgements" that enables the evaluation of information (p. 509). When speaking of knowledge, he also tended to unite "information and knowledge" as one, though his discussion was predominantly about information, its growth and its ability to bestow power on those who possess it. While Bell highlighted the importance of theoretical knowledge as well as information, many PEC theorists focused instead on "information" as the dominant resource. In her analysis of the concept of the information society, Mansell (2010) acknowledged that "information society is a notoriously fuzzy concept" (p. 165), and that early neoclassical economists "make little distinction between information and knowledge" (p. 171). Webster (2006) commented that "oppositional though they are, all scholars acknowledge that there is something special about 'information'" (p. 2). My critique of PEC communications scholars, as well as mainstream economists, is that the intellectual

excitement about information overshadowed the qualitatively different, but equally important, discussion about *knowledge* during this period.[122]

The idea of knowledge, its relationship to information, and how it impacts both society and the economy is integral to the study of political economy. For example, evolutionary economist Kenneth Boulding (1977) proposes that:

> What the economist calls 'capital' is nothing more than human knowledge imposed on the material world. Knowledge and the growth of knowledge, therefore, is the essential key to economic development. Investment, financial systems and economic organizations and institutions are in a sense only the machinery by which a knowledge process is created and expressed (n.p.).

Bell (1980 [1979]), in his discussion of "The Social Framework of the Information Society", echoes Boulding with his observation that in industrial society, the crucial variable is financial capital; however, in post-industrial society, the "axial principle" is codified theoretical knowledge (p. 501). In addition, his controversial claim that "the knowledge theory of value" has replaced the "labour theory of value" in the post-industrial society was massively disruptive for PEC scholars (p. 504, 506). This idea upset much of what critical sociologists and economists based their theories on, that is, the notion

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[122] See Melody (1987) who glosses over the difference between information and knowledge: "In the economics literature the terms 'information' and 'knowledge' tend to be used interchangeably. To many people the term 'knowledge' implies the notion of truth, or at least a higher level of intelligence or expertise. Such usage is not intended here. The terms will be treated essentially as synonyms meaning 'to be aware,' that is, to be informed" (p. 1341). Mansell (1996) also critiques Robert Babe's (1995) book *Communication and the Transformation of Economics*, on which I've relied somewhat for this overview of political economy. Mansell's book review critiques Babe's incomplete analysis of "information" as "there is much academic work […] concerned with information, knowledge and communication that Babe omits" (p. 465). Foray (2004) points out that early economists studying knowledge and information, Machlup and Hayek, also use the terms knowledge and information interchangeably (p. 2). Stehr (2015) points out the many deficiencies in the early theories of knowledge society that "lacked sufficient detail and scope in their conceptualization of the 'knowledge' supplied, the reasons for the demand of more and more knowledge, the ways in which knowledge travels, the rapidly expanding groups of individuals in society who, in one of many ways, live off knowledge, the many forms of knowledge that are considered as pragmatically useful, failed to distinguish between information and knowledge, the application of knowledge to knowledge, the commodification of knowledge and the various effects which knowledge may have on social relations" (p. 108)

that the economic value of a good is determined by the labour that goes into making it. Stehr (2005 [1994]) modified Bell's original claim by pointing out that in actuality, knowledge *joins* labour and capital as a productive force in the knowledge society (p. 114). Perhaps this claim does not sound as outlandish today as it did in 1979 because we are living in the midst of a knowledge society, a concept that turned out to be prophetic in many ways. Stehr (1996) also argued that "the changes in the structure of the economy and its dynamics are increasingly a reflection of the fact that knowledge becomes the leading dimension in the productive process" (p.4). The major problem with this new theory of value is that is takes for granted that knowledge can somehow be measured, in the way that other things that have value, like cars or currency can be measured. This is the crux of the problem when it comes to the knowledge we produce in the social sciences and humanities.

The question "how can we measure the value of the knowledge we produce?" has been addressed by knowledge society theory (KST), which grew out of, but expanded upon, many of the ideas set forth by Bell. Stehr (1996, 2005 [1994], 2007, 2018) has conceptualized the features of the knowledge society in great detail, in reaction against the tendency for theorists like Bell to treat knowledge like "a black box", as "the narrower notion of knowledge that attributes enormous efficacy to scientific and technical knowledge resonates strongly with the dominant public conception of knowledge and its tasks" (2005 [1994], p 116). Walsh (2013) also outlines several claims about the knowledge society, which he defines as a macro theory, that extends and enrich Bell's original observations. First, while knowledge is arguably a feature of all societies, knowledge is more important in ways that cannot be quantitatively measured. Second, the scope of knowledge extends beyond the scientific realm, where knowledge is more distributed (though not equally), and different kinds of knowledge are valued. Third the knowledge society thesis places greater importance on the

differentiation, understanding and acquisition of knowledge, rather than information.[123] Walsh emphasizes two more features of KST that are important for my purposes. The KST approach acknowledges the importance of the economic perspective without being constrained by it. Finally, and most importantly for me, Bell and Stehr differ on the question whether knowledge can reduce uncertainty or promote further indeterminacy. While Bell (and others) have shown how knowledge enables "the reduction of indeterminacy about the economic future" (1973, p. 26); Stehr theorizes that "the growth and the broader dissemination of knowledge paradoxically produces greater uncertainty and contingency rather than providing a resolution of disagreements or the basis for a more effective domination by central societal institutions" (Stehr, 2005 [1994], p. 126). This is an important debate when considering whether further access to knowledge will help or hinder individuals or society.

This debate must take into account the overall growth of data, information, and knowledge made possible by the computers and the internet, as well as the understanding that some knowledge is more helpful (better?) than others. The question of the effects of knowledge on society has been somewhat overshadowed of late, however as the analysis of knowledge is being supplanted by an attention to 'data' that has recently captured the imagination and attention of PEC scholars, as well as the analysis of social media (see Mosco, 2014)[124]. The evolution of capitalism in the social media age means consumer data has taken on massive economic importance. In this age of what Babe (2011) calls "fast capitalism" our societies are also more susceptible to cultural influence under the constant barrage from the media minefield of politics, celebrity worship, and self-promotion that also demands analysis. Meanwhile, the knowledge produced in HSS, that allows us to understand the complex and troubling processes taking place, remains behind paywalls, elusive or ironically class specific.

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[123] Walsh (2013) outlines two more features that focus more on KST as sociological theory, regarding the argument when or how the post-industrial society shifted to the information society, which was then overtook by knowledge society, and the superiority of KST compared to other "upper-middle range" theories like globalization, risk society.

[124] A debate whether "data is the new oil" as the driver of the economy is now underway, see The Economist (2017) and Marr (2018).

Knowledge and the Public Good, the Common Good and Merit Goods

Understanding knowledge is essential to be able to present stronger arguments in favour of access to HSS knowledge. This section defines knowledge as a concept and as a commodity. The definition and understanding of knowledge advanced here leans far more towards the discourse on the economics of knowledge, than on the sociology or philosophy of knowledge. This enables me to bracket off certain aspects of knowledge from my discussion, such as epistemological questions about the truthfulness of knowledge. Rather, I am more concerned with access to knowledge and the issues surrounding the commodification, diffusion, and use of knowledge. Arguments in favour of access appeal to the public good, the common good, or merit goods, and these arguments overlap significantly. This discussion centres upon the word "good", which can be understood as an economic "good", or as something that is "good" for society.[125] The notion of the "public good" begins with a simplistic concept of knowledge, that nevertheless explains the key difficulties experienced in controlling knowledge due to the inherent distributive qualities of non-excludability and non-rivalry. The idea of the *knowledge commons* helps to conceptualize the possibilities of knowledge as a *common* good, a movement related to OA, to guarantee access to knowledge against an increasingly powerful property rights regime. A related concept, *merit goods*, refers to what the government considers to be worthy of providing for its citizens. The relationship between merit goods and common goods is important for the sustainability of HSS scholarship. Finally, because the journal market "fails" on various levels, leading to a need for government intervention, the OA project is also in danger of failure if institutional practices and culture does not change.

My attempt to define knowledge in one page or less collided with Stehr and Grundmann's (2005) five-volume collection of articles on knowledge, *Knowledge: Critical Concepts*. Knowledge

[125] I acknowledge the potential relevance of Bourdieu's (1998 [1994]) concept of capital, especially knowledge as cultural capital that is a result of education, as well as Mincer's (1958) theory of human capital, which attempts to value the knowledge workers possess, but lack the space to elaborate further. Both theories are helpful in showing how knowledge is highly valuable for the people who possess it.

lends itself to theoretical pluralism (Longino, 2002). Hess and Ostrom (2007) said that "every discipline, of course, has a claim on knowledge. This is the output of all academic endeavours" (p. 3). A sociologist might say knowledge is socially constructed (Berger & Luckman, 1966); an economist might say knowledge reduces risk (Foray, 2004), or knowledge is capital (Bourdieu, 1998 [1994]; Edvinsson & Malone, 1987[126]); and an ancient philosopher might say knowledge is virtue (Socrates, in Plato's *Meno*). Stehr and Ufer (2009) acknowledge that knowledge (and information) are highly contested concepts, but that we should move beyond the debate and "commit to a particular usage" (p. 8). My preferred definition follows in Stehr's (2005 [1994]) footsteps, where "knowledge is the capacity for action" (p. 118). This is a combination of "knowledge is power" (Bacon, 1800; Foucault, 1972) and "knowledge is a cognitive capacity" (Cowan, David & Foray, 2000; Foray, 2000; Longino, 2002). For example, scholars accumulate knowledge and then have the capacity to decide what to do with it: disseminate their idea in a conference, publish in an open access journal, or present a public lecture.

This definition focuses on the agency of the knowledge owner, rather than the structural features of knowledge. Stehr and Ufer (2009) emphasize the skills needed to interpret and use knowledge, as "the acquisition, dissemination, and realization of knowledge requires an active actor" (p. 9). This definition is still incomplete, however, as one can easily act without knowledge – impulsively or confusedly -- and knowledge can also prevent one from acting, lacking assurance about the correct course of action (Giddens, 1990[127]; Stehr, 2005 [1994]). Within business management disciplines knowledge is often thought of as a resource that creates a competitive advantage for firms (Barney and Clark, 2007; Halawi, Aronson, & McCarthy, 2005; Meso & Smith, 2000), but knowledge

[126] These authors contributed to the creation of the concept of "intellectual capital."
[127] Giddens (1990) posits that "Modernity is constituted in and through reflexively applied knowledge, but the equation of knowledge with certitude has turned out to be misconceived. We are abroad in a world which is thoroughly constituted through reflexively applied knowledge, but where at the same time we can never be sure that any given element of knowledge will not be revised" (p. 39).

can also be thought of as a resource that informs individual action.[128] One aspect of knowledge that is important for my argument is that knowledge creation is the most effective when it is *social* (Von Krogh, Ichijo, & Nonaka, 2000, p. 8). My meaning here is not quite what Popper (1962) meant in his argument about scientific objectivity; neither what Shapin (1982) might mean about how science is affected by its social environment.[129] Rather, the creation of knowledge is dependent on others, and knowledge stocks are useless if that knowledge does not flow to those who can use or apply it.

A related question is "what is research?" This is another complex question because research encompasses so many different practices. We can say, again simply, that research is the creation of new knowledge through experiment, observation, or creative analysis. The OECD (2015) defines knowledge as "creative and systematic work undertaken to increase the stock of knowledge, including knowledge of humans, culture and society, and the use of this stock of knowledge to devise new applications" (p. 44). What is important is that research produces knowledge, and by extension research produces the capacity to act. That is, if one has the knowledge (or the capacity) to interpret it. I will return to the stocks of knowledge concept later in this chapter.

Essential features of knowledge as a *public good*

Knowledge is an uncommon—in the sense of unusual—commodity. Stehr (2005 [1994]) calls knowledge a 'peculiar entity' because it is unlike other things that can be bought and sold: "it is a

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[128] Note that knowledge also guides reflection, which has traditionally been thought of as the opposite of 'action' (see Shapin, 2012), but I would argue is really a kind of action. Gadamer (1989) and Ricoeur (1973) in the hermeneutic tradition, proposed how the interpretation of texts can be understood from a philosophical perspective that situates the individual historically and culturally, privileges language as the medium for understanding, and questions the idea of the truthfulness of knowledge as established in the natural sciences. While I have mostly avoided a philosophical definition of knowledge, I acknowledge the importance of establishing a position at a later point. Ricoeur's (1993) phenomenological concern for how the self can communicate with others, would be interesting to apply to how researchers and publics can connect and understand one another. From conversation with Dr. Mitchell April 16, 2018.

[129] Popper (1962) made the distinction between science as a social process, versus science as a socially constructed process, or 'process in the mind' (p. 67). Science is social because it depends upon the scientific method that relies on the participation of the scientific community as a whole to validate new knowledge. In addition, new knowledge depends on the cumulative stores of knowledge. Since then, many philosophers and sociologists of science have explored the idea of the socialness of science (Shapin, 1985).

public and a private good" (p. 119). Knowledge is a commodity that can be commonly possessed, its distribution is difficult to control, and the value of knowledge cannot be fully realized until one possesses it. Knowledge also has the added characteristic of being "cumulative" (Foray, 2004; Lessig, 2002, Merton, 1973). Every new discovery rests on a foundation of knowledge required to interpret or use that idea. The special nature of knowledge as a "good" means that there are numerous barriers to possessing and profiting from it. Paul A. Samuelson (1954), in his article "The pure theory of public expenditure," defined private goods and public goods. *Public goods* are those that are non-rivalrous and non-excludable. Classic examples of public goods are air that we breathe, lighthouses, and the military. Knowledge is considered a "public good" in the economics sense because, unlike regular commodities, it does not get used up with consumption, what Samuelson has called "non-rivalry". Thomas Jefferson captured the idea of non-rivalry in his metaphor that equates knowledge with a candle, for "he who receives an idea from me, receives instruction himself without lessening mine; as he who lights a taper at mine, receives light without darkening me."[130] Non-rivalry means that knowledge can be shared infinitely, in contrast to other kinds of commodities that are consumed with use. "Non-excludability" means that "it is impossible to keep those who have not paid for a good from consuming it" (Ostrom 2009, p. 410). In this sense, knowledge is "almost a pure public good" (Stiglitz, 1999, p. 308-309), as access to knowledge can only be controlled with significant efforts. Intellectual property laws exist to keep non-payers, or "free-riders", from possessing knowledge that has been "commodified."

Commodification is an important concept in the political economy of communication toolkit. Mosco (2009) defines commodification as "the process of transforming things valued for their use into marketable products that are valued for what they can bring in exchange" (p. 2). Many PEC and OA scholars alike fear that intellectual property (IP) legislation is erecting such strong barriers to

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[130] Letter from Thomas Jefferson to Isaac MacPherson, 13 August, 1813 *Writings 13:333--35* http://press-pubs.uchicago.edu/founders/documents/a1_8_8s12.html

knowledge that innovation, progress and creativity will be constrained (Drahos & Braithwaite, 2002; Krikorian & Kapczynski, 2010; Lessig, 2002; Radder, 2014). Bengt-Åke Lundvall, an innovation economist and author of *The Learning Economy and the Economics of Hope* (2016), writes that:

> The original innovation system approach emphasized that knowledge and learning are crucial for economic performance in the current era (Lundvall, 1992). But it does not follow that all knowledge should be 'commodified', and this is what seems to have become the major tendency. There is a growing trend in political circles to regard *all knowledge* as a potential commodity and to subordinate *all knowledge production* under the logic of international competitiveness. This is reflected in a movement in favour of expanding and strengthening intellectual property rights to the extreme and far beyond what promotes socioeconomic progress and as well in a strong drive towards colonizing academic knowledge and making it subordinate to market demand. (p. 253)

The argument that knowledge must flow to enable learning, innovation and progress is an important argument echoed by the OA movement, and has been used throughout history to counter the forces that have attempted to benefit privately from new ideas. While the essence of knowledge is that it is infinitely shareable and non-excludable; the reality is that valuable ideas will always be a source of dispute and contention. Numerous examples abound of attempts at hoarding knowledge that is valuable, from the protection of navigational maps in the 15th century by the Spanish and Portuguese monarchies to maintain monopoly in trade (Bown, 2011); to the reluctance of the Church to allow public access to Biblical scripture (Eisenstein, 1979); to the attempt to control the radio electromagnetic spectrum by early scientists such as Guglielmo Marconi (Raboy, 2016).[131] These examples recall Innis's concept of knowledge monopolies, and the encouraging historical fact that in

[131] These three examples are arguably HSS innovations – navigational maps (geography), the Bible (religion), and the means by which radio and cellular communication travels (communications).

each of the above cases, the means were devised to circumvent the control of this knowledge that would eventually become globally available.

Knowledge commons: A really *good* idea

While the features of knowledge influence the distribution of knowledge as a commodity, the content of knowledge -- its benefits to society -- sets forth the strongest argument in favour of common ownership. Since the ancient library at Alexandria in the third century BC, civilizations have understood the importance of common pools of knowledge.[132] Arguments for universal education, such as John Dewey's work in the progressive education movement in the late nineteenth and early twentieth century, emphasized the pragmatic necessity of education for the good of the individual and society. This perspective is based on a value proposition that the flow of knowledge (as education or research) is an essential feature the good society. The existence of publicly funded universities is a more modern example of how society promotes the knowledge commons perspective, training students and conducting research for the good of the community.

The idea of an information commons (Melody, 1990, 2006; Rheingold, 1993), and later a knowledge commons (Hess & Ostrom, 2007) first grew out of the realization that information technology was enabling the sharing of information and knowledge within communities that resembled these partnerships that shared natural resources, and the conviction that such sharing was important for humanity (Hess & Ostrom, 2007). The traditional notion of "the commons" originated from the practice of the common usage of resources such as grazing land, fish stocks, and water.[133] Access to journal articles is one kind of commons model. The knowledge commons is different from other kinds

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[132] Technically, the library (within the larger Museum) was controlled by the various rulers of Alexandria (Greek, Roman or Egyptian depending on the century), but it was used relatively "freely" by scholars of the day and thought of as a "universal" library (Phillips, 2010).

[133] Garrett Hardin (1968) argued that unmanaged resource commons depleted resources unfairly and devasted the environment. This is not the case with knowledge commons because, as discussed above, knowledge doesn't get used up like other kinds of resources (e.g. overgrazing sheep). Foray (2004) calls this the "comedy" of the commons because there is a "happy outcome" (p. 16-17).

of commons because of the nature of the shared resource. As mentioned, knowledge is a different kind of resource because of its "public good" qualities that allow it to be shared potentially endlessly.

The knowledge commons concept stands in opposition to legal structures such as intellectual property laws and technologies that have increased since digitization has made copying electronic forms of knowledge vastly easier. Intellectual property laws have attempted to control the distribution and sharing of data, information, and knowledge since the first copyright Statute of Anne in 1710.[134] Copyright law is meant to strike a balance between public and private interests (Bennett, 1994). With the digitization of communication, however, came the increasing difficulty of controlling information and knowledge in the form of digital text (MacKenzie Owen, 2007).

In the traditional publishing format, scholars give up ownership of journal articles to scholarly publishers to disseminate their ideas, also giving publishers the right to control access. In addition, Suber (2012) calls copyright of scholarly articles a "temporary, government-created monopoly" because knowledge creators are forced to give up their ownership by the system (p. 39). Suber (2007, 2012) also points that because journal articles are "royalty-free" copyright laws could be drastically altered without affecting scholars. For the most part, legal concerns about copyright fall outside of the parameters of my research question. However, as scholars are faced with different intellectual property concerns than other kinds of writers, awareness of the issues is paramount to solving the open access problem. More specifically, knowledge of copyright has been important for this dissertation in order to be able to address questions or perspectives of research participants.[135]

Ostrom (2009) argues that communitarian arrangements can potentially be more efficient than other kinds of institutional structures in controlling and distributing resources. Managing resources commonly requires that stakeholders communicate with one another, and adopt agreed-upon rules and

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[134] https://www.copyrighthistory.com/anne.html

[135] For example, a submission to the Canadian consultation on copyright modernization from the Business Coalition for Balanced Copyright (2009) shows that non-academic writers and journalists do not support OA though they often face difficult relationships with publishers over IP and distribution.

principles (Ostrom, 2009). For example, Creative Commons licensing was created as an alternative IP format for IP owners that hold communitarian principles.[136] Thus, the notion of the knowledge commons is built upon the idea that stakeholders should participate in the commons, as I argue interested publics outside the university should as well. Significant research has gone into understanding how copyright might evolve and is evolving in the new research environment. The RoMEO Project (Gadd, Oppenheim, & Probets, 2003) was a multi-year research project aimed at understanding OA and intellectual property by polling researchers, evaluating publishers' copyright agreements, and creating licensing guidelines for institutional repositories.

Another important development to consider is the signing of Open Access policies by universities around the world. For example, Harvard University's adoption of an Open Access policy, originally adopted by the Faculty of Arts at Harvard in 2008, was the first to be unanimously ratified by faculty members, rather than university administrators. The policy was unique from a legal point of view in that it allowed researchers at Harvard to first retain the copyright of journal articles (not sign it over to publishers), and second to allow the university to distribute freely those articles via an institutional database.[137]

Open access has been discussed almost completely in terms of one-way communication, how our vast stores of knowledge can be spread far and wide simply by changing the copyright conditions of journal articles. Ostensibly, this has proven far more difficult than first anticipated. The realization that better arguments are needed to convince researchers of the benefits of OA, and that legal barriers dictate sharing parameters, indicate that the OA movement has not won the battle. Even though governments have mandated open access for research that is publicly funded, the goal of knowledge dissemination and transfer does not stop there. In addition, given the gap between academic scholarship and practice, building a knowledge commons cannot be done without the participation of

[136] https://creativecommons.org/faq/#what-is-creative-commons-and-what-do-you-do
[137] http://osc.hul.harvard.edu/policies.

all stakeholders. Commons require a community that collaborates to establish the rules of sharing, an awareness of the benefits of participation, and an inclusive culture that operates according to collegial principles. If the hearts and minds of scholars are not committed to the commons arrangement, success will be difficult to achieve, particularly in an environment where institutional controls over IP are increasing.

Market failure and merit goods

While it might seem that the drive to commodify knowledge stands in complete opposition to the knowledge commons model, Garnham (2011) critiques the "fetishization" of the concept of commodification in the study of culture and proposes instead that:

> Broadly liberal political economic concepts of public goods and market failure provided a better understanding of the economics of cultural production and consumption, and of the resulting and unavoidable need for forms of regulation, than Marxist commodification theory. (p. 49)[138]

The idea of market failure is important to explaining why the scholarly journal market -- as a cultural market – can be understood as a "public good" in the economics sense, a common good in the legal sense, and a "merit good" in the policy sense. It is also vital to establish that while common ownership of all knowledge is a noble ideal, the question of financing cannot be naively dismissed. Financing the creation of HSS knowledge (research) is a key consideration for its sustainability.

The economist Francis Bator (1958) established that there are many conditions where markets fail to operate efficiently according to the laws of supply and demand. Stiglitz (1988) discusses that where there are market failures, such as in the case of "imperfect competition (from say, increasing returns), imperfect information, incomplete markets, externalities, public goods, and unemployment," there is a *normative* obligation for the government to act (pp. 82-83). Knowledge markets might seem

[138] He goes on to remark, "it is therefore better understood from the perspective of the political economy of innovation than from a classic industrial development model."

in danger of failure right out of the gate, given the unique features of knowledge. For example, as mentioned above, because it is difficult to know the benefits of knowledge in advance of possessing it, as in the case of basic research, it is difficult for private companies to adopt the risks to invest. This results in the market requiring government subsidy or funding to operate. This market failure argument, however, is perhaps the weakest argument one can make, as almost anything can be justified as deserving government subsidy by this standard.

The research journal market does indeed "fail" on many levels, as there are many reasons why the process of creating knowledge and distributing it to society does not function well according to supply and demand. First, when government interferes in a market, as in the case of the government subsidy of university research, it causes the "natural" market to fail. Second, journal publishers receive knowledge for free, providing a lop-sided form of compensation for researchers' labour (exchanging a marketing service for copyright), defying normal labour theory of value arrangements. Bell's assertion that the "knowledge theory of value" would replace the labour theory of value in the information society, whereby knowledge becomes the new measure of value, applies (ironically) in this situation, as knowledge in the form of a journal article is used as currency to "buy" marketing and distribution of that same article. Third, the journal market is "inelastic" meaning that market prices do not fluctuate with supply and demand (Morrison, 2012). This is because universities are a captive market with little to no power to negotiate prices (or go elsewhere) due to the monopoly of knowledge that publishers enjoy. Fourth, Altman and Avery (2015) argue that "information contagion", or the tendency for "path dependence" when choosing journals also impedes competition. This is because it is difficult to evaluate journals (so many options, reliance on reviews), so that well-established journals maintain their prestige and value over time as consumers consistently value their worth (p. 64). They also point out that a single publication does not stand alone in terms of its value, but rather "scholarly works are embedded in networks of citation, evidence, and meaning that give them value, and that contribute to the value of the network" (p. 64).

A third sense of the term "public good" is exemplified by the term "merit goods", which refers to something that the government provides for its citizens because of the belief that this good will benefit society, but that it will not be supplied by the private sector sufficiently, such as universal education or health care (Black, Hashimzade, & Myles, 2017). The notion of *merit wants* (goods) was developed by economist Richard Musgrave (1959) who realized that some goods are "considered so meritorious that their satisfaction is provided for through the public budget, over and above what is provided for through the market and paid for by private buyers" (p. 13). The provision of merit goods might seem "paternalistic" as the provision of that good is reliant on a benevolent government as benefactor (Trotman-Dickenson 1996, p. 64). Musgrave, in a somewhat troubling technocratic statement, also indicates that "preferences should be imposed with certain limits by a chosen elite, be it because its members are better educated, possess greater innate wisdom . . ." (Musgrave, 1969, p. 143). This technocratic paternalism has worked to the advantage for HSS research because the lack of public awareness of the benefits of this research means that if left to the private market, it might not be sufficiently supplied. Despite that there may not be sufficient public understanding of the benefits of HSS research (Ekos, 2008), the government does continue to fund it publicly because policy advisors – the chosen elite -- agree on the benefits to society. Thus, HSS research funding is precariously dependent on this agreement.

Some merit goods only benefit a small number of people, rather than the whole population. The benefits for open access to research articles for the scholarly community are clear – because of the additive nature of knowledge scholars need to stay current in their disciplines to be able to teach about it and to continue adding to the body of existing knowledge. The benefits to the whole population are arguably not as clear however, raising the question of whether HSS research should be considered a public good, available to the whole public, *and* a merit good, meritorious enough for the government to

supply it; or simply a merit good, valuable only to a privileged, class-specific, and highly educated population.[139]

Given its unique nature, knowledge is a public good in many different ways: as an economic concept, as a social investment, as a philanthropic need, and as a "global" good. Economists Eleanor Ostrom (2009) and Inge Kaul (2012) encourage more work into the understanding of public goods, which has changed considerably since Samuelson's (1954) simplistic definition. Kaul (2012), in her article "Rethinking public goods and global public goods," argues that many goods should be understood as global public goods requiring "reflexive policy" approaches. Further, she illustrates the complexity of decision-making involved in negotiating and providing public goods, like peace-keeping, that involve multiple states and public and private actors. Open Access to journal articles is also an example of a global public good as all scholars need access to the latest research in order to participate in the global scholarly community. Researchers working at universities that do not have large research library budgets are greatly disadvantaged by their lack of access. Arguably, global access to knowledge is especially important when it comes to certain kinds of knowledge such as health and medical research, knowledge about complex global problems like climate change, and HSS knowledge that helps us understand and enjoy our lives. But OA does not work if only a few countries agree to participate. Organizations that control knowledge, such as the World Intellectual Property Organization (WIPO), work to *regulate the distribution* of knowledge. Their mission is "to lead the development of a balanced and effective international intellectual property (IP) system that enables innovation and creativity for the benefit of all."

The attempt to create an organization that promoted the flow of knowledge globally was not successful. In the late 1970s and early 1980s the New World Information and Communication Order (NWICO), also known as the MacBride Commission, was envisioned as a means of promoting a more

[139] Some have argued that scholarly journals are club goods, valuable to a select group who are willing to pay for them (Potts, Hartley, Montgomery, Neylon, & Rennie, 2017).

equitable flow of mass media, communication and entertainment between developed and developing countries. The United States, and later the UK, were opposed to any control of communications or media resulting in the dissolution of the NWICO and withdrawal of funding. The MacBride Report (1984) discussed the "flaws in communication flows" that have developed as a result of an imbalance of power between media (and technology) rich countries and developing countries that struggle to prevent being overwhelmed by the strong cultural imperialist media practices of the U.S. (Hesmondhalgh, 2013).

Value expressed as research impacts

Karl Marx (1990 [1867]) defined the different forms of value within capitalism, referring to use value, exchange value, and labour value. Though there is certainly a great deal of labour value embodied in research journal articles, the use value of that journal article cannot be quantified. Calculating the exchange value of a journal article is also problematic, as the price will not be related to the potential use or the cost to produce that knowledge. Stehr (2005 [1994]), in his article on "*The texture of knowledge societies"*, adds the important footnote that "it is a widely-shared assumption that social science knowledge and knowledge from the humanities is somehow less useful than natural science knowledge" (p. 130). This attitude is also regularly found in the media.[140] Many scholars have investigated and argue for an awareness of the social responsibility of the university (Boyer, 1996; Calhoun, 2009; Kezar et al, 2015; Thorton & Jaeger, 2007). By contrast, May and Perry (2011) argue that "Universities have never been simply protected or insulated from broader social, economic or political forces but despite this, attributing 'usefulness' to disciplines is highly problematic" (p. 127). Hayter (2015) provides a review of literature about the social responsibility of universities, which until recently has not been discussed in empirical terms, or in specific terms about how universities should contribute to society apart from research, teaching and service. Machlup (1979b), in his article "The

[140] http://foreignpolicy.com/2009/04/15/the-cult-of-irrelevance/
http://www.washingtonpost.com/wp-dyn/content/article/2009/04/12/AR2009041202260.html.

uses and benefits of knowledge", rejects simplistic cost-benefit analyses of the usefulness of knowledge, where he gives the example of a graduate student that tries to come up with a value for a chemistry journal article. This is because the production of knowledge, whether in private research labs, universities, or government funding of "innovation" projects, has unknown externalities (positive benefits, or negative consequences) and requires a leap of faith in believing that the outcomes of the knowledge produced will be beneficial or profitable. Bates (1988) uses the term ancillary value, to describe the process whereby "the use of a good by an individual creates a benefit for or value for others", such as in the case of education (Bates, 1988, p. 82).

If all knowledge is difficult to attach value to, the specialized knowledge produced in the social sciences and humanities is even more challenging to describe in market terms. In the sciences, it is easy to perceive that a great deal of research has positive, economic spin-offs, or externalities – pharmaceutical research develops new drugs, engineering research develops better ways to build things, medical research saves lives. These have tangible, positive externalities. In the social sciences and humanities, the impacts are more difficult to demonstrate let alone quantify. Achieving value is not only about doing pragmatic, administrative, or socially useful research. The challenge for evaluating impacts is also to demonstrate where social sciences research helps us to understand our lives, and humanities research helps us to enjoy life. This question of whether the liberal arts has value is the central question for impacts of HSS research, a branch of inquiry that makes qualitative and quantitative arguments in defense of HSS.

Joel Mokyr (2003), in his book *The Gifts of Athena: Historical Origins of the Knowledge Economy,* argues that knowledge acquires value because of the perception of its value. The question of the value of HSS is central to the problem of *access* to HSS research, because without access, there can be no perception of value, let alone realized value. I am making the assumption that HSS research has value, based on my personal perception of value and experience conducting, learning about and applying this research. Providing proof about the quality, usefulness or truth of this knowledge,

however, is beyond the boundaries of this dissertation project, although I originally intended to prove there is a demand for HSS research by asking HSS knowledge translators and professionals. I must take the position that it does have value, some or all of it, has some kind of value. If it has value it is important that it can be used, found, read, understood, taught and distributed.

Finally, publicly funded research, and the creation of new knowledge in general, carries with it an obligation to share that knowledge with the public who paid for it and might benefit from it. Calhoun (2009) writes that:

> The reward system of academia itself is not clearly oriented to the sharing of knowledge as a public good. [p. 589…] In considering the future of academic freedom, we need to consider not only explicit threats and intimidation. We need to consider structural changes in how universities and academic careers work. We need to be self-critical about positions of privilege. And we need to recognize that respect for academic freedom has no "natural" status: it rests on a tacit bargain. Our side of that bargain includes effective public communication (p. 590-91).

The notion of academic freedom is sometimes interpreted as giving scholars the freedom to pursue research without the obligation to serve the public interest (Rajaoson, 2002; de la Fuente, 2002; Drury, 2008; Hayter, 2015; Moscon, 2015). The PEC perspective also stands in contrast to administrative research approaches that are utilitarian, motivated by corporate or government interests, and generally assumed to be inferior intellectually *(*Smythe & Van Dinh, 1983). Wilsdon et al. (2015)[141], in their report on research metrics, detail how "many within academia resist moves towards greater quantification of performance management on the grounds that these will erode academic freedoms and the traditional values of universities" (p. 79).

[141] Coauthors too long to list in text: James Wilsdon, Liz Allen, Eleonora Belfiore, Philip Campbell, Stephen Curry, Steven Hill, Richard Jones, Roger Kain, Simon Kerridge, Mike Thelwall, Jane Tinkler, Ian Viney, Paul Wouters, Jude Hill, Ben Johnson.

Beginning in the 1990s, scholars began to voice their concerns regarding the growing influence of capitalist and corporate values on the university (Engell & Dangerfield, 2005). This line of argument condemns the neoliberalization of the university[142] (Readings, 1996; Aronowitz, 2000; Kirp, 2003; Davies, 2014; Flew, 2014; Schiller, 1996; Smythe, 2017), the values of "academic capitalism" (Giroux, 2007; Radder, 2014; Slaughter & Leslie, 1997; Slaughter & Rhodes, 2004), and the notion of the "marketplace of ideas" (Drezner, 2017). Critics charge that universities are reorienting their institutional role away from education towards reaping the economic benefits from training students, playing sports, and commercializing research or new ideas (Shapiro, 2005). Research outcomes are increasingly being judged according to economic impacts and commercial value (Bok, 2009; Krimsky, 2003; Geiger, 2004). One of the main critiques is that attaching monetary value to research outcomes disadvantages humanities and social sciences, as impacts from these knowledge domains are far more difficult to measure and trace, with the danger that funders would make the facile conclusion that there are few benefits as a result. This critique may have also served to distance critical scholars further from the notion that researchers, as employees of public institutions, are also public servants.

Initially, few critics were willing to take a more constructive stance on the problem of the increasing marketization of the university. Kirp (2003), in his work, *Shakespeare, Einstein, and the Bottom Line*, argues convincingly that the liberal arts are threatened under a marketplace ideology, providing ample evidence of how universities are under increasing pressure to perform like businesses. His perspective differs from many of the above-mentioned critiques, however, as although he critiques market-driven education, he also sees an opportunity for the liberal arts to lay claim to the creative energy and opportunity for reenergizing academia's role in society. Eric Gould's *The University in a Corporate Culture* (2003), while critical and condemnatory, attempts to motivate the university

[142] Birch (2017) defines neoliberalism as "the infiltration or installation of 'markets' as the organizing principle in our economies, politics *and* societies" (p. 2). Both Birch and Flew (2014) emphasize the confused and various definitions that have been used over the last 150 years. The most recent usage is a pejorative critique of the "dominant ideology" (Flew, 2014) to describe the economic and political policies of deregulation, privatization and globalization that has taken place under centrist or right leaning governments since the 1980s such as outlined in Harvey (2005).

community to embrace both the pragmatist orientation of a liberal education and the benefits of entrepreneurial spirit and cost-cutting that are important to any organization. Gould, a humanist scholar, identifies the contradictions that complicate the debate around the university's purpose, as "serious political differences lie at the heart of higher education in a complicated way, for universities are by necessity wedded to capitalism, the pursuit of knowledge, and agendas for sustaining social justice and academic freedom all at once" (p. xv). Engell and Dangerfield (2005), in a review of his book, call his attitude "defeatist" (p. 15). Finally, Geiger (2004), whose work *Knowledge and Money: Research Universities and the Paradox of the Marketplace,* also takes a more positive outlook, pointing out that while universities have better research funding than ever before, the challenge facing universities is "to accommodate the demands of the new research economy without compromising their basic mission" (p. 140).[143]

By 2019, the corporatization of the university is arguably no longer a trend, but the status quo. Champions of the liberal arts, however, continue to promote the non-economic benefits of liberal education. To further prove the merits of HSS knowledge and education, a new branch of scholarship has materialized to demonstrate the positive impacts of social sciences and humanities research. Bastow et al. (2014), in their three-year study of social sciences impacts in the UK, point out that, "the processes involved in social science research influencing wider decision making have been relatively little studied in systematic ways, and consistently underappreciated by observers outside academia" (p. 2). They conclude that "the social sciences predominantly achieve external impacts by influencing people to think about things in a different, more precisely reasoned and better informed way, one that will (hopefully) produce better decisions and societal outcomes" (p. 273). Since that time, however, impacts research has grown, as well as the popularity of linking research impacts to research funding. For example, "Humanities Indicators" is a project of the American Academy of Arts and Sciences that

[143] Geiger's analysis does not address HSS research, but focuses in on basic research and the growth of medical research within universities from the 1990s – 2000s.

tracks metrics from humanities education, such as "job satisfaction of humanities PhD recipients" and "Humanities Education Quantified". In the UK, impacts analysis scholarship has ignited rigorous debate around the social utility of HSS knowledge, under pressure to conform to the UK government's Research Excellence Framework (REF) and Knowledge Exchange Framework (KEF) guidelines (Wilsdon et al., 2015; also see LSE Impacts Blog, Responsible Metrics Blog). For example, Sivertsen and Meijer (2018) point out that the impact-based funding often proceeds from erroneous assumptions about causality (that there is a linear relationship between research and societal impact); attribution (difficulty of knowing whether research or something else is responsible for impacts); internationality (research and innovation is often global and difficult to localize impacts as a results); and time scale (impacts of science usually realized over a long period) (p. 2). The Canadian Federation for the Humanities and Social Sciences (CFHSS) recently released a report on the impacts of the HSS (Severinson, 2017). This report proposes optimistically that, rather than disadvantaging HSS research:

> The assessment of diverse impacts is likely to draw increased attention to the use of research outside of academia. In doing so, impact assessment encourages the "democratization" of knowledge, which describes both the co-production of knowledge between academic and non-academic partners and the co-use of that knowledge throughout different sectors. This approach to research has the potential to help break down barriers between the scholarly community and non-academic sectors, build trust, encourage partnerships, challenge perceptions of academic elitism, and open new pathways for knowledge gathering and sharing (p. 15).

Finally, research in the humanities is perhaps continually under the most scrutiny and threat from loss of government funding, being the most difficult to value quantitatively.[144] The editor of the collected volume *The Public Value of the Humanities* (2011), Jonathan Bate, argues that the debate about

[144] The premier of Ontario, Doug Ford, has recently announced that post-secondary institution funding will be tied to performance outcomes https://www.cbc.ca/news/canada/toronto/ontario-colleges-university-performance-funding-budget-1.5094751

economic impact versus "civilizing virtue" has a history within the writings of John Stuart Mill, Jeremy Bentham, and Samuel Taylor Coleridge (p. 10). In beautiful prose ripe with allusion, he argues that:

> Research in the humanities is often regarded as a superficial ornament of society. Those who undertake it are sometimes accused of obscurantism, of being all too eager to show off the amazing technicolour dreamcoat of their academic jargon at the expense of communicating clearly with a wide public. But if Coleridge is to be believed, it might just be that among the faculties of the humanities we will find the Josephs who will guide us through the seven lean years (p. 12)

The acknowledged difficulty of establishing the value of research in the HSS is part of the larger set of considerations regarding the project to make all research open to the public. With increased public exposure comes possible increased public scrutiny of "obscure" research. On the other hand, expanding the audience for social sciences and humanities research could have positive and mutually beneficial effects on research agendas that might be invigorated by an awareness of their public audience. Audiences, in turn, stand to be enriched by exposure to Romantic poetry, awareness of Biblical references, and education by humanities scholarship that "teach[es] us that all controversies have historical precedents" (Bates, p. 10).

Promoting the Flow of Knowledge

This section delves even deeper into the complex nature of knowledge, how it is different from information, and how the characteristics of knowledge might enable or resist the control of it. Second, I discuss tacit and codified knowledge, concepts that are essential for my use of the theoretical metaphors of stocks and flows of knowledge. I argue that the process of codifying knowledge, which relies on knowledge being made explicit, allows it to be commodified; whereas tacit knowledge enables ideas to flow. The university as an institution has historically been more concerned about stocks of knowledge rather than flows. This is evidenced by the fact that scholars have been rewarded

more for their publications, rather than by their teaching output; how many articles are published or cited, rather than whether knowledge transfer has taken place at all. This opens the way to a discussion of my central theoretical concept of *flow,* that emphasizes a reflexive, multi-way dispersion of knowledge. I will discuss flow from both the micro, person-to-person level and from the macro, or societal level. Micro flow, also known as learning or knowledge transfer, is mostly a tacit process, difficult to monetize or even describe. The societal level concept of flow is related to theoretical concepts including dialectic, reflexivity, feedback, the double hermeneutic, the virtuous circle and second loop learning. All these concepts promote the idea that knowledge does not, and should not, flow in one direction from the university community. The process whereby knowledge flows, is reflected on, and returns back changed to the original source, is the lynchpin for social innovation. My argument focuses on Anthony Giddens' (1984) idea of the double hermeneutic, as a way of explaining how HSS research flows, and a theoretical argument in favour of a much broader interpretation of open access. My interviews led me to consider the prospect of feedback loops as a way to explain what professionals that carry out research outside of the academic community need, which will be discussed in detail in the analysis chapters.

Information and knowledge: Codification and transfer

The unique nature of knowledge differentiates it from other cultural commodities like music and television, and from other forms of communication, like information and data. Knowledge shares many similarities with information and data: all three are non-rivalrous, non-excludable, difficult to know the value of the product before one uses it, and are *more or less* easily copied or reproduced in their codified forms. It is also difficult to define one without clarifying the others. Gregory Bateson's (1972) definition of information as "any difference that makes a difference" to a conscious, human mind (p. 315), is echoed in Donald Case's also oft-cited version of "any difference you perceive in your environment or yourself" (2012, p. 4). Both these explanations emphasize the personal,

individual, cognitive processing aspects of information. Wolfe (2005) emphasizes that the distinction between information and knowledge is highly relevant when considering research knowledge transfer as "the traditional justification for government-funded basic research relied on the public good qualities of information. However, the evidence deduced from the relevant studies indicates that what firms draw upon is not information per se, but knowledge" (p. 7). While information is valuable to firms, the knowledge to interpret data, information, processes, and performance relies on knowledgeable humans.

Bell (1980 [1979]) emphasized the need for openness to "information and knowledge" and, in a critical point for my argument, states that:

> Information, or knowledge, even when it is sold, *remains with the producer* [my emphasis]. It is a 'collective good' in that once it has been created, it is by its nature available to all. In fact, the character of science itself, as a cooperative venture of knowledge, depends on the open and complete transmission of all new experiments and discoveries to others in the field. Multiple discoveries of the same theory or experimental result or technique, which Robert Merton argues is a more dominant pattern in science than the image of the lonely genius or scholar, are one result of this openness and the rapid spread of knowledge (1980 [1979], p. 512)

The simple realization that knowledge "remains with the producer", even when codified in a journal article and given away for the price of prestige and reputation, is a testament to the ability of knowledge to bypass institutional control. That is, if the holders of that knowledge are motivated to share it further.

Table 4.1 Comparison of Knowledge and Information

Knowledge	**Information**
Non-rivalrous	Non-rivalrous
Non-excludable	Non-excludable
Difficult to know value in advance of use	Difficult to know value in advance of use
Requires cognitive processing/understanding to put to use	Lower levels of processing required
Value derived from tacit knowledge of knowledgeable agent – value is in the person	Value derived when information is unequally distributed (Stiglitz, 2002).

Tacit knowledge is embodied – remains with the producer, "how to guide"	Information is explicit, resides in messages, can be a stock of knowledge
Difficult to commodify unless in an explicit form	Easier to commodify as always explicit
Can be mediated/flow through people (knowledge translators) or technologies	Information travels, migrates: travelling form of knowledge
Knowledge allows agent to bypass institutional control – emancipatory	Information provides competitive edge and can increase institutional control

If information resides in messages, then knowledge resides in people. The major difference that separates knowledge from information is the far more complicated process required to codify knowledge and transfer it to others. Knowledge requires understanding that is dependent on the interpreter possessing the cognitive capacity or ability to interpret the knowledge (David & Foray, 2002). Although I adopt Stehr's definition of knowledge as a capacity to act (2005[1994]), and that action requires agency, my definition of information departs from his somewhat. While I agree that "information can migrate more easily than knowledge", "is more general", is "not as scarce as knowledge and can be detached from meaning", according to my conceptualization, information *is* the travelling form of knowledge (Stehr, 2009, p. 9). Information becomes knowledge when it is internalized in a tacit form enabling the owner to act on it. Codification refers to the method of recording knowledge (in language, text, sound, diagram, lectures etc.). Transfer, the result of knowledge flow, refers to the ability to learn and use that knowledge.

A stock of knowledge is the codified form of knowledge which can be expressed concretely, first, in language, and second in any number of forms of communication media. Stehr (2015) points out that:

> Modern societies have made dramatic advances in the intellectual appropriation of nature and society. There is an immense stock of objectified knowledge that mediate our relation to nature and ourselves. In a general sense, this advancement has been called, in other contexts, modernization or rationalization. (p.109)

We accumulate stocks of knowledge in the library, in our hard drives, in our filing cabinets. While stocks are important, what is more important is that knowledge flows to where it is needed. Melody (1987) points out that the value of stocks actually depends on flow:

> The value of this stock of knowledge to society depends upon how pervasively it is spread throughout that society and upon the institutions for maintaining, replenishing and expanding the stock of knowledge, that is, its educational and training system and re- search generating new knowledge. Economic benefits come in the form of improved decision-making throughout the economy (p. 1330).

Following Miller (2002), I also concur that information has no intrinsic meaning, until interpreted by human subjects at which point it becomes knowledge. According to this perspective then, stocks, which are codified forms of knowledge, consist of information. Whereas flows, the understanding and application of information, consist of knowledge. Cowan et al. (2000) thinks this is too simplistic of an explanation making tacit and explicit knowledge a dichotomy. I disagree that tacit and explicit are a dichotomy if the concept of flow is interposed between them.

In my theoretical scheme, the idea of stocks and flows are closely related to the concepts of codification and transfer. The terms codification and transfer are used in an information systems approach to communication, knowledge management, and innovation studies.[145] These terms reduce the epistemological processes of writing, teaching and learning to "data processing" jargon, abstracting the processes from the realm of humanities and social sciences, into the scientific realm. This reduction is also what enabled early information scientists to create simple mathematical models of communication, such as Claude Shannon and Warren Weaver's linear sender-message-receiver model, and mathematical modelling of tacit knowledge (Arrow, 1962). Cowan & Foray (1997) discuss the

[145] Mosco (2009) distinguishes between two different ways that communication has been discussed: a transmission of information model and the constitution of meaning model. He points out further that together both perspectives are important. While many political economists have traditionally focused on structural elements, "it is important to resist seeing the political economic as the realm of structure, institution and material activity while communication occupies culture, meaning and subjectivity" (p. 68).

complex and expensive process of codification in their article "The economics of codification and the diffusion of knowledge," pointing out that advances in technology have brought the costs of the codification process down, while increasing the pace of codification. Only codified knowledge can be commodified, that is, treated like a commodity that can be bought and sold (Ancori, Bureth, & Cohandet, 2000). Digitization, computer technology and the Internet have made data, information and knowledge more easily distributed, (difficult to control, limit, prevent from access); however, knowledge carries with it the additional challenge of transfer. Knowledge is difficult to transfer to others because it requires the ability to decode, interpret and understand, in short it requires learning which results in competence (Cowan, David & Foray, 2000; Mokyr, 2003, p. 14).

Arguably, the university as an institution has historically been more concerned about "stocks of knowledge" rather than flows. Publications are the key to promotion, and those who act as public intellectuals, who devote their efforts to disseminating knowledge to the public have often been looked down upon (Drezner, 2017; Lecklidder, 2017; Pasquerella, 2017). One of my critiques of the OA movement is that the arguments for access have also been made in terms of stocks as evidence of success: how many open access journal articles have been published, how many citations of these articles have happened, what the copyright terms are for these stocks. Finally, the central argument for open access is a delivery of stocks issue, where the transfer of knowledge is not addressed or is taken for granted.

Tacitness and knowledge flow between people

The concepts of tacit and explicit knowledge are important in understanding the distinction between simple information delivery and complex knowledge transfer. I argue that tacit knowledge is important for OA because the ability to use knowledge begins and ends with tacit processes (Polanyi, 1962), that tacit knowledge is the seed for codified knowledge, and that knowledge lives within agents – and can be made explicit in many different ways. The philosopher and economist Michael Polanyi (1962)

reasoned that knowledge is learned through experience, and that "all knowledge is either tacit, or rooted in tacit experience" (1966, p. 7).[146] Tacit knowledge can be understood as an innate ability to do things, but paradoxically cannot always be easily articulated. The possession of tacit knowledge lies at the foundation of what it means to have expertise. According to Cowan and Foray (1997) tacit knowledge is found in people, institutions and routines, and is difficult to transport making it resistant to commodification. Echoing Polanyi, they point out that "it will always be true that tacit knowledge is needed to use codified knowledge" (n.p., Section 1.2). Gascoigne and Thornton (2013) emphasize the personal nature of tacit knowledge, which also puts into question the possibility of being objective (pp.5-7). Tacit knowledge has an embodied quality, meaning it belongs exclusively to an individual, allowing that person to "know how" to do something. This means tacit knowledge is the built-in "how to" guide for all that we do. The notion of tacit knowledge is helpful in understanding my research subjects who, as practitioners, possess a wealth of tacit knowledge from their work, in contrast to HSS scholars who are expert at codifying their knowledge, which in itself is a kind of tacit knowledge – knowing how to write, explain theory, analyze data.[147] In my research interviews, I observed, that almost without exception, people were willing to share their expertise, planting in me the seed of knowledge flow theory, as the conversations proceeded almost as if there is a principle of "sharing what one knows", when circumstances allow for this sharing of tacit experience.

In addition to having become a "loaded buzzword", the conversation around tacit and explicit knowledge has taken two different roads in business management/economics and in philosophy, psychology or sociology (Cowan et al., 2000, p. 212). While the former took a more purposeful approach to understanding knowledge in order to understand expertise and innovation within a knowledge management framework (Arrow, 1962; Nonaka, 1994, 2008; Lam, 2000; Kimble, 2013);

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[146] Tacit knowledge is sometimes interpreted as "knowing how" which corresponds with Gilbert Ryle's (1949) definition. I wish to sidestep the epistemological discussion that addresses Ryle's "knowing how" and "knowing that", to focus instead on tacit and codified knowledge as embodied and explicit forms of knowledge. This enables me to adopt a communications-focused understanding of the concepts rather than a philosophy-focus.

[147] Well, technically, scholarly publishers own the codified version.

the latter ventured into phenomenological and epistemological grounds in an attempt to explain mind and consciousness (Ryle, 1949; Husserl, 1962; Schutz, 1967; Giddens, 1984; Searle, 1983; Barbiero, 2004; Sennett, 2008). In the first case, tacit knowledge is difficult but not impossible to extract. This means that those with expertise can elucidate their experiences and understanding, putting them into words or journal articles, for the benefit or use of others. This perspective also maintains that knowledge flows (tacit knowledge) can be measured (Zucker, Darby, Furner, Liu, & Ma, 2007). In the other camp, tacit processes are pre-cognitive; that is, we are not conscious of how we "go on," or how we "take up" knowledge, and tacit knowledge functions in the background of our mental awareness (Coghlan & Brydon-Miller, 2014). Several scholars have critiqued the knowledge management approach as veering too far from Polanyi's intent (Cowan et al., 2000; Hedesstrom & Whitley, 2000; Tsoukas, 2005). Gascoigne and Thornton (2013) carefully explain that tacit knowledge is difficult (if not impossible) to measure, and contrasts with the idea that explicit knowledge is valuable because it can be recorded and counted. The instrumentalization of knowledge, whereby universities, governments, and firms have attempted to "capture" tacit knowledge and extract value from knowledgeable subjects (such as employees in a firm), as if the knowledgeable agent is an orange to be squeezed, is precisely what the philosophical/sociological camp rejects (Aronowitz, 2000; Wolfe, 2005). The simplification of the notions of tacit and explicit, as well as other aspects of knowledge, enabled a far more productive and widespread application of this theory, however, aimed at improving innovation in organizations. The privileging of tacit experience resulted in firms giving due respect to workers that gained tacit understanding of processes, acknowledging the subjective power of the individual (Von Krogh, Ichijo & Nonaka, 2000).

For my purposes, both perspectives on tacit knowledge are important. Polanyi's assertion that "*all knowledge is either tacit or rooted in tacit knowledge*" (1966, p.7) can be used to explain the processes of knowledge transfer that involves encoding and decoding of knowledge. Hedesstrom and Whitley (2000) interpret Polanyi's claim as meaning "even if knowledge has been articulated into

words or mathematical formulas, this explicit knowledge must rely on being tacitly understood and applied" (p. 3). On the one hand, I maintain that tacit knowledge is knowable, fluid and ever-changing because experiential learning -- which arguably is all learning -- never stops. However, the knowledge management definition of tacit does not completely suit my purposes as even nuanced interpretations of "tacit", such as Cowan et al. (2000), focus almost exclusively on R&D within STEM disciplines or private firms, neglecting the unique considerations inherent in HSS knowledge. On the other hand, if tacit knowledge is understood as a cognitive capacity to understand, then this has implications for OA and the sharing of knowledge. Lam's (2000) perspective emphasizes that the key to acquiring tacit knowledge is experience. In addition, without some form of shared experience, it is extremely difficult for people to share each other's thinking processes. This requires a higher level of engagement between knowledgeable agents. Knowledge sharing between academic researchers and their professional counterparts could qualify as such an arrangement.

The aspect of tacit that most interests me is that it cannot be "taken away" from a subject. My conceptualization of tacit knowledge is emancipatory. Knowledgeable agents can use or give away their knowledge, for free or for profit. This perspective maintains that humans have agency, or control of their own knowledge, despite the concern that the codification process has increased exponentially under a knowledge economy paradigm, abstracting knowledge from the realm of people to the realm of technology (Bakardjieva & Feenberg 2002; Beniger, 1986; Feenberg, 1999; Lundvall, 2016; Postman, 1993). So even if scholars give up their journal articles to for-profit publishers, they still retain the tacit knowledge they have gained from their experience. This is important because research communication cannot stop when the journal article or book is published. It definitely should not stop when the conference is over. That knowledge needs to keep flowing until it has reached someone who can decode it and put it to use in society.

The understanding of tacitness as part of a process is also important to my argument, because knowledge flow between people depends on codification, enabling it to be distributed, and

interpretation, using the tacit resources unique to each person. This means that tacit knowledge is both a seed for explicit knowledge, as well as a wellspring, upon which the owner constantly draws upon for understanding and/or action. The transfer of knowledge – in a codified format -- requires that agents be able to read the code. This interpretive process, lies at the heart of the phenomenological understanding of tacitness. Miller (2002) emphasizes that "knowledge is the uniquely human capability of making meaning from information - ideally in face-to-face relationships with other human beings" (n.p.). Kimble (2013), drawing on Miller (2002) cautions, however, that the notion of decoding cannot be reduced to an instrumental process, as "information systems" explanations of encoding and decoding attempt to do. Kimble summarizes this distinction as:

> Human beings are able to learn how to assign meaning to events without needing to refer to a set of pre-programmed instructions. The implication of this is that, in the case of human agents, the decoding of the message needs to take into account not only the context of use, but also the knowledge (cognitive context) of the receiver (p. 3).

The existence of the tacit means the process of understanding is more than simply encoding and decoding, that there is something personal, unknowable and unstructured inherent in the process.

The concept of tacit knowledge also refers to the mediating role of experts or mentorship models to communicate how tacit knowledge can be transferred. An expert or mentor can expedite learning for non-experts by acting as a knowledge translator. Knowledge translators possess the tacit understanding to decode the codified knowledge from experts. This knowledge flow pattern might originate with researchers or scholars, and then flow to knowledge translators like journalists, teachers, research consultants, and other professionals who have the tacit knowledge to interpret then *re-code* the knowledge, and distribute this knowledge to clients, students, readers and members of the public.

This resurrects the question, discussed in the previous chapter, whether journal articles can be de-coded by non-experts. Scientific discoveries, for example, depend on the body of knowledge on which they are founded, as knowledge is cumulative. Decoding requires the awareness of this

foundation. This is an argument against open access to journal articles, especially in the HSS, where understanding of cultural, political, intellectual, and historical foundations is important. Decoding is also challenging where language and jargon form barriers to understanding, even among the initiated. Degrees of expertise exist, however, both inside and outside the university. For example, scientists have often made discoveries and created inventions without understanding the precise mechanism or scientific explanation upon which it operated (see Mokyr 2003, p. 38; Raboy, 2017). Professionals working outside the university in the same discipline or area of study as university researchers also understand much of the same codes. While cultural barriers might separate these two groups, such as scholars studying communications (or psychology, or music), and professionals practicing communications (or psychology, or music), their knowledge is in fact complementary. While professional knowledge might be based more on tacit experiential knowledge, scholars derive benefit from studying practices and phenomena, and making their discoveries explicit. A more relational approach to research, where scholars stay in close contact with those in their professions outside the university, may also result in a change in both academic and professional cultures where both groups benefit from knowledge they share reflexively. This could be a work-around solution that remedies lack of access with more rewarding interpersonal access. It may also rebuild trust in experts and the university as an institution. Thus, a complete understanding of codes is not required to decode HSS knowledge, or any knowledge, though some foundational understanding is necessary to prevent misunderstanding. If this were the case, PhD students would never graduate.

Macro flow and institutions

My concept of flow is not linear. It is more like diffusion than delivery. It is more like water spouting from a fountain than rushing down a mountain. Is closed access like a dam in the river of knowledge, or is it like a wad of gum in just one of the spouts of the fountain? While it may be the case that the open access movement has focused on what Machlup (1979a) calls the “mail carrier” function, I argue

that the movement, to be successful in the HSS disciplines, needs to take into account the complete research life cycle, especially on one of the most neglected aspects, the feedback from society back to the research community.

Arguably, knowledge mobilization efforts and positive impacts of HSS scholarship will not be successful unless the problems around access, that go deeper than concerns about the research journal market, need to be addressed to maintain the public good aspects of social sciences and humanities scholarship. There is more than one way to disseminate research. HSS scholars can use many different modes of dissemination to circumvent restrictions on access to knowledge.

Figure 4.1 Fountain of Latona

Source: https://en.wikipedia.org/wiki/Fountain Latona's Fountain in the Parc de Versailles[148]

The concept of flow is pluralistic in the sense that different disciplines use it in different ways, and my use of this concept is a bit of a hybrid as well. The term "flow" has been discussed extensively within

[148] For more background about Latona's fountain see: http://en.chateauversailles.fr/discover/estate/gardens/fountains#the-four-seasons-fountains . The mythological symbolism does not really translate perfectly for my purpose, however the imagery does.

economics theory, management, and communications, initially in different communication contexts, but more recently pertaining specifically to knowledge.[149] Elihu Katz and Paul Lazarsfeld (2017 [1955]) formulated the two-step flow theory of communication, which proposed that people form opinions based on their relationships with opinion leaders, whom they consider to be more competent or expert than themselves. This sense of flow is important because it emphasizes that humans possess some agency to make decisions. This theory contrasted with the powerful effects theories of the mass media that grew out of fears of the strength of propaganda to determine opinion during the two World Wars. Today this same fear is driving the condemnation of Facebook over posts meant to sway opinions of voters during the U.S. election.

In economics, flow refers to how commodities, assets, labour, or money flows in markets. However, as discussed throughout this chapter, knowledge is a "peculiar" commodity, so neither the flow of knowledge, nor the market can be compared to how apples or automobiles flow to consumers. Machlup (1979a), in his article "Stocks and Flows of Knowledge", begins to differentiate between the dichotomy of stocks and flows of knowledge, and the difficulties for the economist in measuring both. He proposed that "the production and distribution of knowledge in the United States, is, in essence, the annual flow of knowledge disseminated at a cost" (p. 53), which he attempted to measure in his book *The Production and Distribution of Knowledge in the United States* (1962).[150] Machlup also cautions that knowledge flow is hampered by many factors, such as memory loss, or lack of communication skills on the part of senders, and lack of understanding, readiness, or interest on the part of receivers (1979a, p. 54). Melody (1987) points out that the structure of institutions can affect the flow of information, as is certainly the case with the university and the publishing industry that maintain

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[149] In psychology, according to Mihaly Csikszentmihályi (1990), flow is a mental state, or feeling of intense concentration while focusing on a task leading to a heightened sense of satisfaction. Manuel Castells (2000 [1996]) uses the term "the space of flow" to describe the fluidity of capitalism within the network society.

[150] His research on the growth of information and knowledge industries in the U.S. led to information society theory and corresponding changes in political and economic policy.

institutional control over how research articles are disseminated. Regardless of the context, the concept of flow requires attention to both the micro and macro environments within which communication is taking place, affected by both human agency and institutional structures.

Both Stehr and Innis provide some keys to how to bypass the controlling force of institutions resulting in the diffusion of knowledge. Stehr (2005 [1994]) alerts us to the paradox that an increase in the "capacity to act" (knowledge), is directly related to a decrease in institutional capacity to impose its will over knowledgeable agents (p. 125). For example, if scholars are aware and informed about how to negotiate with publishers about the IP of their journal articles, they can find ways to retain ownership and ensure access to their articles. As another example, if scholars are trained and rewarded for community outreach and sharing of research with the public, the loss of access to journal articles can be replaced with other, more targeted forms of communication. Innis (2006 [1951]) demonstrated that oral modes of communication, that emphasized dialogue and relationships, were one way of overcoming monopolies of knowledge.[151] Heyer and Crowley (2006) point out however, that:

> Innis of course, did not use this oral/literate contrast to advocate a romantic return to the former. Rather, it functioned as an element in a critical theory of knowledge whereby recapturing something of the 'spirit' of the oral mode, with its attendant 'elasticity' would foster, he believed, intellectual exchange and generate a skeptical attitude toward entrenched dogma (pp. xvii-xviii).

Innis gave numerous historical examples of how working outside the dominant communications media allowed groups to escape the monopolies of knowledge established by those who controlled the media forms.[152] Most of my interview participants are doing this already. They cannot access journals but

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[151] I have not mentioned the work of Walter Ong (2002[1982]) on oral communication as well as other media ecology scholars, but certainly ideas about the ability of oral modes of communication to improve trust are important here as well.
[152] Scolari (2009) discusses the increasing use of multi-media formats, or "transmedia" practices to reach audiences. Anderson and McLachlan (2016) adopted this term to explain a "knowledge strategy" whereby different media forms are used to engage audiences and include stakeholders (p. 308).

they watch podcasts, talk to colleagues at the university and go to Academia.edu for accessible material.

The double hermeneutic and the open access imperative

During my research interviews, I realized that my participants possessed a wealth of tacit knowledge about their profession that the university research community would benefit from understanding as well. The feedback process describes how a system is affected by the communication of information about performance or operations back into the system. In human interaction, the notion of feedback is central to describing the process of exchange that happens in communications processes. Feedback is dependent on the steady and reliable flow of knowledge. Feedback loops occur in nature, such as when changing hormone levels cause biological processes to start or stop, and in mechanical and software engineering where feedback mechanisms are built in to maintain balance and control over the system. In the image of Latona's Fountain above (p.114) you can see that while the central figure sprays water outward distributing it to all, other figures spit it back at her. Symbolically speaking, she is getting their feedback. In a literal and metaphorical sense, this is an analogy for research in the social sciences and humanities. Lecklider (2017) writes that "those of us who fancy ourselves intellectuals have a particular responsibility to make our work legible even as it exposes us to ever-expanding avenues of disrespect" (para.11).

Reflexivity is a certain kind of feedback process that refers to how information returns to the source, changing both the receiver, the sender and the system. Sociologist Anthony Giddens (1984) formulated the concept of the double hermeneutic, which maintains that "the 'findings' of the social sciences very often enter constitutively into the world they describe" (p. 20). This simple feedback concept frames my central argument about the dissemination of SSH research to the public. First social scientists carry out their research, creating theories from their observations of groups or phenomena, relying on traditional methods to distribute these ideas. These methods focus mostly on training of

university students, presenting at conferences, or publishing in scholarly journals. Traditional research dissemination methods promote internal circulation, like an intranet, rather than an open access internet. In the traditional scenario, researchers may or may not share research results directly with participants or the public. The results of the research do eventually permeate the awareness of the research population they are directed at, the speed of this communication depending on whether the scholar chooses to communicate directly with her research participants, disseminating the research results more broadly, or allow the findings to trickle down. That knowledge in turn changes the population under observation, requiring new research to reevaluate the situation. Giddens (1982), in his quest to create a social theory that takes into account the power of individual agency as well as social structure, calls the double hermeneutic the lynchpin for the social sciences:

> The fact that the 'findings' of the social sciences can be taken up by those to whose behavior they refer is not a phenomenon that can, or should, be marginalized, but is integral to their very nature. It is the hinge connecting two possible modes in which the social sciences connect to their involvement in society itself: as contributing to forms of exploitative domination, or as promoting emancipation (p. 14)

Access to HSS research, is therefore, absolutely central to the entire practice of the social sciences. Giddens argues that the double hermeneutic shows that social sciences cannot ignore "the public" because society is the object of our inquiry. Whereas the natural sciences' object of inquiry, nature, "cannot answer back", human research subjects can, do and should.[153] His contention that the object of the natural sciences does not "answer back"; whereas the object of the humanities and social sciences "are not merely inert objects of knowledge, but agents able to – and prone to – incorporate social theory

[153] Note that Giddens' claim that natural scientists are not affected in the same way as social scientists has been challenged by some sociologists of science who argue that science is also strongly affected by public understanding and critique (Nowotny, Scott, & Gibbons, 2001).

and research within their own action" is central to how the HSS disciplines have reoriented their relationship to the lay community (p. 13).

The term "hermeneutic" refers to interpretation, and a discipline has built up around the idea of interpreting "human actions, texts and other meaningful material" (Mantzavinos, 2016).[154] The double hermeneutic model is also a process that explains social change, as feedback results in a change to the system, never returning to the exact same position or situation. In a sense, the double hermeneutic feedback process mimics learning on an individual scale, or innovation on a social scale.

Scholars must take into account at least five types of feedback: those of their research subjects, those that might come from practitioners of their discipline, those that might come from the broader public, possible repercussions from government policy or funders, and finally those from their colleagues. Without this feedback, HSS scholars also lack the understanding of whether what they proposed theoretically works practically. In other words, if there is no flow, there is no praxis. The double hermeneutic also acknowledges the reality experienced by early anthropologists, that even the act of studying a group, changes the group if they are at all aware of the research taking place, whether or not they are aware of the results, becoming more self-conscious as they answer questions, or allow themselves to be observed. Not getting access to findings can result in frustration or lack of trust about the research results, especially when research participants eventually become aware of the research that has affected or could affect them in the future.[155] If members of society are not privileged to HSS research results, they are simply objects of study, rather than actors in their own quest to understand their circumstances or solve their problems. Expediting knowledge flow can assist publics in understanding complex problems and rapidly changing environments. Finally, if scholars are not open

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[154] I do not wish to delve deeper into the hermeneutic process which would take me too far down the path of philosophy and linguistics, but I do acknowledge here the work of Heidegger (1927), Gadamer (1989), de Saussure, Chomsky and Ricoeur (1973) in further explaining the concept.

[155] For example, there is a growing body of scholarship on "outsider research" that details how Western scholars and researchers conducted research on indigenous groups that is perceived as "intrusive, exploitative and unethical" (Ermine, Sinclair and Jeffery, 2004, p. 12).

to feedback from their research subjects (or the public in general), they are missing out on the benefits of deeper understanding such feedback might produce. For example, several of my research participants expressed their preference for more personal connections with university researchers, and many of the participants also were involved in innovative organizations or projects.

Stehr and Grundmann (2005), quoting the work of Michael Crozier (1963), point out that "as soon as a field is well covered, as soon as the first institutions and innovations can be translated into rules and programs, the expert's power disappears. As a matter of fact, experts have power only on the front line of progress" (p. 15). This view regarding the fleeting power of the expert is in contrast to my assertion that the tacit knowledge of HSS scholars is repeatedly useful. This is because the double hermeneutic consistently provides fresh circumstances for investigation. Giddens (1990) proposes that "there is a fundamental sense in which reflexivity is a defining characteristic of all human action" (p. 36). While the double hermeneutic arguably applies to all scientific endeavours, some scientific discoveries do run out of energy once "laws" have been explained, or technologies created. For the social sciences and humanities, however, changes wrought by opening up expert ideas for analysis and application, provide more opportunities for analysis and application, meaning that the value of expertise can be recycled, as long as the expert remains involved in the field of research.

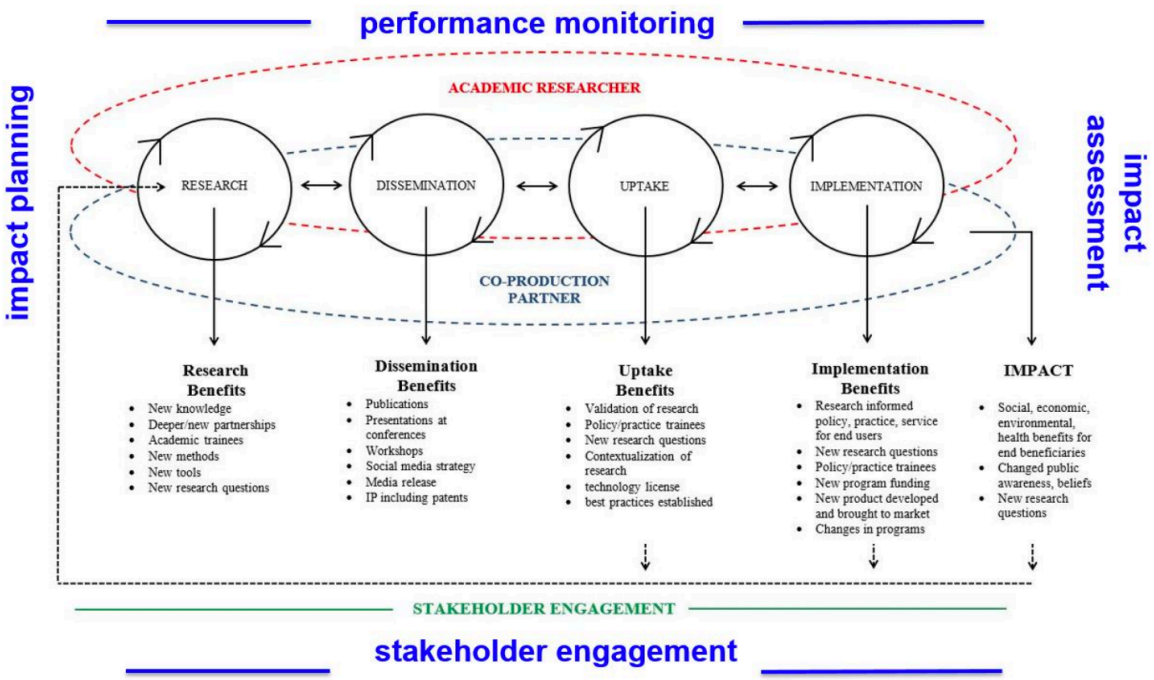
Various scholars (Björk, 2005, 2006, 2007; Cox & Tam, 2018; Carlson, 2014; Deng and Dotson, 2015; Ketchum, 2017; Vaughan et al., 2013) have discussed the problem of access to research by modelling the stages of knowledge creation, dissemination, transfer and how numerous factors such as funding and feedback play into the cycle. The complexity of this kind of modelling is illustrated in a series of articles by Bo-Christer Björk (2005; 2006; 2007) on the "research life cycle model." This model maps the research communication process, using 33 separate diagrams, 113 activity boxes and approximately 250 labelled arrows indicating how knowledge flows in the system.[156] Björk also

[156] Note that Bjork revised his model in the second publication (2007) from an initial 80 activity boxes and 250 arrows, to the complexity indicated above. https://docs.lib.purdue.edu/cgi/viewcontent.cgi?article=1797&context=iatul

identifies several places where feedback occurs, for example, during the evaluation phase that decides whether the research or researcher should receive further funding, when the research is taken up by society or industry as an innovative measure, or to add to the body of existing knowledge. Motivated to build the model "in order to provide a cost and performance analysis of various ways of organizing [the scientific communication process]" (Björk 2005, p. 167), the model also is intended to show "how disseminated scientific knowledge can be transferred by several parallel mechanisms into better industrial performance, new products and services and eventually a better quality of life" (Björk 2007, Diagram A4 – Apply the knowledge, p. 40). The one thing that the model does not illustrate is that feedback about the research, from any or all of the stakeholders, actually restarts the research process, and shifts the starting point whenever research is tested in the crucible of society. Cox and Tam (2018) review nine more recent models that attempt to illustrate the research process. They also comment, that many of these models are uni-directional, but that some of them use the metaphor of the "knowledge spiral" and incorporate transfer and feedback into their maps.

Phipps et al. (2016) also warn against relying on a linear model to explain research transfer as a unidirectional and seamless process. Based on a case study of the PREVNet project, an academic research network studying the problem of bullying, they have developed a model that illustrates the various pathways to improving knowledge mobilization and creating research impact. This model neatly illustrates how feedback happens at many levels and junctures of the total research life cycle. Using the PREVNet research project as a case study, which supports 121 researchers and 63 national public and community organizations, the researchers explain in detail how the project coordinated the co-production of knowledge and collaboration, and conclude that "getting to impacts is a shared enterprise" between academic and non-academic partners (p. 38). Similar to Björk (2005; 2006; 2007), the research team recently edited their "Co-Produced Pathway" (Knowledge Mobilization Unit, March 27, 2018) to better illustrate stakeholder engagement and feedback in the process.

Figure 4.2 The Co-Produced Pathway to Impact (Revised)



Note: Reprinted from "Evolving the co-produced pathway to impact", Knowledge Mobilization Unit (2018, March 27). [Blog] March 27, 2018. Retrieved from: http://researchimpact.ca/evolving-the-co-produced-pathway-to-impact-document-conjoint-sur-la-trajectoire-vers-limpact-toujours-plus-de-precision/

These on-the-ground revisions indicate that the evolution of HSS research methodologies, how to understand research impacts, and the optimum ways to communicate research are still very much under development, and are evolving in the direction of more stakeholder inclusion in research on various fronts.

Knowledge flow, knowledge mobilization and open scholarship

The double hermeneutic, and the position that research results should be shared with research participants, affected communities, and the greater public, applies even more strongly to scholarship that directly engages the public. To capture the full benefits from scholarly research, research communication must be understood more completely in terms of knowledge flow, a concept also supported and promoted by knowledge mobilization practice (Bennet, Bennet, Fafard, Fonda, Lomond, Messier, & Vaugeois, 2007; Fenwick & Farrell, 2011; McKeen, 2016; Meagher, Lyall, & Nutley, 2008).

Similar to open access, there are many institutional and perceptual barriers to knowledge mobilization in the academy. While the idea that the university should contribute to society was in place since the original land grants for American universities in the 19th century (Bonnen, 1998 in Phipps & Shapson, 2009), knowledge mobilization (KMb) as a policy and a concept is being reevaluated and renewed in the 21st century. Indeed, KMb has been a requirement for SSHRC research applications since the early 2000s, where researchers are asked to specify their KMb strategy and receive research funding to make it happen. Like open access, knowledge mobilization is an emerging field of work, resulting in much of its literature addressing how to implement knowledge mobilization practices, the lack of institutional support, and how to operationalize the concept.

As a practice and a concept, knowledge mobilization is well-oriented towards research that happens in and for the community. Bennet et al (2007) acknowledge that "by definition and practice part of the KMb system is embedded within its community." Much of KMb literature focuses on how to enable KMb approaches, or describes community based research projects that have successfully implemented KMb communication strategies (Phipps, Jensen and Myers, 2012; Cooper, 2015; Braedley, 2016; Mosher, Anucha, Appiah, & Levesque, 2014). Some of these case studies describe successful and inspiring community-based research projects that support marginalized youth (Mosher et al., 2014); farming communities coping with epidemics on the Canadian prairies (Anderson & McLachlan, 2016); and an anti-bullying program for Canadian schools and organizations (Phipps et al., 2016).

Phipps and Shapson (2009) are careful to point out the differences between community based research and knowledge mobilization:

> Community-based research is both a methodology and a philosophy of undertaking research, albeit with elements of knowledge mobilisation (Minkler and Wallerstein, 2003). In contrast, knowledge mobilisation is a suite of activities and services available to support research and

> includes producer push elements such as clear language research summaries that may not involve communities as the driver of the research question (p. 5).

Open access might also be thought of as a "producer push" strategy for knowledge mobilization, as it is a way for researchers to promote access to their own knowledge (Lavis, Ross, McLeod, & Gildner, 2003), thus dovetailing with some of the goals for knowledge mobilization.

KMb, while extremely successful as a community based research strategy, is equally important as a general research communication strategy. Research in the community does not always fall into the category of community based research or action research, which is consciously different from other kinds of research in that is it politically oriented towards knowledge sharing, inclusivity and pragmatic problem solving (Shultz & Kajner, 2013). It is important to emphasize that not all HSS research has a community-based element, but all research can potentially be communicated outward more successfully. SSHRC's more generic definition of KMb is applicable to a range of different kinds of HSS research:

> The reciprocal and complementary flow and uptake of research knowledge between researchers, knowledge brokers and knowledge users—both within and beyond academia—in such a way that may benefit users and create positive impacts within Canada and/or internationally, and, ultimately, has the potential to enhance the profile, reach and impact of social sciences and humanities research[157].

In an analysis of SSHRC's research granting programs (2018) the evaluators found that 96% of SSHRC-funded projects surveyed use a variety of knowledge mobilization strategies such as knowledge exchange i.e. conferences; disseminating research to colleagues i.e. journal articles; and knowledge brokering, which is facilitating knowledge flow in general (SSHRC & Goss Gilroy, p. 17).

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[157] From SSHRC's definition of terms: http://www.sshrc-crsh.gc.ca/funding-financement/programs-programmes/definitions-eng.aspx

Phipps and Shapson (2009) discuss their experience in creating the knowledge mobilization unit, a partnership between York University and University of Victoria in 2006, the first of its kind in Canada, focused on mobilizing research impacts in the social sciences and humanities. They argue that governments and universities should support knowledge mobilization to promote social innovation in a similar way to how universities have supported technological commercialization for economic innovation (p. 3). Their definition emphasizes the role that universities must fulfill in supporting researchers, if the goal of producing impacts is to be achieved:

> A suite of services that enhances the two-way connection between researchers and research users so that research and evidence can inform decisions about public policy and professional practice. Knowledge mobilisation encompasses methods of knowledge transfer, translation and exchange and extends them to include the co-production of knowledge. Knowledge mobilisation turns research into action. Knowledge mobilisation (the how) enables social innovation (the what).

The authors emphasize that knowledge mobilization efforts require institutional support to be sustainable. Another challenge for KMb is evaluating the effectiveness of these strategies, as well as the overall impact of research that undertakes KMb. Finally, Phipps and Shapson conclude that the Knowledge Mobilization Unit at York University (now Research Impact Canada), is "one model" to support KMb services, "including producer push, user pull, knowledge exchange and co-production to maximise the economic, social, cultural and environmental impact of research" (p. 15). In answer to the call for more institutional support, sixteen universities across Canada have joined Research Impact Canada, "committed to maximizing the impact of academic research for the public good in local and global communities."[158]

[158] Retrieved from: http://researchimpact.ca/about-ric/#members

While KMb has various goals and definitions, it is expressly motivated towards creating and capturing research impacts (Mosher, Anucha, Appiah, & Levesque, 2014; Nichols, Phipps, Provencal, & Hewett, 2013; Sá, Li, & Faubert, 2011; Levin, 2008; Bennet & Bennet, 2007). McKean (2016) identifies "the rub", or the unstated background problematic inherent in discussions about research impacts, knowledge mobilization, and even open access:

> Implicit in the assumptions about knowledge mobilization and research impact is that it will incentivize researchers to produce work with a high social utility. Doing so serves two additional purposes: it compels researchers to demonstrate the impact of their research, and it helps granting agencies to demonstrate the social value of publicly funded research (p.6).

Indeed, this purpose might rub HSS scholars the wrong way, particularly those whose research does not have clear impacts that could directly benefit the public. In this sense, efforts to improve research flow can be interpreted as excluding non-applied research from receiving funding, or from taking place at all. Anderson and McLachlan (2016) acknowledge that "any commitment to knowledge mobilization is in tension with, and systemically marginalized, by knowledge transfer systems and discourses" (p. 297). They delineate the differences between a knowledge transfer paradigm or "impact agenda" and the knowledge mobilization approach, where the former reinforces power, privilege and the hegemony of the dominant scientific discourse, and the latter "rejects hierarchies of knowledge" promoting instead the democratization of knowledge, reciprocity, reflexivity, and counter-hegemonic discourse (pp.298-99).

Amidst the concerns regarding knowledge mobilization, open access, and a potentially menacing research impact agenda, arguments about the benefits of HSS scholarship that is not expressly applied, community-based, or administrative, need to be loudly repeated. Just as the STM community has made a strong case for supporting basic scientific research, the HSS community also has its 'pure' research. The fundamental research of the HSS allows scholars to build theories, understand problems, refine ideas, and contribute to the knowledge base. Arguably, open access to this

scholarship might have unforeseen public benefits, as digitization combined with open access has the potential to reach vast numbers of yet to be identified interested publics.

Examples abound where HSS concepts have permeated public awareness and started a chain reaction of change. Concepts like colonization (and de-colonization) have provided indigenous groups with the power to question the narrative of history; the theory of multiple intelligences and learning styles transformed the practice of teaching (and has now been critiqued extensively by teachers themselves)[159]; and as discussed at the beginning of this chapter, the idea of the information society/knowledge economy set the Western world on a policy path that promoted the growth of information technology, white collar jobs and globalization. Boulding (1966) reminds us that:

> We have here a certain epistemological paradox, that where knowledge is an essential part of that system, knowledge about the system changes the system itself. This is a kind of generalized Heisenberg Principle, which is particularly troublesome in the social sciences. What this means, of course, is not that knowledge is unattainable, but that we must regard it as part of a total dynamic system (p. 41).

In my results section I will discuss several examples from my interviews where participants have used HSS concepts to support innovative forms of consulting or service delivery that beg to be "reanalyzed" in light of their innovations.

Note that other aspects of HSS research knowledge also need to be taken into account when thinking about research communication. Much HSS research is local or particular, therefore the audience is potentially quite targeted. The double hermeneutic in action means that knowledge might have a somewhat short shelf life – so an analysis is applicable only until the social group or phenomenon changes. This short shelf life, however, is a bonus when it comes to the sustainability of

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[159] In an interesting anecdote, I recently saw posters at my daughter's elementary school that the students had made on the theory of multiple intelligences. This is evidence the theory has truly trickled down as far as it can go when it is being taught to ten year olds.

the HSS. As the double hermeneutic works, more interpretation is necessary to continue the quest for understanding. In addition, if our ultimate audience is publics or practitioners that might be able to put our research to use, we must be conscience of the codes, or language, we use to talk about our research. The double hermeneutic, and the problem of access, is also a problem of language.

Making a conscious effort to promote feedback from our research subjects already happens in many ways in the HSS disciplines, but the importance of reflexivity has not been addressed in the context of open access to HSS knowledge. Social Work, Education and Psychology, where "evidence-based practice", Participant Action Research (PAR), and communities of practice are more commonly found than other disciplines, are highly reliant on feedback especially in professional practice (Greenwood & Levin, 2007). When academic and professional practice is more closely intertwined, practitioners can bypass codified knowledge (publications) and promote relationships and knowledge sharing in real-time. This type of sharing already happens at the university where we have adjunct faculty; "downtown" satellite universities; NGOs like MITACs working to promote university-industry liaisons;[160] knowledge mobilization initiatives and funding programs that reward "Centres of Excellence" that form bridges between researchers, professionals and government. Canadian universities are making great efforts to mobilize research knowledge through different formats such as social media, alumni publications and op-ed articles in news outlets. Organizations that are dedicated to translating HSS knowledge are already expediting the double hermeneutic such as Research Impact Canada,[161] The Canadian Institute for Research on Public Policy[162], "The Conversation"[163], Medium.com, Open Access Government[164], and open access repositories such as SocArxiv[165], The Humanities Commons,[166] and the Open Library of the Humanities. Finally, this attitude, by extension,

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[160] https://www.mitacs.ca/en/about-mitacs
[161] http://researchimpact.ca/
[162] http://irpp.org/
[163] See "*The Conversation*" www.theconversation.ca
[164] https://www.openaccessgovernment.org/
[165] https://socopen.org/
[166] https://hcommons.org/

supports open access to research publications, and where this is not possible, a live person who embodies that knowledge can share it in many other ways.

Tennant et al. (2019), in their report "Foundations for Open Scholarship Strategy Development"[167] provides an extremely detailed strategy on how to promote many kinds of openness in the academic context. The team of over 30 scholars recommends how researchers can improve the reach and impact of their research at all stages of the research process. This document also acknowledges the range of stakeholders, including publics outside the university, involved in the debate around openness. The report makes numerous suggestions about how infrastructure can be changed to support open scholarship from publishing models, research funding, incentives and rewards for open practices, to focusing on impacts, transparency and the public good. Finally, the report acknowledges the many challenges to restructuring in a paradigm-changing way to promote the further democratization of knowledge, in a community that is resistant to change, subject to economic forces, political agendas and apathy. Knowledge flow theory supports the broad initiative of open scholarship, focusing specifically on the feedback aspects from outside of the university community. This is one point that the Open Scholarship Strategy does not strongly emphasize, but rather presumes that generalized public good benefits will result from the open communication of knowledge.

Destabilization, trust and the run-away world

The above report, and indeed this dissertation, is optimistic about the ability of the academic community to improve research communication and by extension ensure the public good is served. Optimism is necessary at the beginning of a plan for change, though tremendous challenges for both the town and gown communities stand in the way of improved knowledge flow. Several theorists relied on for my argument, including Giddens (1984, 1990), Stehr (2005 [1992, 1994]), and also Beck

[167] https://open-scholarship-strategy.github.io/site/

(2005 [1992]) have pointed out the paradox that more knowledge can lead to more instability, uncertainty and risk. Giddens (1990) refers to the deep-epistemological changes of late modernity where "the equation of knowledge with certitude has turned out to be misconceived" because we are in a world which is thoroughly constituted through reflexively applied knowledge [rather than bound to traditional ways and explanations], "but where at the same time we can never be sure that any given element of that knowledge will not be revised" (Giddens 1990, p. 39). Many other scholars have since echoed this concern such as Grundmann & Stehr (2003), Stehr & Ulfer (2009), and Funtowicz & Ravetz (1993, 2001), who also point out that science cannot always provide reliable knowledge, but often creates further uncertainty. This is a major challenge to knowledge flow and the argument that better flow will serve the public good. The unfinished project of science, however, is not considered a liability if looked at from the perspective of the HSS and the double hermeneutic. This is one instance where perhaps the HSS has a strategic advantage over the STM disciplines. Keats's claim that "axioms in philosophy are not axioms until they are proved upon our pulses"[168], enlightens the positive and essential[169] role of the double hermeneutic, or praxis, or reflexivity. The application of HSS theory to practice is important for establishing whether knowledge claims have value. Only once they have been tested in society's laboratory, will we know whether they help or hinder, improve or detract, create systematizing order, or destabilizing chaos.

Another major challenge, that has been alluded to throughout this chapter, is the lack of trust between academics and publics outside of the institution. Giddens, Beck, Stehr and others have commented extensively on the importance of trust in contemporary evaluations of society, and how sociological changes (in late modernity according to Giddens, or the knowledge society according to Stehr) have modified or degraded levels of trust in individuals and institutions. Equipping the scholarly

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[168] Letter to John Hamilton Reynolds, May 3, 1818. http://www.john-keats.com/briefe/030518.htm

[169] Use of these words here, following a claim about philosophy, not to be confused with positivism and essentialism, but pun is intended.

community with knowledge about their publics, conceptualized by Giddens, and then further contextualized by his critics, will help scholars that practice more engaged forms of scholarship. Beck (2005 [1992]), in his article entitled "Knowledge or unawareness: Two perspectives on reflexive modernization", challenges Giddens (and Scott Lash) and their concepts of reflexivity. He emphasizes that:

> The decisive point, according to Giddens, is the extent to which post-traditional trust can be converted to *active* trust. Active trust cannot be called up, but *must be won* [my emphasis]. It should not be confused with duty, but instead requires equality, discursiveness, reciprocity, substantiation. Ultimately, Giddens is concerned with the figure of the 'reflexive citizen,' for whom individual autonomy and responsibility must be readjusted to fit his vision and scope of activity. This figure also provides late modernity with a 'realistic utopia' that can give direction and impetus to a policy of reform (p. 346).

Beck emphasizes further that Giddens' formulation puts too much emphasis on the ability of experts to deal with the "pluralization of rationalities and agents of knowledge, and the key role of known and repressed types of unawareness" that can be found in contemporary society. While this statement was made in the 1990s, I would suggest that the pluralization of rationalities twenty years later has multiplied further. However, HSS scholars have no hope of (re)building trust unless communication with publics, and the building of research communities is promoted that are inclusive, discursive, and focused on improving "unawareness."

Conclusion: The Open Access Virtuous Circle

This chapter has attempted to situate the open access debate within a larger circle of discourse about knowledge: references to the knowledge society, the economics of knowledge, knowledge management and knowledge mobilization attempted to show how open access contributes to the

democratization of knowledge by enabling knowledge flow. Key to this argument is the notion of the double hermeneutic, or the importance of feedback in the HSS knowledge creation cycle.

I have argued that HSS researchers need to disseminate their research findings more broadly for the sustainability of our own disciplines and for the good of society, and particularly when those ideas might focus on, or assist publics. Beginning with the premise that HSS knowledge has value, I have discussed knowledge as a public good, a common good and a merit good, and the difficulty of proving the value of knowledge quantitatively. Given that HSS knowledge is a good that does not operate according to supply and demand principles, the academy has to rely on government subsidy, and for this reason must work to create the perception that HSS research has merit. This is a sort of 'patriarchal' relationship that is precarious and elitist. The academy is also continually under scrutiny from the court of public opinion whose lack of access to scholarly output skews collective understanding of HSS scholarship. Improving this perception involves improving access to HSS research; however, access to journal articles, that has driven the open access movement, is just one way of communicating knowledge.

The concept of knowledge flow is helpful in describing how HSS researchers can overcome access barriers like IP protection of codified knowledge, the ability to decode (understand) HSS knowledge, and the gap between practitioners and scholars. Bringing concepts from the sociology of knowledge and knowledge management, like tacit and explicit knowledge into the discussion, illustrates how journal communication is often conceptualized as a stock of knowledge problem. Open access transforms journals as research artifact into journals as a tool for emancipation. Knowledge stocks can be commodified, accumulated, measured, and distributed widely, but this is only half the knowledge mobilization story. Stocks and flows depend on explicit *and* tacit knowledge. In fact, stocks are useless without flows, and flow is possible because tacit knowledge enables decoding, putting knowledge to use, and interpretation. In choosing to make their work open, the researcher is no longer constrained by systems that deny the public access to research. The idea of tacit knowledge also

means that the researcher is *more important than the research findings* in the research life cycle. As tacit knowledge results from experience, there is an opportunity for HSS researchers to tap into the tacit experiences of people in professional practice, providing another reason for expanding the circle of access to research for publics, as will be shown in my research analysis chapters.

Finally, knowledge flow is not one-way. The research life cycle, the double hermeneutic, and knowledge mobilization are concepts that point to the spiral direction and diffusion of knowledge flow. Indeed, one way dissemination of HSS knowledge only serves to further the gap of understanding between the academy and a skeptical, overwhelmed and untrusting public (see Chapters Six and Seven). Flow can be improved first and foremost by enabling access to research using a number of open access publishing options; research transfer can be fostered with the assistance of knowledge translators, who can act as a bridge from scholars to publics, and further by adopting knowledge mobilization strategies that offer a suite of communication options. Giddens' model of the double hermeneutic shows that because society is the object of our inquiry, ethically and methodologically we are obligated to involve and inform them about our research results, in a sense truly completing the research life cycle.

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Chapter Five: Methodology

> *Sharing, curating, and preserving scholarship is imperative for the advancement of research, just as openness is central to the development of new modes of teaching and learning. Deep structural changes to the scholarly communication system are needed not only to respond to the current funding crises in higher education and the emerging forms of scholarship in the digital age, but also to foster and deepen the connections between the academy and the wider public. Only a model that builds collaborative alliances across a wide variety of institutions and that engages a range of stakeholders can provide a fair and equitable path to truly open and sustainable forms of scholarship.*
>
> --R. Kennison, & L. Norberg (2014). Toward a scalable and sustainable approach to open access publishing and archiving for humanities and social sciences societies: A proposal. *Learned Publishing, p.* 234.

During my dissertation journey, my methodological approach to open access encountered a number of closed doors. As a result, my ideal vision of how to understand "open access and the public good" evolved into an achievable reality where windows of opportunity opened up different options to achieve my research results. While originally my research plan was to provide further justification and evidence for the necessity of open access to HSS research for members of the public, this research focus proved to be much smaller than my present claim: that the problem of access to research, and knowledge flow in general, should be a central methodological concern of all HSS researchers. Simply argued, if there is no access, there is no praxis. Access to "theory" (or research results) is required for the application of theory (or research recommendations) to practice. In a sense, my journey was originally driven by positivist intent, but my interviews with knowledge translators broke open the boundaries of proof to conceptualize open access as something more than simple, one-way knowledge dissemination.

As an idea, open access has the important feature of being relevant to almost every research case no matter the "paradigmatic or fundamental beliefs" underlying the research practice. Willis, Jost & Nilakanta, (2007) in *Foundations of qualitative research: Interpretative and critical approaches,* point out that "the debate over how research and practice relate is ongoing and it is not likely to be settled easily because the different views are based on differences in paradigmatic or fundamental

beliefs" (p. 118). Open access, however, as explained in Chapter Four, should be a greater concern for those who want practices of supporting data to inform their profession, as well as critical theorists who argue for institutional change where there is oppression, and most definitely interpretivists, who take great care to understand their research participants. Open access as a concept makes explicit the problem of who deserves access, and calls for a transformative approach to research that understands the public right to access as a methodological imperative.

In this chapter, I will explain and discuss my methodological position, choices and discoveries. Beginning with a discussion of my research design, in the first section I will briefly review critical theory, and mixed methods research and triangulation, the elements that comprise my methodological blend of various approaches. These choices originally served as a "public consultation"-style research plan that veered away from the primary focus of informing policy, as the project progressed. In the second section, I will discuss what transpired over the course of my data gathering, and how the obstacles encountered turned into learning opportunities. I will describe my research instruments -- the survey, focus groups, and interviews – and the results of these choices. Finally, I will conclude with some thoughts about the findings of the overall project.

The Methodological Blend

In this section I will review my research design and the paradigmatic and fundamental beliefs upon which I based this plan, discuss in more detail why I chose a critical theory foundation aimed at interrogating the system for the public good, and a mixed methods research plan, combining what I hoped would be the best of all worlds.

.My original research question was:

What are the attitudes towards social sciences and humanities research, perceived needs for open access to this research, and preferred methods of access among selected groups of Canadian citizens?

This original research question was suitable for the survey and my original conception of the research, but while conducting the interviews, the conversations with participants broadened my inquiry.

Reconceptualized Version: *How can we improve knowledge flow between humanities and social sciences scholars and knowledge users and creators outside of the university?*

Arguably, both questions are relevant and guided the inquiry to its conclusion. The role of a research question to guide scientific inquiry differs depending on your methodological paradigm. Numerous scholars have emphasized that in qualitative research, questioning is ongoing, as "our questions change during the process of research to reflect an increased understanding of the problem" (Agee, 2009, p. 2009; Charmaz, 2006; DeCarlo, 2018). Creswell & Poth (2018) state clearly that "qualitative research questions are open-ended, evolving and non-directional" (p. 137). From an empirical perspective, changing a research question mid-study might happen, but creates a different problem, as the research question is expressly meant to be answered by the design of the study. Given that my approach incorporates a mix of quantitative and qualitative methods, the quantitative survey was guided by the original research question, and I only felt compelled to alter the question during the course of the qualitative research interviews. Newman, Benz and Ridenour (1998) emphasize that research is more appropriately conceptualized as a continuum between qualitative and quantitative methods, as both approaches have value in the search for knowledge.

Public consultation as an open access concept

I originally conceived of my research as a public consultation-style project geared towards informing Canadian policy. This framing is appropriate given the belief that public deliberation is an essential component of democracy, and "increasingly complex decision making processes, it is argued, require a more informed citizenry" (Abelson, Forest, Eyles, Smith, Martin, & Gauvin, 2003, p. 240). Public participation projects might also be motivated by governments that wish to remain in power and use consultation as a method of appeasing the electorate (Rowe & Frewer, 2000, p. 5). Canada has a long history of public consultation, ranging from a full federal public enquiry process that historically dealt with contentious environmental, planning, or government policy issues (Salter, 1981), to almost

ubiquitous calls for public input into decision-making at all levels of government, and the professionalization of the practice (Bherer, Gauthier, & Simard, 2017). Most importantly, the notion of public participation in decision making and the notion of open access to knowledge are mutually reinforcing. Better informed citizens, it can be argued, makes for better democracy (OECD, 2009).[170] Interestingly, the debates around the usefulness and effectiveness of public participation echo some of the arguments around public access to research, focusing attention on the abilities of non-experts to contribute to technical or policy matters.

Involving the public in policy decisions ranges from top-down style communication from government to the public (e.g. an "Open House" meeting on a proposed development), to public opinion polling; to public participation and consensus conferences, where citizens are invited to the bargaining table and given a voice in policy deliberation (Rowe & Frewer, 2000, p. 6; Joss & Durant, 1995). I intended to carry out a middle course towards public involvement, generating data and conclusions from members of the public that could be used to inform the research granting councils' decision to mandate Open Access. Partially through my degree, the Tri-Council did adopt an OA mandate, making this input redundant. Still, I hoped that further support for OA would reinforce this decision and generate ideas for how to renovate Canada's research dissemination system.

I adopted the language of government consultation or public relations, where citizens affected by policy are called "stakeholders," giving them a right to participate in decisions that affect them. York University's Knowledge Mobilization Unit (2018, March 27) defines stakeholders in the research field as "everyone directly and/or indirectly affected by the research to impact processes, including academic and non-academic organizations/individuals." Further, this blog post also contends that:

[170] This argument formed the original basis for my dissertation, based on Habermas' (1991[1962])concept of the public sphere and the theory of communicative action. I found, however, that this was only one benefit of OA, and I did not want to be limited by this viewpoint.

> Listening to stakeholders is crucial because it increases the probability that research outputs will be used, which maximizes the potential for achieving impact(s). The benefits of stakeholder engagement include improved quality and applicability of the research, increased dissemination and uptake of results and empowerment of stakeholders.

Stakeholders can also be classified according to their level of awareness or engagement. For example, Grunig (1997) defines publics as:

- Non-publics – not affected by a problem
- Latent publics - might be affected by a problem but do not realize it
- Aware publics – recognize the problem
- Active publics – do something about the problem

My research plan was to engage "interested" publics, who may fall somewhere between latent publics and aware publics, as I did not foresee encountering "active publics" outside of the university that were engaged in the issue of open access.

The difficulty of implementing public participation projects in the academic context is acknowledged by Rowe and Frewer (2000) that argue this is partially because of the difficulty of measuring outcomes in such processes, and "a lack of the empirical consideration of the quality of these methods" (p.3). Unless one of the research partners is a government body, there can be no guarantee that the research results will inform or influence policy decisions. Finally, in the OECD Report (2009), *Focus on Citizens: Public Engagement for Better Policy and Service*, researchers found that of the 23 governments surveyed, many had problems with the time commitment, resources required and challenges of analysis posed by public consultation projects (p. 13).

For my project, the original intention of informing policy became less of a concern when it became clear that OA policy is actually ahead of the adoption curve regarding the flow of knowledge. As evidenced by the number of OA mandates (see Chapter Three), governments and institutions seem

to be on board for OA, whereas HSS academic culture and public awareness are less informed or lack buy-in. While the policy connection is less urgent at this point, given Canada's institutional and funding body mandates, the intention to promote and support those mandates became the primary concern.

Critical theory and the mixed methods toolbox

Critical theory, as discussed in my theory chapter, takes a methodological perspective that follows the historical tradition that questions the status quo, originating as a socio-economic critique in the work of Karl Marx, focusing on cultural critique in the Frankfurt School theorists of the mid-twentieth century, and stretching further to address problems of racism, gender and global economic inequality in the 21st century. Kellner (2005) points out that critical theory now takes many forms in a range of disciplines, making simple definitions difficult as "there is not one single or dominant understanding of critical theory in the university of the early twenty-first century" (p. 507). Strangely enough, my particular strain of critical theory, political economy [of communications], is not an entry in the *Oxford Dictionary of Critical Theory*, or mentioned in the definition by Kellner (2005)[171]. Willis et al. (2007) define critical theorists as "a loose collection of scholars and practitioners who tend to focus on the impact of power relationships in human cultures" (p. 81). It is this emphasis on power that links my project to critical theory. My methodological choices are also a blend of critical and administrative research that is concerned with critiquing injustice *and* enabling cost-savings; the public good *and* innovation; the sharing of knowledge *and* the renovation of the scholarly publishing system. In addition, Rich (2007), in *An Introduction to Critical Theory* points out that many critical theorists (that lean in the cultural studies/humanities direction) doubt that discovering truth is even possible given the

[171] Space does not permit me to trace the development of critical theory from Karl Marx by way of the Frankfurt School theorists, where it was taken up by political economists of communication who focused more heavily on economic concerns; and a similar interest in the perennial struggle for power that arose within cultural studies, but focused on the semiotics and the structure (or post-structure) of cultural symbols. I believe the "cultural turn" in critical theory is the reason "political economy" has been overlooked in these works. See Mosco (2009) and Babe (2009) for a full description of the development of political economy and cultural studies critical approaches in the communication studies context.

interference of ideology and hegemonic forces, and therefore might avoid quantitative methods (p. 7). I argue, however, that critical theorists should be willing to use every tool in the research methods toolbox to create the strongest possible arguments to prove that a problem exists, that the problem is important, and that the problem can be solved.

The mixed-methods approach was also designed to:

- Appeal to a wide range of researchers from numerous methodological backgrounds, especially those in Library and Information Science who are the most engaged in the OA debate;
- Also appeal to the publics that I believed were the 'silent stakeholders' in the OA debate;
- Finally, be relevant and useful for Canadian research policy, providing further justification for the Tri-Council Mandate on Open Access and promoting adherence to this policy.

Creating a strong argument to support the open access perspective was the main reason why I chose a mixed methods approach to studying access to HSS research as experienced by non-academic publics. Gathering quantitative data that supported my claims was an important way for me to establish acceptance within the library and information science community where most of the OA literature resides. Johnson, Onwuegbuzie and Turner (2007), in their article "Towards a definition of mixed methods research", as well as Teddlie and Tashakkori (2009) consider mixed methods research as one of three "research paradigms" including qualitative, quantitative and mixed. They point out further, that epistemologically, mixed methods research takes a pragmatic approach between the extremes of Plato (quantitative) who held the perspective that objective truths could be known, and the Sophists who doubted truth could be established (qualitative) (Johnson et al., 2007, p. 113).

Origins of the mixed methods approach can be found in Campbell and Fiske's (1959) article on "triangulation" of research methods, that recommended using multiple research methods to confirm or validate research findings (Johnson et al., 2007, p. 114). Since that time, a host of researchers have provided justification for using multiple paradigms and methods to study phenomena, in an attempt to

understand a problem more completely (Denzin, 1970; Jick, 1979; Greene, 2006; Hesse-Biber, 2010; Plowright, 2011). Some researchers replace the "triangle" metaphor with a more complex "prism" or crystal form that illustrates the complexity of multiple paradigm research (Richardson, 2000; Saukko, 2003; Ellingson, 2008; in Denzin, 2009). This image can be a negative one, as prisms might "diffract rather than refract, or reflect, vision" (Denzin, 2009, p. 18). However, a three-dimensional image might be more fitting when comparing methodologies that operate from sometimes diametrically opposed ways of thinking. Though leaning heavily towards the qualitative perspective, Denzin and Lincoln (1994, 2000) acknowledge that post-positivist research is one of many ways of knowing, and that there are many different methods that can be used in social sciences research. Though originally seemingly a strong proponent of mixed research, Denzin (2009) points out more recently that mixed methods researchers tend to "presume a methodological hierarchy, with quantitative methods at the top" (17,) and offers a strong critique in his article "Moments, mixed methods, and paradigm dialogs" of the premises of multiple paradigm research (2010). This article is a thorough critique of mixed methods as being an ad-hoc, jack-of-all trades approach that requires multiple competencies, and continues to privilege what Denzin calls scientifically-based research (SBR), by which he means post-positivist, quantitative research that is promoted and accepted by neo-conservative funding bodies and governments. Perhaps more to his liking, in my research plan, the quantitative research phase was structured to play the supporting role, with the qualitative research interviews providing the starring role.

Finally, Marshall and Rossman (2006) point out that "triangulation is not so much about getting 'truth' but rather about finding the multiple perspectives for knowing the social world" (p. 204). They too justify the strengths of qualitative inquiry by emphasizing the practical realization that human understanding is also relative, and that multiple perspectives and interpretations of an event are an epistemological reality.

Research Design

My original intention to demonstrate that there is public support for HSS research, and demand for access to that research, evolved into a broader theoretical analysis of the problem of knowledge flow, partially because of the many barriers to the former research design. I believe this change of course proved to be superior, however, because of the more sophisticated argument it allowed me to make. In this section, I will briefly review my original research design, which I consider important to note because, ironically, I encountered access barriers, as well as epistemological barriers in carrying out this design that are a direct result of closed access to research. I will discuss how my various research instruments also evolved in an attempt to get better public engagement with the issues, which was my other methodological challenge.

The "interested publics" survey and research population

My survey was designed to answer my original research question:

What are the attitudes towards social sciences and humanities research, perceived needs for open access to this research, and preferred methods of access among selected groups of Canadian citizens?

The intention was to:

> Conduct an on-line survey about access to and experience with SSH research (following up on a SSHRC 2008 survey). Through professional associations, NGOs and school boards, I will target Canadians that might have more of an interest in having access to SSH research, including journalists, teachers, and business consulting professionals.[172]

The aims of the survey were:

- To establish baseline information about what my selected publics knew about HSS research and OA.
- To draw members of these publics into the discussion about access to research.

[172] From Dissertation Proposal

- To recruit participants for Phase II of my study.
- To understand the research needs of my target population.
- To inform/educate participants in the process.

Given the results from the SSHRC survey (2008), that demonstrated a lack of public awareness and understanding of HSS research, I questioned whether the problem was the research population – all Canadians – and whether a selected group of publics that would possibly have more awareness and knowledge of HSS research, would create more positive results. In addition, while all Canadians can possibly be considered stakeholders in terms of HSS research, certain groups have more of a role in and need for the latest research. At various times, I have called my research participants, "knowledge translators", "knowledge professionals", stakeholders, or interested publics. I defined this group as journalists, teachers, research consulting professionals, lawyers and those working in non-governmental organizations. Later, I decided that it would be worthwhile to include HSS professionals such as psychologists, freelance writers, and social workers. Anderson and McLachlan (2016) might critique this approach as a "knowledge transfer" method (one-way, hierarchical, elitist) versus a knowledge mobilization approach:

> When knowledge transfer does engage with 'downstream' actors, this primarily focuses on a professional class of knowledge users, for example in health (e.g. physicians, public health authorities), governments (e.g. bureaucrats), industry (e.g. engineers), and business (e.g. corporate executive officers) where less powerful actors in civil society are rarely engaged. (p. 297)

The SSHRC survey already established that the Canadian public as a whole lacks awareness and understanding, so distributing a survey to a population with no awareness of the issues would be redundant. From personal conversations with friends and acquaintances, I was reasonably sure I could tap into a population that is concerned about research dissemination, taxpayer spending, and the flow of

knowledge.[173] In addition, the point of the survey was to understand if there is an awareness and demand for HSS research from any group. I could have picked a number of other groups, or focused in on one i.e. teachers. My interest, however, was whether those who collaborate with, are the professional counterparts of, or are somehow connected to the HSS academic community, might have more of a stake or interest in the issues.

Initially, I also thought I could access these groups through their professional associations, as preliminary conversations were positive, with groups such as the Alberta Teachers' Association, the Law Society of Alberta, the Calgary Chamber of Commerce and the Centre for E-Democracy[174]. Once I had my survey in place, however, these associations I contacted pulled back from posting my survey citing privacy reasons and the need to protect their membership.

The questions asked in the survey were meant to establish:

- what resources respondents relied on for their research needs,
- their level of awareness regarding HSS research, and
- their level of awareness/understanding of the issues regarding access to research in Canada.

I used the Survey Monkey online application for drafting and distributing the survey. Initially the survey consisted of 36 questions. See Appendix 2 for the various versions of my survey.

I approached attendees of the Edmonton Comic Book Expo in 2016 to obtain baseline responses to my questionnaire. Conversations with other PhD students indicated that Expo attendees were willing to participate in research. Attendees at the Expo are from diverse backgrounds, but may tend to be younger than the average Canadian. I was able to recruit 30 people, providing each participant with a

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[173] Alfred Schutz (1976) differentiated between the "well-informed citizen" and the "man on the street". These research populations are approached differently for obvious reasons. SSHRC's survey took the woman/man on the street approach; whereas I opted for a more targeted sample, knowing already that the former lacked awareness and engagement with HSS research.

[174] I had a conversation with the director of this group, Nicole Goodman, for over six months, after which I gave up. Dr. David Mitchell initially suggested I contact them for assistance as they had an extensive database of names that would have been a relevant group to poll.

$5 gift card. I also did a pretest of the survey with 10 people that were known to me to work out any obvious problems with the survey. From these two kinds of responses, I edited the survey down to take less time and to clarify some of the questions.

My second major attempt at getting responses was to appeal to my own list of colleagues and contacts, asking them to be "mediators" and to send the survey on to someone who might be in my target population defined as "knowledge translators," or teachers, lawyers, research consultants, NGOs and journalists. I also asked these colleagues not to answer the questionnaire themselves. Through this snowball sampling technique, I was able to gather 31 responses, which was far less than I had hoped. I subsequently went through another three edits of the survey, making it easier to answer and shorter, gathering another 39 responses. I also asked the Faculty of Arts Communications Division if they would post something on their website or tweet a link about my survey. I posted the survey on my own Facebook and Twitter accounts as well. My last version, edited down to 19 questions, and designed to take 5-10 minutes to answer, was sent to a targeted group of 300 NGOS that I gathered from a database of NGOs on the Government of Alberta website, and from the Internet in general, including provincial and federal non-government organizations in the list. This survey version yielded 42 responses. For the analysis, I focused on the questions asked in this last version, with 119 completed surveys.

Individual and group interviews

The second phase of the research was initially going to contain two parts. I described the research like this:

> Drawing from these participants (survey participants), I will conduct focus groups to discuss experiences with the databases and delve deeper into the issues of the public good and research communication. Finally, I will conduct library workshops followed by one-on-one interviews with participants that are interested in knowing further about what research is available with university database access (not available to the public).

I had several meetings with staff at the University of Calgary library regarding how to enable the library workshops and database access. My original research design was to provide participants with an extended period of database access so that they would have a sense of what kind of research access was available at the university, and then follow up that experience with a group interview/focus group where participants could deliberate the merits of access to research. Through one of my contacts in the open access community, Dr. John Willinsky, I heard that he was involved in a similar project with physicians. This project allowed a group of physicians to have access to the Stanford University database for a period of six months, followed by interviews about the experience (Maggio, Moorhead, and Willinsky, 2016). Unfortunately, the University of Calgary could not allow library database access to people without legitimate ID numbers for fear of jeopardizing their copyright agreements with publishers. As a concession, I would show interview participants several journal articles that I hand-picked for them (as a very poor substitute for having their own access for an extended period of time).

I had hoped to recruit participants for my workshop phase of the research from among my survey respondents, however, no one stepped forward. Again, I revised my expectations and came up with several different strategies for recruiting participants. First, I conducted some baseline focus groups with members of the public at the Calgary Comic Expo in March 2017. These focus groups were very successful. I was able to conduct three, and had to turn participants away as would-be volunteers had lined up outside the meeting room. Generally, I used the focus groups to find out how people do research in their personal or professional lives, what they think research is, and whether they would like better access to research. These questions were variations on the questions asked in the online survey. The focus groups, however, were also expensive, as I agreed to provide participants $20-25 gift cards.

I also submitted a formal request to the Calgary Catholic School District to conduct research with teachers in their schools and received approval for this in March 2017. I was able to conduct two

workshops, one with high school teachers, and one with subject area consultants who provide curriculum support to the school district.

Third, drawing on personal contacts, I began by asking people whom I had a weak connection with, and who fit my target population if they would participate in a workshop or one-on-one interview. I also cold-called numerous people that fit the research parameters. Though I had some kind rejections from many people, for the most part, my emails or phone calls went unacknowledged. Once I did establish some connections and completed interviews from my selected sample, I used those participants for suggestions of other people to interview. This use of snowball sampling was successful in a few cases.

After attempting so many different recruiting methods, the one-on-one interviews were very successful and the data extremely helpful in formulating my ideas and conclusions. Though my approach to these interviews was mostly from a grounded perspective, allowing the research participants to talk about their connection to research in a mostly unstructured way, I managed to carry out some triangulation of results, by asking some similar questions during the interviews that I had asked in the surveys. This will be discussed further in my analysis chapters.

Below is a list of individual and group interview participants and how they qualified as an "interested public," or knowledge translator. Note that some of the participants did not want to be anonymous in the research, while others requested complete anonymity.

Table 5.1 Interview Participants

Individuals	**Category**	**Organization**	**KT Qualifications**
16 general	General Public/ Baseline	3 focus groups held at Calgary Expo 2017	n/a
David	Social Work/ Psychology/Human Rights Group	Director, Canadian Mental Health Association (Alberta Head Office)	Translates mental health knowledge to public, clinicians, researchers
FSP	Social Work/ Psychology Human Rights Group	Private practice psychologist	Translates knowledge for clients

Robert	Social Work/ Psychology/ Human Rights Group	CUPS, Program Director	Translates knowledge for clients; conducts research to alleviate homelessness
MSP	Social Work/ Psychology/ Human Rights Group	Social Worker for at risk youth	Translates knowledge for clients
CSP	Social Work/ Psychology/ Human Rights Group	Human Rights Advocate	Translates knowledge for clients
IL	Legal Professionals Group	Criminal Defense Lawyer, Alberta Youth Criminal Defense Office	Translates knowledge for clients
JL	Legal Professionals Group	Director of Legal Aid Organization	Translates knowledge for clients and public
VL	Legal Professionals Group	Immigration Lawyer	Translates knowledge for clients
SL	Legal Professionals Group	Research Lawyer	Translates knowledge for articling students
NL	Legal Professionals Group	Research Lawyer	Translates knowledge for judges
SHL	Legal Professionals Group	Senior Director of Health, Safety and Environment for large construction corporation	Translates knowledge for workers and organization, creates policy
Law librarians (2)	Legal Professionals Group	Law Librarians	Translates, disseminates knowledge for organization
Lance	Educators Group	High school teacher, librarian (BC)	Translates knowledge for students
High School (6)	Educators Group	Calgary area high school	Translates knowledge for students
Curriculum Consultants (4)	Educators Group	Calgary Catholic School District Subject Area Curriculum Specialists	Translates knowledge for other teachers and administrators
Heather	Educators Group	Primary school Montessori teacher with her Masters of Education degree	Translates knowledge for students
Richard	Business/management/ research consulting	Private research consulting Firm, Praxis	Translates knowledge for clients
Rick	Business/management/ research consulting	Private research consulting Firm, Organizational Change and Team Building	Translates knowledge for clients

Vanessa	Business/management/ research consulting	Investment Advisor that offers seminars for women	Translates knowledge for clients
Len	Journalist/writer/researcher group	Retired broadcast journalist	Translates knowledge for public
KJR	Journalist/writer/researcher group	Print journalist/reporter for large national newspaper	Translates knowledge for public
Andrea	Journalist/writer/researcher group	Researcher and writer for national think tank, Cardus	Translates knowledge for public
Marco	Journalist/writer/researcher group	Researcher and writer for national think tank, Ideas for Atlantic Prosperity	Translates knowledge for public
SJR	Journalist/writer/researcher group	Freelance writer that writes non-fiction history books	Translates knowledge for public
CT	Theatre/Drama	Theater Outreach coordinator	Translates knowledge for audience
HT	Theatre/Drama	University instructor, dramaturge, director, actor, theatre critic	Translates knowledge for public, audience and students

The interview research sample, not including the Expo "focus groups", contained 17 women and 18 men. Three participants were from outside of Alberta (British Columbia, Ontario, and the Maritimes) and two others were from outside Calgary.

All is data

In addition to the formal research methods, I also engaged my topic in many informal ways that contributed to my understanding and formulating of my theory. For example, I gathered information daily about open access through a Google alert set up to find all publications that contained the words "open access". I took every opportunity to talk to people about access to research. I met informally with the OA policy specialist with SSHRC, Jeremy Geelen. Sometimes this was the best way to understand what, in general, people thought or understood about HSS research and about access to HSS journal articles. Certain conversations stood out and helped confirm my sense that people of every kind

of background do some kind of research, understand the issues about access to knowledge in a basic way, and use creative ways to find out information they need for their lives. On vacation, I met an enthusiastic potter who was so proud of the fact that he discovered a glazing technique by buying chemistry textbooks and journal articles on the topic that enabled him to master the new technique. He was extremely erudite on numerous topics, including how to grow cocoa beans and create his own organic chocolate. At the same time, he had an artist's awareness of the importance of intellectual property, saying, "I paid for articles but I didn't like it. But I understand that people have to make money."[176]

These numerous opportunities to talk with people about research, played an important role in the evolution of my thinking and formulation of theory. Willis et al. (2007) concur that "in a qualitative study the process of making meaning is emergent. That is, what you are studying, the data you are collecting, and how those data are to be handled, change and emerge across the life of the study" (p. 202).

Originally, I expected to encounter a great deal of anti-intellectual bias when talking with people, and had my own opinions as to why people might not value academic expertise. One of my best interviews, however, came about through an initial conversation with someone who clearly did not value how a university education contributed to personal and social welfare, until I pointed out that they were using HSS concepts in their own consulting practice. I then managed to convince this person to do an interview with me, which served to change both my opinion about who holds anti-intellectual attitudes, and also changed the opinions of my interviewee. I engaged people who "could not escape" such as massage therapists or hair stylists, that I essentially paid to listen to me talk about my research. These conversations were always interesting, engaging and enlightening. I respected their viewpoints

[176] Bill, April 7, 2018. He also said "I had to buy an article here and a book there because they were pieces of a puzzle. I bought an article that was a page and half for $25 but I needed it to solve the puzzle to understand colloidal or ruby glass." His metaphor of "pieces of a puzzle" was interesting in revealing his personal research style as well as the notion of being self-taught and relying on online research when one lives in the middle of nowhere!

about higher education and its merits (or lack of), and found that negativity seemed to stem from negative personal experiences, rather than unfounded bias.[177]

Finally, the notion of controlling for researcher bias is a foundational consideration in the practice of scientific research, and is approached differently depending on the paradigm. In terms of the survey research, I tried to avoid leading questions, and did not ask people known to me to participate in my research. On the other hand, while I realized my critical theory perspective might result in the perception that my research is biased in favour of Open Access, I did not consider any of the questions in the survey to have right or wrong answers. In terms of the qualitative tools, I tried to maintain a self-reflexive position regarding my own methodological choices to understand researcher bias. The key to this is to maintain an attitude of openness, with the hope of finding a solution to the problem (Glaser, 2011). Especially during the interview process, it was difficult to explain my topic without acknowledging that I thought open access was a good idea. However, in the final analysis, I would consider my initial attitude before I began my research to be more biased, as I saw myself as an OA advocate that wanted to advance the cause; whereas, at the end of my research, I felt empowered to critique the cause itself.

Soundness of research

In total, I engaged 170 people in thinking about or discussing the problem of access to HSS research, their awareness of this research, and suggestions they might have for a better connection to the HSS scholarly community. Using two different research instruments, an on-line survey, and individual and group interviews (focus groups), I gathered considerable data that could be useful for the HSS academic community, the Open Access movement, and interested publics who would all benefit from a better approach to knowledge flow. The surveys and conversations influenced my understanding of the

[177] This would be a very interesting study. Scholars know that anti-intellectual bias against the university exists, the question is, why do people feel this way? Asking people from varied backgrounds in everyday settings would no doubt result in interesting insights.

problem of public access to research. As my research instruments cross qualitative and quantitative boundaries, considerations of reliability and validity measures for quantitative tools apply, as well as measures for assessing the soundness of qualitative research, such as credibility, transferability, dependability and confirmability formulated by Lincoln and Guba (1985).

The survey was designed to answer my research question, and get a sense of how people outside of the academy engage with HSS research. The data was analyzed using the software available through the Survey Monkey database, which allows for comparison of results, comparisons between questions and between respondents, and the creation of charts and graphs. Although I was able to manipulate the data in many different ways, the low numbers of responses prevent me from making generalizations about my survey population. However, because I gathered information about my respondents' professions, I feel that the excellent range and quality of professionals who answered the survey indicate that I was able to garner responses from a healthy, reliable and valid sample. In addition, I feel that the survey was strengthened by the opportunities for open ended responses to questions that overcame somewhat the limiting structure, or distortions that can be found in a quantitative survey format.

I also took measures to ensure the quality of my qualitative data and analysis techniques (group and individual surveys). To prevent confirmation bias, I mostly refrained from talking about my views about Open Access until the end of the interview, or sometimes not at all (Nickerson, 1998). I involved colleagues in the data collection, having two other graduate students help me with the focus groups and provide their feedback afterwards. After each interview, I created a research memo that summarized the conversation, provided an opportunity for self-reflection, started to identify themes, and pulled out relevant quotes. I created codes from these memos, and also used these codes as key word searches using NVivo software. I member-checked a sample of interview summaries with several of my participants (10), and received back five responses confirming my analysis or making minor changes.

Finally, triangulation of data is one more way that I was able to cross-check and confirm research findings. I feel that if I had only one research method to inform my understanding, I would not have been able to delve as deeply into the problem of access to HSS research, and make a strong and well-informed case around knowledge flow. The survey would have been sufficient to answer my original research question, but would not have given me the license to comment about feedback, the double hermeneutic, and importance of tacit knowledge in escaping monopolies of knowledge. The interviews challenged my understanding of open access, but if I had only done the interviews, I would not have had the ability to show that demand for HSS knowledge does exist, and may have been disheartened by negative attitudes towards the academy evident in some of my face-to-face discussions.

Conclusions

My research journey was successful on a number of levels. First, I carried out a survey with knowledge translators, and with a specific NGO community sample, that allowed me to compare results between groups, and engage people in the access to research debate. I also conducted a number of group and individual interviews with a sufficiently large scale, geographically-diverse and broadly-focused sample that provided excellent feedback to my questions about the public good aspects of HSS research, their levels of access, and their research needs. I gathered numerous insights about how HSS research is perceived outside of the academy, what are the research needs of knowledge translator communities, and how knowledge access can be improved. This is highly significant because of the very low level of engagement with non-academic citizens in the OA debate. In this sense, the research has started a conversation that has not happened in a way that engages citizen stakeholders. The research also combined research methods and perspectives, and triangulated research results. The most exciting outcome of this research was the ability to dig deeper into the OA debate by understanding the needs and perspectives of research users and implementers outside of the academy, which led me to conceptualize more fully the process of knowledge flow in the scholarly communications landscape.

Chapter Six
Survey Analysis

> *I imagine very few people pay to access research. I have no interest whatsoever in paying money to get through paywalls for virtually anything, given that I can generally find information of sufficient quality and reliability for free. From a public good perspective, access to education and information generally correlate with better results on virtually every metric. Traditional repositories and sources of knowledge are essentially losing relevance in part because free access to information is overtaking them. For many purposes, this change involves little meaningful loss of reliability. However, without access to peer-reviewed academic works, most people lack the ability to verify whether their information in a particular situation is reliable. Operationally speaking, people are incentivized to accept as true most reasonable-seeming freely-accessible online information because it is not practical for them to access resources that could reliably corroborate or refute it. The overall outcome is that information is largely accurate but that false information is not easily rejected from the knowledge base.*
>
> -- Survey Respondent. How Canadians Do Research: Access to and Awareness of Research in the Humanities and Social Sciences

The primary purpose of the survey was to answer my research question, giving me a baseline understanding about how "knowledge translators" understand and experience the access to research issue. I wanted to understand whether there was a professional or personal perception of need for access to humanities and social sciences research among certain groups outside of the academy, and also understand my population's level of awareness regarding access to this research. The survey was also an important part of my mixed methods approach to understanding more broadly open access and the public good.

While carrying out the survey was technically challenging, the survey results provide insight into the problem of public access to research. The complexity of the research topic, the difficulty of recruiting participants, and the technical bumps in the road regarding the dissemination of the survey, slowed the research process. Given that the SSHRC (2008) survey indicated that the majority of Canadians were not aware of HSS research, I felt compelled to design the survey with this in mind. In addition, I also wanted the survey to encourage further involvement in the project, with the hopes of recruiting interview/focus group participants. Finally, I designed the survey to be informative for participants, hoping to enlist further interest in the topic and ignite public discussion. While the

number of responses prevent inferences to a larger population, the results do prove interesting, and were helpful in formulating my theory. The results discussed below indicate that:

- among respondents, there is a demand for HSS research, especially among "knowledge translators" and NGOs;
- while people might not be aware of the open access problem, they have encountered it in their daily lives;
- respondents are concerned about research quality and value expert knowledge;
- almost everyone in my sample does "research";
- the audience for "peer reviewed research articles," outside of the academy, could be significant;
- there is an openness and curiosity about HSS research among members of the public that participated in the survey;
- people are engaged in research on a regular basis; and
- respondents use many kinds of resources to fulfill their knowledge needs.

For the purpose of simplicity, I focus on the last version of my survey, as all questions, but one, were asked of all participants (see Methodology Chapter and Appendix 2). Section one breaks down the results by question and includes all respondents to the survey. Section two focuses in on my specific "knowledge translator" sample. First, I look at non-government organizations (NGOs) and not-for profit organizations (NFP), as representative of the "knowledge translator/professional population" I was trying to capture. I also divide up the results using other parameters to determine whether different groupings responded differently to the survey than a more general population sample. To further identify whether my knowledge translator group is more engaged with research, I cross-tabulate the data in various ways, to understand respondents' attitudes. Finally, in section three, the analysis of the survey results identifies important themes as well as issues that would benefit from more exploration.

The data was analysed at the descriptive level for the purposes of this study, as deeper statistical understanding of the data to prescribe further policy action was not required for an exploratory topic.

Survey Results by Question for Total Respondents

As mentioned in my methodology chapter, the last version of the survey was edited down to encourage more participation, cut down on the time to complete the survey, and delete some of the questions that might have been considered too leading. The last version was also sent to a more specific population than the first version, focusing on community organizations, non-profits (NFP) and non-governmental organizations (NGOs). Survey Monkey records the time it takes to finish the survey, and the last version averaged 7 minutes, whereas the first took 15 minutes.

This section presents the results from all survey responses (n=119). Given the various versions of the survey, I manually combined the versions into the final version to enable analysis of the total group. Quantitative results are shown in charts or graphs, while comments are summarized where noteworthy. I allowed open-ended comments to almost all the questions, encouraging respondents to elaborate their thoughts on a topic. This research design choice enabled further analysis regarding how respondents understand the issues, and greater insight into their opinions.

The first question[178], **Q2 "How often do you use the Internet to do RESEARCH* on topics that are of interest or importance to you**" was designed to introduce the topic of online research, provide my definition of "research"[179], and get a sense regarding how engaged respondents are with research in their personal and professional lives. 117 people answered this question. 91% of respondents use the Internet to do research for their personal lives once a week or more often, 38% of those every day. 83% of respondents use the Internet to do research for their professional lives once a

[178] Note that in the survey itself, this question appears as Q2, because the first question asks whether they consent to participate in the survey. For this reason, throughout the survey, the Q# is off by one.
[179] *For the purposes of the survey, "internet research" means using an Internet search engine (such as Google) to find resources that will educate you about a topic, to gain expertise or become knowledgeable in the area. This research is more than just searching for information like movie times, an address or the latest news.

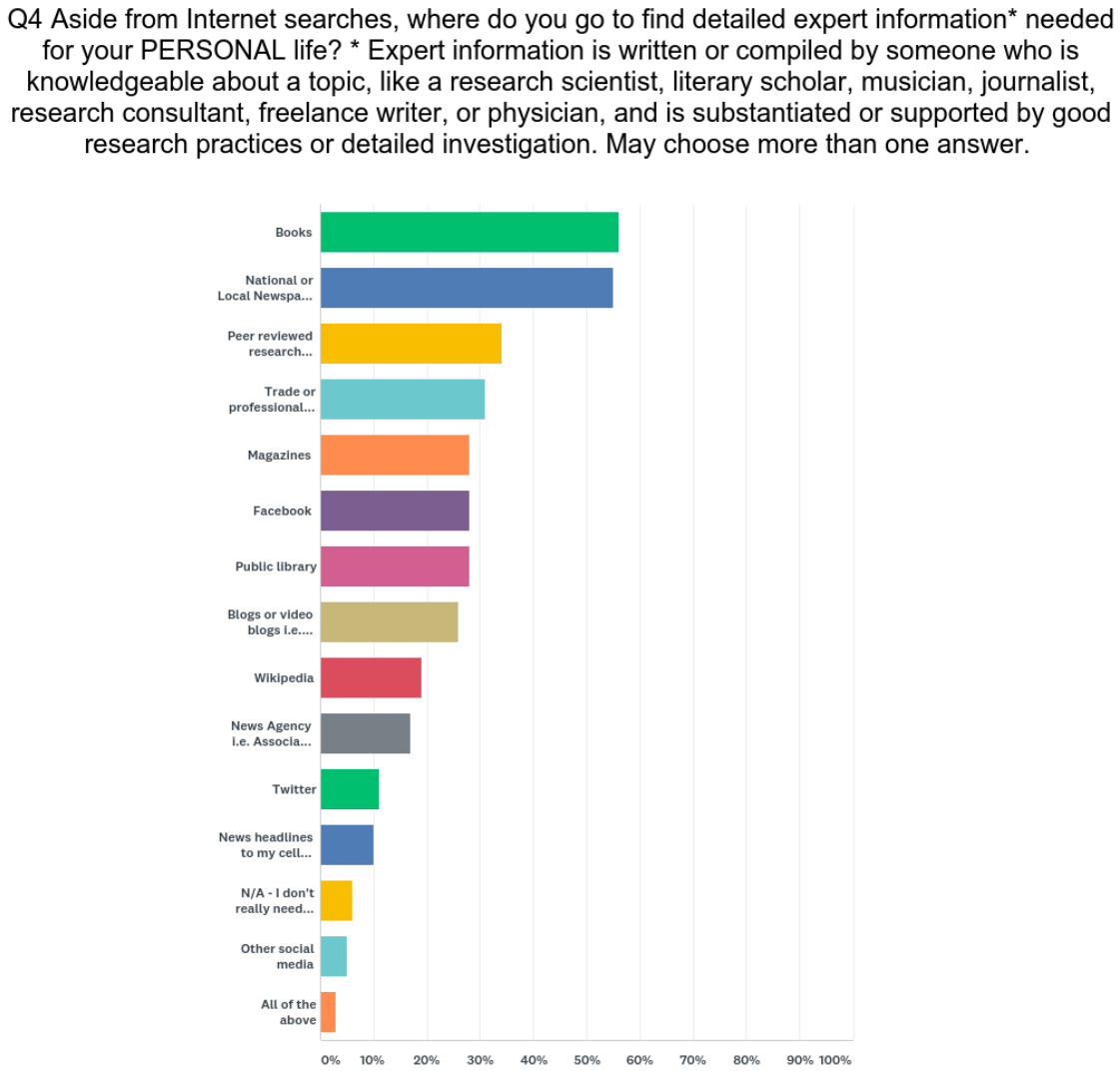
week or more often, 33 % (or 39/117) of people use it every day. This result confirmed my sense that "everyone does research" in the age of the internet, or is under the perception that they do.

The second question, **Q3 "Aside from Internet searches, where do you go to find detailed expert information needed for your PROFESSIONAL life?"** (n=107); and third **(Q4)** questions, **"where do you go to find detailed expert information needed for your PERSONAL life?"** (n=100), follow up on the first by asking where people look for "detailed expert information." This question also allowed me to define what I mean by "expert information" which is a term I use in other parts of the survey. The chart below illustrates the diversity of sources respondents use to carry out their research queries.

Figure 6.1 Q3 Total Respondents

Interestingly, respondents top three choices are “trade or professional publications” (65%), followed closely by “peer-reviewed research” (59%), and then “books” at 39%, for their professional lives. For their personal lives, 56% of respondents chose “books” as their first option, and “local, national or online newspapers” at 55%. The third option, somewhat surprisingly, was “peer reviewed journal articles” at 34%.

Figure 6.2 Q4 Total Respondents



A number of people (21) added other categories in the comments sections to Q3 and Q4. 11 participants mentioned different kinds of people or experts that they can consult such as “personal doctor or specialist in field”, “our organization has a librarian”, “other professionals in my field,”

"expert friends," "science journalists," and "friends & family with experience/knowledge in the area of interest." Other respondents mentioned different trusted organizations such as (2), "the company's own standards and practices", the Mayo Clinic, learned societies, and "publications from places like the Pembina Institute or Parkland Institute." Finally, some people referred to other media outlets or sources such as television, Tumblr, Westlaw (research database for lawyers), "university library" (2), and news websites.

In **Q5**, responses to **"In general, when doing research using random internet searches, how satisfied are you with the quality of expert information that is available to you?",** respondents (n=117) were split closely between those who are "satisfied, very satisfied or completely satisfied" (50.86%), and those who felt "somewhat satisfied, or not satisfied at all" (46.55%). Of the three respondents who answered "other", one indicated that, "generally, research done by experts is dense and very hard to read, so I just avoid it, skim it or search through the document." I was under the impression that people would be more dissatisfied than my results indicate, which is what motivated me to ask the question. This is difficult to gage, however, when respondents might not realize there is expert information that they cannot access, so they do not feel dissatisfied. People through the ages have remarked[180] on the state of knowing or not knowing what we do not know.

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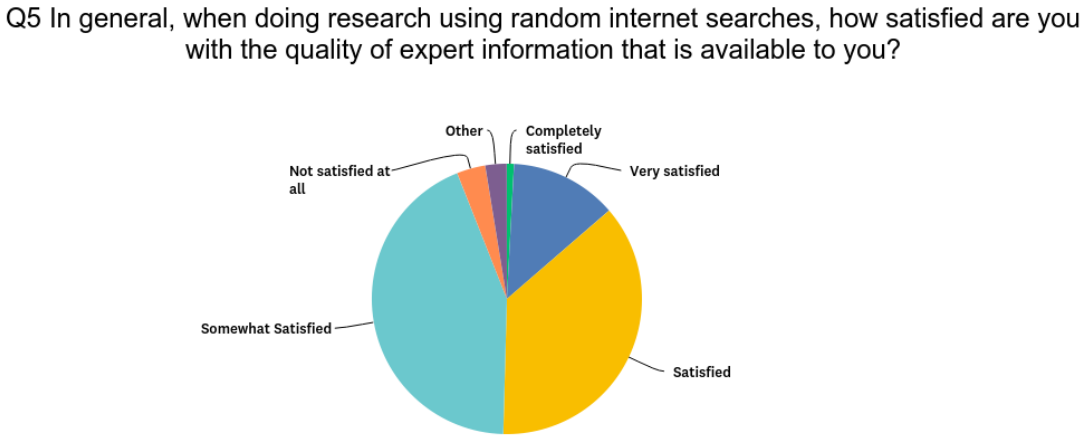
[180] The Socratic Paradox is taken from Plato's *Apology* (21d), where Socrates is thought to have said, "I know that I know nothing." Donald Rumsfeld said famously, though he was ridiculed for it:

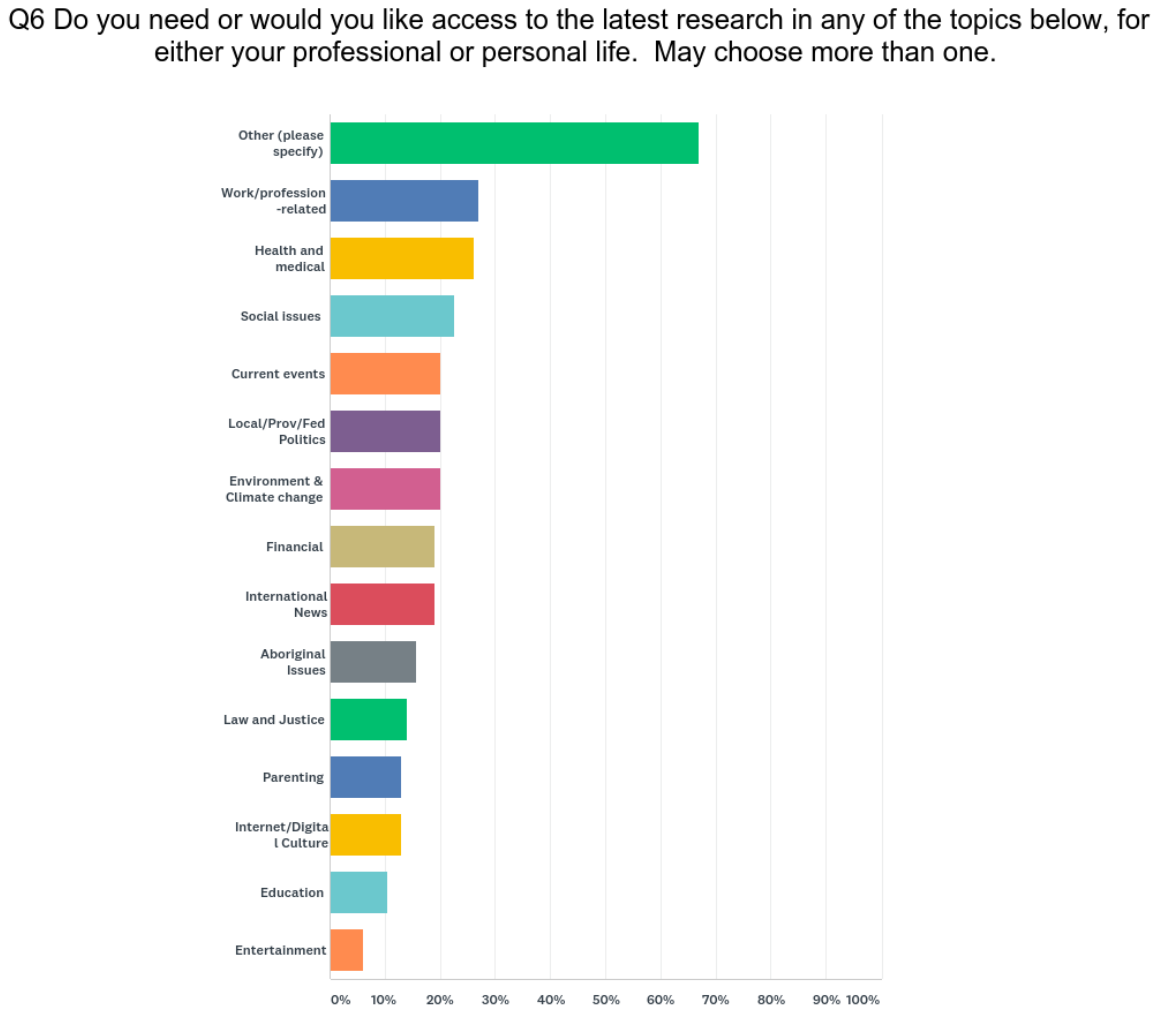
> […] as we know, there are known knowns; there are things we know we know. We also know there are known unknowns; that is to say we know there are some things we do not know. But there are also unknown unknowns—the ones we don't know we don't know. And if one looks throughout the history of our country and other free countries, it is the latter category that tend to be the difficult ones. (U.S. Department of Defense news briefing on February 12, 2002).

Figure 6.3 Q5 Total Respondents



For **Q6, "do you need or would you like access to the latest research in any of the topics below, for either your professional or personal life,"** (n=115) the intention was not to determine the popularity of the topics, but rather to inform respondents about the range of topics covered by HSS research. In addition, because of the different lists provided in the different versions of the survey, I cannot report on the choices for all respondents in a succinct way. The list below was provided in the Final version of the survey, sent to the NGO/NFP group.

Figure 6.4 Q6 Total Respondents



Note that the top ranked category was "other" because I filled in the answers to the deleted questions from the previous versions of the survey in the comments box to keep track of how respondents answered. Of those 75 respondents from previous versions, 43/75 wanted expert information and chose one or more categories that interested them. 15/75 were not sure if they wanted expert information, but still chose various categories that they were interested in. 8 of the respondents chose "maybe", or "not sure" if they wanted the latest research. Of the remaining 9 respondents who chose "no", two of those actually said "no" then checked off several categories they might be interested in, and the remaining 7 said "no" to all related questions and chose no categories they might be interested in. In sum, the majority of respondents not part of the NGO/NFP group answered "yes" to needing HSS information

(40/75), with the top categories selected being "education", "mental health" and "environment" (different list of topics). The important take away from this question is that, in total, only 7/115 respondents said "no" to wanting the latest research in any of the topics covered by HSS research, no matter how the question was phrased. In addition, two people added new categories, "municipal/local policies" and "human resources".

More important and interesting to me is the follow-up to this question, **Q7** which was **"Are you aware that research on the above topics is conducted by social sciences and humanities researchers at universities across Canada?"** 62% of respondents answered "yes" in the total group. 21% of respondents said "no." 16% chose "Don't know/not sure". Two respondents commented that "not always clear how to reach the authors or papers," and "I've found the quality varies considerably in the rigour of the research." This percentage of awareness (62%) is much higher than the SSHRC survey results, which found that 62% of Canadians were *unfamiliar* with research from the social sciences and humanities (with 38% who were familiar).

Q8 changed the focus somewhat, asking respondents **"what do you consider important when looking for information for your personal or professional research needs?"** (n=107). This question was important to understand what measures of research quality are important for people. 80% of respondents chose "the research is produced by an 'expert' in that field", followed by "the research is peer reviewed" (59%), and "the research is produced as a book or article" (43%). Respondents were less concerned whether the research results were very new (22%) or produced in the last five years (21%). The selection of expertise as the most important measure is possibly a significant indication that this is a trustworthy or valued aspect of scholarly research. It would have been interesting to probe further what being an expert means to respondents.

Another noteworthy result was the large number of people that said they would read a full-length journal article. **Q9** asked **"Generally, new research findings produced by university researchers are communicated to peers and the public as an article in a peer-reviewed scholarly**

journal. If the topic interested you, or was of concern to you, would you read a full-length journal article (avg. 5000-7000 words)?" Results indicated that 68/115 (59%) people answered the question "yes", 24 said no, and 23 were not sure. 17 people provided comments that provide further insight into their research practices, such as "if it was directly related to what I was looking for", or "I would read the abstract and conclusions." Interestingly, of the 13 students that answered this question, 5 responded yes, and an equal number of students said no. Of the 17 open ended comments respondents provided, 4 refer to reading it only if it was written in clear language or expressed sentiments like, "sure wish researchers would communicate more clearly"; 5 indicated that they would read summaries, abstracts, conclusions, or skim; and 4 indicated they would read it if it was relevant. Other (3) commented that they do this every day, or that they only do it for professional purposes.

Q10 asked "**Aside from post-secondary education you may have completed, since that time, have you ever needed to consult social sciences and humanities research publications for your personal or professional life?"** A large number of respondents (74/118) said, yes, 31/118 indicated no, and 13 people chose "I don't know" or "not sure."

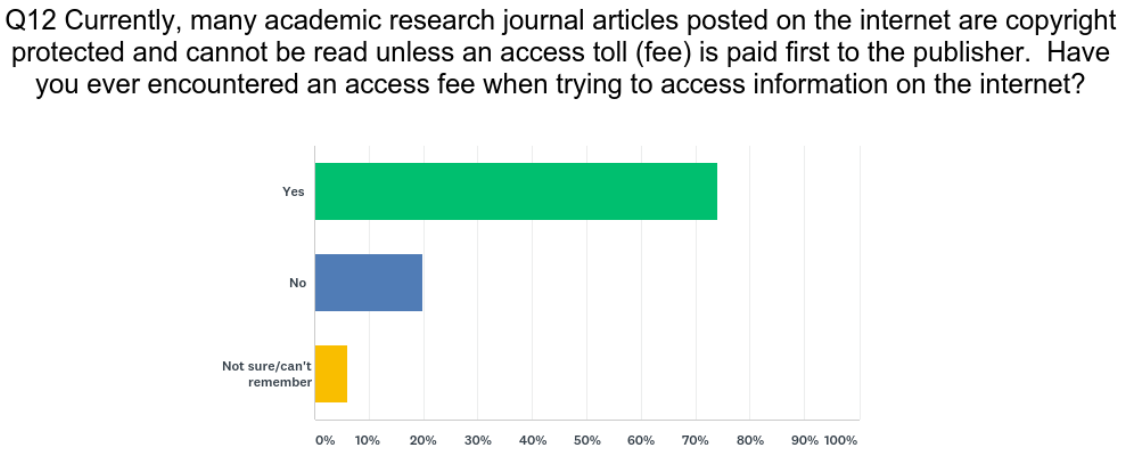
While Q10 respondents indicated that they have often needed to consult scholarly research in the past, not all of them know how to do this. As a "trap" question, **Q11** asked **"Do you know how to find academic, peer-reviewed research?"** 67% (77/115) of respondents answered "yes", "14% (16/115), 17% (20/115) chose "not sure/don't know", and 2 chose "need more information to answer question." Interestingly, of the people who said "yes" to Q10 (74), 13 people answered "no", "not sure" or "need more information to answer the question" to question 11. Six comments to Q11 also indicate that some respondents understand access issues, sharing their access "work-arounds" or expressing frustration:

- I know how to find the information, but sometimes it is not available to me through open source sites. In a professional capacity, I will look to contact the author directly if I require a paper I can't get access to.

- I used to refer to academic journals online, but they became too costly to access or the validity of content/publishing process became questionable, so now I am not sure.
- I do not have access to some pathways that academics use.

Q12 asked respondents **"have you ever encountered an access fee when trying to access information on the internet."** The chart below indicates that a large majority of all respondents (86/116) have encountered a paywall.

Figure 6.5 Q12 Total Respondents

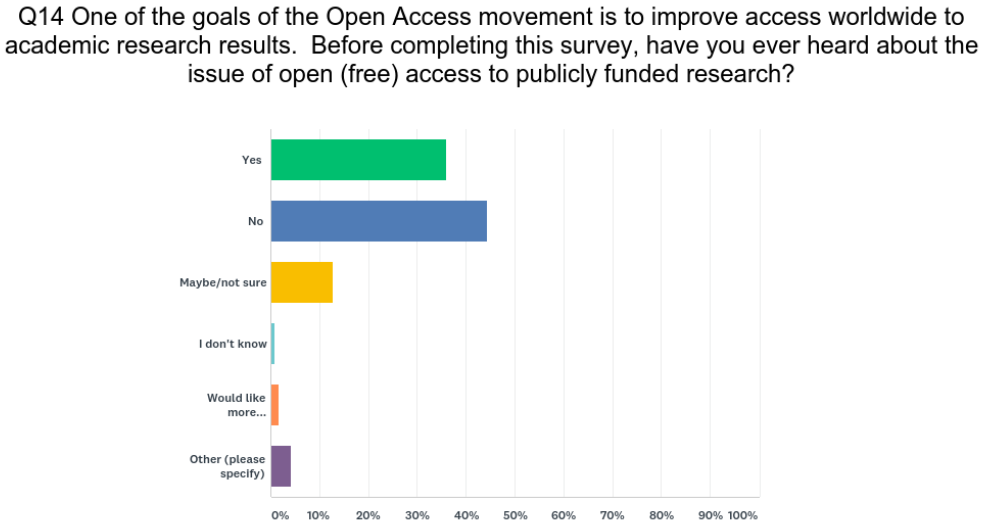


The follow-up **Q13** asked, "**If yes**, **have you ever agreed to pay for access?"** Only 16 people indicated yes (out of 103), whereas 83 people indicated "no", with four choosing "don't know/can't remember." Note that more people answered this question, than had answered "yes" to Q12 (86), indicating that some people might not understand the connection between peer-reviewed journal articles, and paywalls, possibly remembering that they might have been asked to pay for information in the past, but not realizing why (or they might not have read the question thoroughly). Also, other forms of content, such as newspapers, have paywalls, so they may have had experiences with this. The comments section of this question provides some interesting insights. For example, one person says, "I email someone who has university library access with the DOI or other info and ask them to share it

with me"; and another admits "I always have had access to a relative's university password (but don't tell anyone...)". Another respondent feels that they are "always able to find free information that satisfies my need." A couple of others have access to JSTOR through their work, or have university access (legitimately).

Q14 "Before completing this survey, have you ever heard about the issue of open access to research?" is the first question to address Open Access specifically and provide a definition. The results are also somewhat surprising to me, with 35.9% (42/117) of people indicating they were aware of the open access movement.

Figure 6.6. Q14 Total Respondents



When I noticed this result in earlier versions of the survey, I decided to add **Q15**: **"Did you know that university researchers are NOT paid royalties by the publisher when their published journal article is downloaded or purchased?"** I thought perhaps social acceptability bias might be a factor (not wanting to admit they didn't know about the OA movement), so I tried to check the knowledge level of respondents who indicated they had heard about open access. The choices were "Yes, I was aware that academics write journal articles to circulate their ideas to colleagues and the public, and to be considered for promotion" and "No, I didn't know that university researchers do not get paid

royalties for this work, in addition to their salary." Not every version of the survey contained this question(n=66), however the results were split fairly evenly between those who answered "yes" (48.5%) and those who answered "no" (51.5%). Comparing those who answered "yes" to Q14, with Q15, 7 respondents answered "no", indicating perhaps that these participants might not have a deep understanding of the issue. The other purpose of asking this question was to inform people about the differences between scholarly publishing and other kinds of publishing where royalties are common, and understand what people in general might know about the economics of scholarly publishing.

Some comments provided by respondents (4) indicate a high level of awareness about HSS research or the open access movement. For example, one respondent commenting on Q14 (Have you heard about the OA movement) writes:

> I imagine very few people pay to access research. I have no interest whatsoever in paying money to get through paywalls for virtually anything, given that I can generally find information of *sufficient quality and reliability for free* (my emphasis). From a public good perspective, access to education and information generally correlate with better results on virtually every metric. Traditional repositories and sources of knowledge are essentially losing relevance in part because free access to information is overtaking them. For many purposes, this change involves little meaningful loss of reliability. However, without access to peer-reviewed academic works, most people lack the ability to verify whether their information in a particular situation is reliable. Operationally speaking, people are incentivized to accept as true most reasonable-seeming freely-accessible online information because it is not practical for them to access resources that could reliably corroborate or refute it. The overall outcome is that information is largely accurate but that false information is not easily rejected from the knowledge base.

Delving into this participant's other responses, however, reveals that a deeper knowledge about access to research does not correlate with knowledge about HSS research. This respondent, a teacher, was not sure what kind of research was done in the HSS (Q7).

Another respondent, a university professor, displayed a very in-depth knowledge about access to research in their comment to Q14:

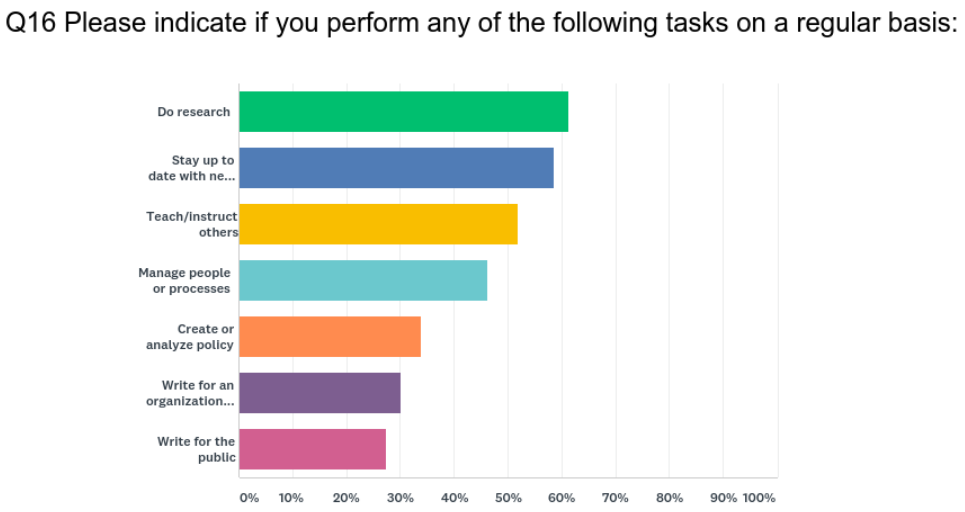
> This is a complex issue. Some arguments offered by the OA movement are valid and reasonable. However, taxpayers also pay user-fees for numerous public goods, e.g., use of public libraries, recreational facilities, national and provincial parks, and public schools and post-secondary institutions, all of which are already heavily subsidized by the government (tax-payers). Should these public goods also have open access? What would be the business model to make them sustainable without user fees? Many of these public goods are not used by many sectors of the public, e.g., property taxes paid by home owners who have no kids help pay for public schools. How else would the schools operate?

This same respondent commented on Q15 as well (Did you know university researchers are not paid royalties):

> University libraries that I know of pay a hefty subscription to e-journals that are accessible by the students, faculty, researchers, and professor emeriti. Professors and graduate students who publish do so in order to leverage these pubs for career advancement, which are typical incentives for scholars. Although their work becomes part of the "public domain" I also understand the reason why some e-journals regard them as proprietary. I know of a few scholars who want to get compensated by such journals. If they want to make some money over and on top of their academic salaries, they should publish books and earn royalties. Publishing their research in academic journals - without compensation - has been a tradition I've learned to live with. It's been part of my professional culture and I can live with it.

Q16 asked about people's research related practices, **"Please indicate if you perform any of the following tasks on a regular basis,"** and represents what is left of the 'demographic' questions in the final version:

Figure 6.7 Q16 Total Respondents



106 people responded to this question, many choosing more than one task that they carry out regularly. Over 60% of respondents "do research", a question that was asked in a different way at the beginning of the survey in Q2. Recall that 91% of respondents said they use the Internet to do research for their personal lives once a week or more often, and 83% of respondents use the Internet to do research for their professional lives once a week or more often (33 % or 38/116 people use it every day). Perhaps the different response rate can be explained by the sorts of tasks on the list, with doing "research" associated with a more formal process like "write for an organization" or "teach/instruct others". It might also be explained by different definitions of 'do research" that people might have. For example, a few people who indicated that they "do research" on a regular basis do not fit the typical concept of someone who might do research for a living, including an insulator, overnight freight associate and a cabinet maker. However, these professions could have a best practices research component. The results of this question might have been different if I had asked, "please indicate if you perform the following tasks in your job, on a regular basis."

Q17 is the last question that provides an opportunity to evaluate the survey according to "profession." **"What is your profession?"** is the only demographic question that I asked all participants. There is a wide range of professions represented in my sample. This question is also useful because it enables me to pinpoint the answers from different professions. I wanted to know if the profession of respondents that fit my theoretical categorization of knowledge translators, HSS professionals, or those who might have more of a use for HSS knowledge in general, would know more about HSS research, the access problem, or have more of a demand for access to it. Following is a list of professions of respondents, that I selected out as part of this select group, or sample (named KT or HSS in Table 6.1 below). Clearly, many of my participants are involved in research or knowledge translation as a profession:

Table 6.1 Q17 List of KT professions among survey respondents

Envmntl. conservation professional Consulting Education Lawyer Researcher (3) Teacher/educator (9) Research scientist Retired teacher/educator (3) Physician University professor Retired university professor Accountant/educator Executive (director) (2) Therapist Social Sciences Speech language pathologist (Research)Analyst/associate (4) (Project) Manager (2) Project research assistant Analyst at NFP that aims to eliminate poverty	Business analyst Librarian VP Research, private research firm Broadcaster Non-profit management Human resources (2) Communications Director Communications, program based Communications mgr-health charity VP Marketing Senior policy analyst Marketing and HR Coordinator HR for a NFP Marketing and COMS, NFP sector Biologist in the NFP sector Multicultural association manager Ex. Director of NFP (2)	Provincial NFP manager Manager of NFP Policy advisor Social impact analyst/researcher Research analyst of Canadian charities Researcher with a NFP (2) Researcher and writer President charity undertaking wildlife research, public education Manager of support programs Health care consultant Health economist Economist Arts Manager Govt Rltn. consultant & ED of NFP Project coordinator at NFP Physical fitness (from NGO/NFP group) Group facilitator – mental health/nutritional consultant

The list of professions also tells me that despite the low response rate, the sample has captured an excellent diversity of people whose answers to my survey are valuable, and who may have benefitted from participating in the survey.

Survey results of "Knowledge Translators"

My research has been guided by the assumption that knowledge translators would have more interest in and awareness of HSS research, and also be more motivated to have access to this research than a general population sample. This assumption is based on the SSHRC survey (2008), as well as on the assumption among experts that the specialist nature of their research might not appeal to a general audience. Although the results from my survey cannot be taken as a strong indication this is true, lacking statistical significance, and the difficulty of identifying a clear-cut control group or knowledge translator sample from my survey data, several ways of classifying my participants show that some differences do exist.[181]

In this section, I look first at the NGO/NFP group that I surveyed separately, using the last version of the survey, and comparing them to everyone else who completed the survey. Although I sent the survey to organizations that could be identified as NGO/NFPs, there were also some organizations that receive government funding, some that do research consulting, such as think tanks, as well as government departments, included in this list. In total, I sent requests to 325 email addresses, with 23 invalid addresses. 42 people answered the survey with a response rate of 13.9%. There is no way of knowing, however, which organizations answered my survey, or whether the person answering the survey was the most knowledgeable about research conducted or required by the organizations. After comparing results with this group to the rest of the participants, I offer two other ways of parsing out the "knowledge translators" from my data: from their 'professions' (Q17) and from whether or not they say they "do research" on a regular

[181] I tried to obtain responses from what I defined as "knowledge translators" in many different ways. Due to the anonymous nature of the responses, and the lack of ability to control 'snowball sampling,' I cannot be sure that respondents fall into this categorization. In addition, my attempt at having a control group using the results from my Edmonton Expo participants, was also tainted by the fact that several people who filled out the survey worked for a research consulting firm.

basis (Q16). This enables me to compare survey responses by dividing up my research participants in four different ways to understand any differences in perception or understanding.

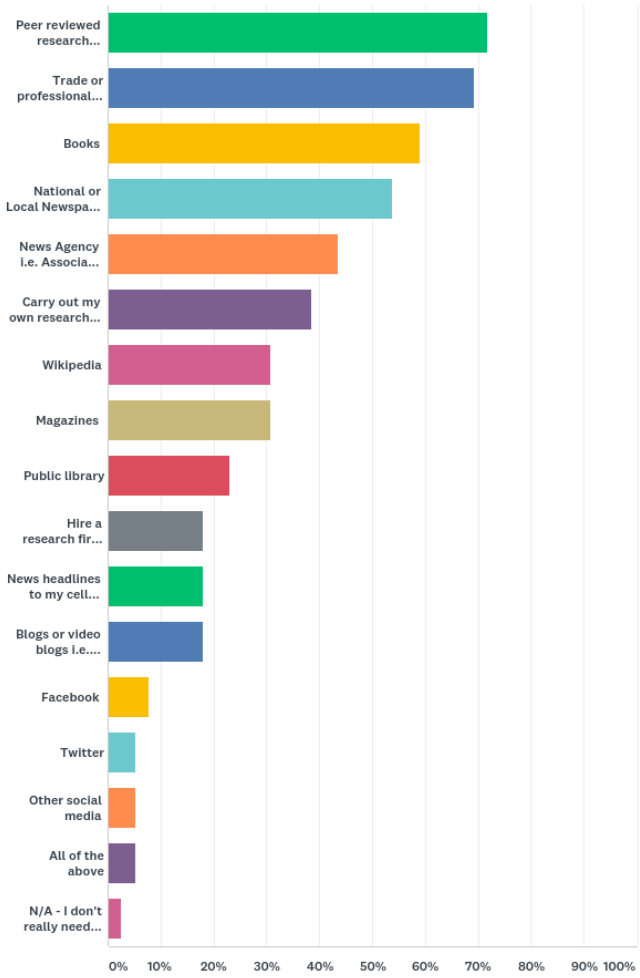
The results of the first question for this select NGO/NFP group immediately demonstrate the differences between a more general population and a "knowledge translator" set: **Q2 "How often do you use the Internet to do research on topics that are of interest or importance to you**?" For the non-NGO/NFP sample, results were very positive with 88% (67/76) of respondents using the Internet to do research for their personal lives once a week or more often, 37% of those every day; and 75% of respondents using the Internet to do research for their professional lives once a week or more often, 25% (19/76) people use it every day. Selecting out the NGO/NFP respondents, results are even higher, with 100% of respondents doing research for their personal lives once a week or more, (68% every day), and 39/40 people using the internet to do research at least once a week for their professional lives.

Some differences exist between the two groups for the next two questions, "**Where do you go to find detailed expert information for your professional (Q3) or personal life (Q4)?**" In the NGO/NFP group (n=39), "peer reviewed research" outranks trade or professional publications with 71% of respondents making that choice. Compared with the non-NGO/NFP sample where respondents' top three choices are "trade or professional publications" (63%) followed closely by "peer-reviewed research" (51%), and then "books" at 38%, for their professional lives. Participants were far more unlikely to turn to peer reviewed research for their personal lives, however, as only 34% of NGO/NFP respondents chose that category for question 3 with very similar results for the remainder group (33%). Books ranked as the top choice, followed by online news sites for both groups. Finally, NGO/NFP respondents added several additional options such as university libraries, librarians, professors, conversations with experts,

and publications from research institutes, indicating that many people go to a wide range of sources to find information.

Figure 6.8 Q3 NGO/NFP Respondents

Q3 (Professional Life) NGO/NFP Sample n=39

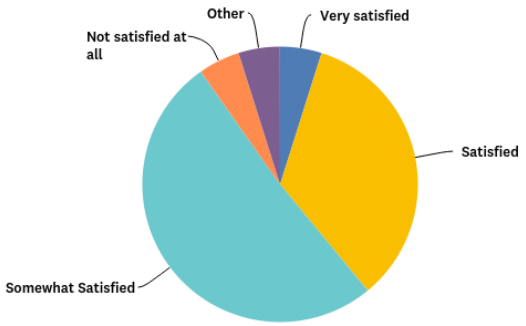


Results from **Q5, "In general, when doing research using the internet, how satisfied are you with the quality of expert information that is available to you?"** also indicate slight differences between the NGO/NFP group and the rest of the respondents. In the non-NGO/NFP group, a greater percentage of respondents were "very satisfied or completely satisfied" with the

quality of information, whereas only a slim percentage of respondents felt that way in the NGO/NFP group. Perhaps owing to the greater use or demand for research among the NGO/NFP group, these respondents were not as satisfied with the expert knowledge available to them. Far fewer respondents were "very satisfied" in the NGO/NFP group (2) and no one was completely satisfied by comparison.

Figure 6.9 Q5 NGO/NFP Respondents

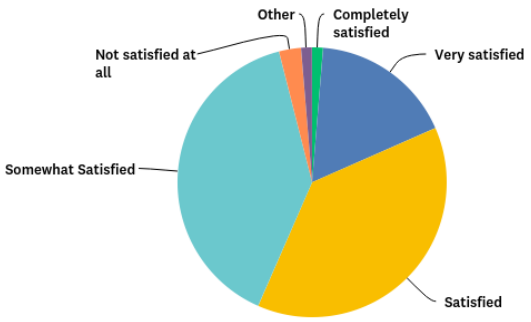
Q5 In general, when doing research using random internet searches, how satisfied are you with the quality of expert information that is available to you?



NGO/NFP (n=41)

Figure 6.10 Q5 Non-NGO/NFP Respondents

Q5 In general, when doing research using random internet searches, how satisfied are you with the quality of expert information that is available to you?



Non-NGO/NFP (n=76)

Q6 asks **"Do you need or would you like access to the latest research in any of the topics below, for either your professional or personal life?"** For the NGO/NFP sample (n=40), 31 respondents chose "work/profession related"; 30 respondents selected "health and medical" and 26 chose "social issues." I am not able to compare choices because I used a different list of topics in previous versions, however, that is not what I hoped to learn from this question. The important outcome is that only 4 respondents in the NGO/NFP group skipped this question, and the rest of the respondents checked off categories, indicating they *would like access to the latest research*.

Table 6.2 Q6 NGO/NFP Respondents

Do you need or would you like access to the latest research in any of the topics below, for either your professional or personal life?

ANSWER CHOICES		RESPONSES	
Work/profession-related		77.50%	31
Health and medical		75.00%	30
Social issues		65.00%	26
Current events		57.50%	23
Local/Prov/Fed Politics		57.50%	23
Environment & Climate change		57.50%	23
Financial		55.00%	22
International News		55.00%	22
Aboriginal Issues		45.00%	18
Law and Justice		40.00%	16
Parenting		37.50%	15
Internet/Digital Culture		37.50%	15
Education		30.00%	12
Entertainment		17.50%	7
Other (please specify)	Responses	5.00%	2
Total Respondents: 40			

Q7 asked respondents **"are you aware that research on the above topics is conducted by social sciences and humanities researchers at universities across Canada?"** 78% (32/41) of respondents chose "yes." 3 people admitted "no" and 4 chose "don't know/not sure." Two comments to this question said, "not always clear how to reach authors or papers" and "I've found the quality varies considerably in the rigour of the research." This is in contrast to the rest of the group where 52% (40/76) were aware, 28% (21/76) were not aware, and 20% (15/76) chose "don't know/not sure." The awareness of NGO/NFP group is 26% higher than the rest of the respondents, who are already 38% more aware than the general Canadian population (based on the SSHRC 2006/2008 survey).

Q8 changes the focus asking **"What do you consider important when looking for information to support your personal or professional research needs?"** NGO/NFP respondents were most likely to select "The research/information is produced by an 'expert' in that field" with 85% (34/40) making that choice, followed by "the research is peer reviewed", and "the research is published as a book or journal article" or "the research has been produced in the last 5 years." Far fewer were concerned that "the research results are very new" (7/40), or "the research is reported on by the mainstream media" (10/40). The top selection is the same for the rest of the respondents, with 78% (62/67) choosing the research is produced by an "expert" in that field."

Table 6.3 Q8 NGO/NFP Respondents

"What do you consider important when looking for information to support your personal or professional research needs?"

ANSWER CHOICES	RESPONSES	
The research/information is produced by an "expert" in that field	85.00%	34
The research is peer reviewed	65.00%	26
The research is published as a book or journal article	55.00%	22
The research is reported on by the mainstream media	25.00%	10
The research results are very new	17.50%	7
The research has been produced in the last 5 years	55.00%	22
Total Respondents: 40		

NGO/NFP responses to **Q9, "would you read a full-length journal article"** are also noteworthy as 63 % responded yes (26/41) with almost half of these people leaving comments to the question as well (10), such as "depending on the relevance" and "only if it was very well-written and delivered practical insights." Five of these comments pertained to relevance, and three referred to the need for clear, accessible language. In the remainder of the research sample, 57% (42/74) would read a journal article, and an equal number said "no" or "not sure" (16/74).

While respondents indicated that they have often needed to consult scholarly research in the past, not all of them know how to do this. **Q10** asked "**Aside from post-secondary education you may have completed, since that time, have you ever needed to consult social sciences and humanities research publications for your personal or professional life?"**[182] 75.6% of NGO/NFP respondents answered yes, with only 14.6 % (6 people) responding "no." Removing the responses from this group, the results were still high, with 62.3% of respondents indicating "yes" (43/60). As a "trap" question, **Q11** asked **"Do you know how to find**

[182] Explanatory text for this question: "Note that academic publications might include journal articles, chapters in books, or monographs (full-length books written by a single author)."

academic, peer-reviewed research?" Interestingly, of the people who said "yes" to Q10 (43), 10 people answered "no", "not sure" or "need more information to answer the question" to question 11 in the general group (excluding NGO/NFP respondents). In the NGO/NFP group, 4 of 30 people who answered "yes" to question 10 answered "no" to knowing how to find academic, peer reviewed research.

Consistent with the rest of the survey, the next few questions that pertain to issues of access had a higher positive score in the NGO/NFP group. **Q12 asked "Have you ever encountered an access fee when trying to access information on the internet?"** to which 35/40 people (88%) said "yes", with only 5 saying "no" or "not sure/can't remember". **Q13** asks if respondents have paid for access to a journal article, to which 23% (9/39) responded "yes" (28 said "no", and 2 "don't know"). This is much higher comparatively to the 11% (7/64) who chose "yes" in the other group (55/64 were overwhelmingly "no"). NGO/NFP respondents also left six comments, illuminating their personal experiences:

- I email someone who has university library access with the DOI or other info and ask them to share it with me.
- Work related a couple of times out of necessity at the time, but do not feel this is fair in order to develop information sharing and new programs based on current research to support individuals and groups of people.

Q14 then addressed open access, asking respondents "**Before completing this survey, have you ever heard about the issue of open (free) access to publicly funded research?"** Again, the majority of NGO/NFP, 54% (22/41) had heard about open access, with 19/41 admitting they were not familiar with the problem. This is twice as high as the remainder of the research sample, with 26% (20/76) indicating "yes." The follow-up question to Q14, **Q15 "Did you**

know that university researchers are NOT paid royalties by the publisher when their published journal article is downloaded or purchased?" 54% (22/41) of our NGO/NFP group indicated they were aware. People also left strong comments to this question:

- I wish that university researchers would devote more resources to plain-language summaries of their work, their publications and WHY THEIR WORK MATTERS (respondent's emphasis) to the advancement of their field or to everyday life decisions.
- It's a perverse system, since it's often publicly funded research. I'm aware of the movement to break this monopoly, and am all for it.
- I think it is extremely wrong for a publisher to charge for use of an article and not provide any of that to the researchers; if researchers aren't paid any royalties, publishers should not be allowed to charge readers for access.

Note that I cannot compare the results to the whole research sample because I asked this question only in version 3 and the final version. In version 3, 25 people responded to the question, with 40% (10/25) saying "yes" and 60% "no" (15/25). Our NGO/NFP sample still exhibited a higher awareness of the issue in comparison.

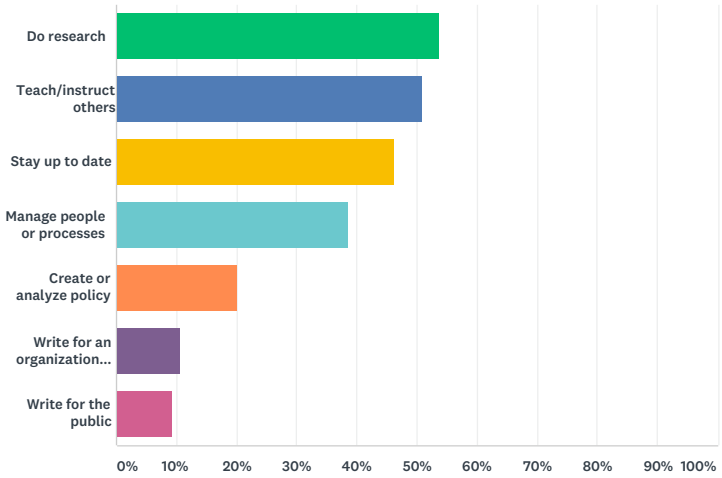
Finally, the two demographic questions show that, indeed, the NGO/NFP sample is also different from the rest of the research participants in terms of their professional duties and professions.

Figure 6.11 Q16 NGO/NFP Respondents

Q16 Non-NGO/NFP Sample

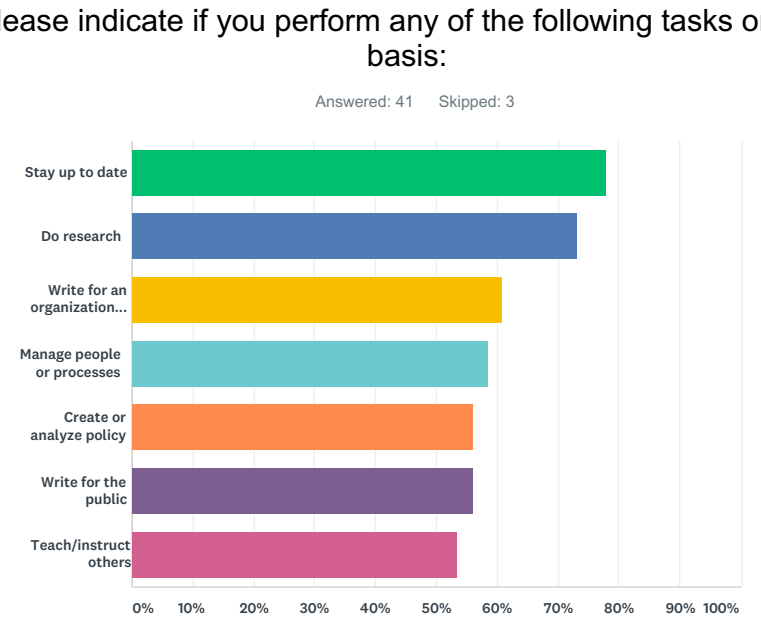
Q16 Please indicate if you perform any of the following tasks on a regular basis:

Answered: 65 Skipped: 11



ANSWER CHOICES	RESPONSES	
Do research	53.85%	35
Teach/instruct others	50.77%	33
Stay up to date	46.15%	30
Manage people or processes	38.46%	25
Create or analyze policy	20.00%	13
Write for an organization/corporate publication	10.77%	7
Write for the public	9.23%	6
Total Respondents: 65		

Figure 6.12 Q16 NGO/NFP Respondents



ANSWER CHOICES	RESPONSES	
Stay up to date	78.05%	32
Do research	73.17%	30
Write for an organization/corporate publication	60.98%	25
Manage people or processes	58.54%	24
Create or analyze policy	56.10%	23
Write for the public	56.10%	23
Teach/instruct others	53.66%	22
Total Respondents: 41		

The results from Q16 show that the NGO/NFP participants ranked “stay up to date” at the top of the list, considering they are engaging in tasks requiring advanced or up-to-date knowledge, such as doing research and instructing others. They also ranked higher in every task than the non-NGO/NFP sample, demonstrating that they are more often involved in “knowledge translation” activities such as teaching, writing for the public or their organization, and creating policy.

Q17 asked respondents **"what is your profession?",** listed in the chart below. Many involve research directly, and the majority clearly require knowledge translation skills.

Table 6.4 Q17 NGO/NFP Respondent Professions

Environ. Conservation Professional Non-profit management Human resources Communications Director Communications, program based Communications manager for a health charity HR Consultant VP Marketing Senior Policy Analyst Marketing and HR Coordinator HR for a non-profit org Arts manager Government relations consultant and ED of a non-profit organization Project coordinator at a non-profit	Marketing & Communications, NFP sector Biologist in NFP sector Social work Multicultural association of Wood Buffalo – manager Analyst for non-profit that aims to eliminate poverty Exec Director of Non-profit that serves children, youth and parents Provincial, non-profit manager Policy advisor Research analyst of Canadian charity Research with a non-profit (quasi-academic) Executive director, national non-profit association Physical fitness	President, registered charity undertaking wildlife research, public education Health care consultant Health economist Executive director Manager of support programs Researcher Manage a non-profit (German-Canadian centre for Innovation and Research) Research associate in a non-profit organization Research associate Researcher and writer Economist Group facilitator – mental health/nutrition consultant

From the list of professions above, the NGO/NFP sample seems representative of knowledge-translators, and many are directly involved in research. I wanted to distill my respondents further, however, to see if I could arrive at an even more engaged and aware sample. In the chart below, I recorded responses from the NGO/NFP group, from respondents that indicated that they "do research" on a regular basis (Q16), and from those whose professions seemed to fit or require knowledge translation.

To compare various samples based on their professions, or research and knowledge translation activities, the following chart cross-tabulates some of the key questions in the survey.

Table 6.5 Comparison of Results Between Respondent Categories

	NGO/NFP Sample n=44	**"Do Research" Sample n=65**	**KT or HSS professions sample n=75**	**Not KT/HSS profession (all other respondents)[183] n=36**
Q3 Where do you go to find expert information for your professional life	72% peer reviewed articles 69 % Trade/prof associations pubs	70% Trade/prof pubs 67% Peer reviewed articles	68% peer reviewed articles 66% trade/professional association pubs.	67% Trade/prof pubs 47% Books 40% peer reviewed articles
Q7 Are you aware that research on the above topics is conducted by HSS researchers?	78% Yes 7% Not 10% Not sure	64% Yes 22% No 11% Not sure	71% Yes 12% No 10% Not sure	47% Yes 28% No 25% Not sure
Q8 What do you consider important for research	85% produced by expert 65% peer reviewed	81% Produced by expert 63% Peer reviewed	86% Produced by expert 63% Peer reviewed	71% Produced by expert[184] 48% Peer reviewed
Q9 Would you read a full-length journal article	63% Yes 20% No 17% Not sure	63% Yes 22% No 16% Not sure	65% Yes 19% No 16% Not sure	43% Yes 29% No 29% Not sure
Q10 Have you ever needed to consult HSS publications	76% Yes 15% No 10% Don't know	75% Yes 22% No 3% Don't know	77% Yes 19% No 4% Don't know	44% Yes 53% No 3% Don't know
Q11 Do you know how to find academic, peer-reviewed research	75% Yes 15% No 10% Not sure	73% Yes 11% No 13% Not sure	73% Yes 14% No 14% Not sure	56% Yes 17% No 22% Not sure
Q12 Have you ever encountered an access fee	88% Yes 8% No 5% Not sure	92% Yes 5% No 3% Not sure	77% Yes 16% No 7% Not sure	70% Yes 28% No 3% Not sure
Q13 Have you ever paid for access to journal article	23% Yes 72% No 5% Don't know	21% Yes 78% No 2% Don't know	17% Yes 78% No 4% Don't know	7% Yes 93% No
Q14 Have you heard about the OA movement	54% Yes 29% No 9% Not sure	45% Yes 35% No 11% Not sure	41% Yes 43% No 11% Not sure	25% Yes 47% No 19% No sure
Q15 Did you know university researchers are not paid royalties	54% Yes 46% No	60% Yes 40% No	49% Yes 51% No	50% Yes 50% No

Comparing the three samples to the left is an attempt to parse out the best sample that might correspond to my KT/HSS professions target population. Note that there is overlap between the

[183] Note that this group includes 'students' – which arguably could be part of the KT/HSS sample, but there is no way of knowing what the students are studying. This group also does not include any NGO/NFP respondents.
[184] The most popular choice among this group is "The research has been conducted using reliable methods and techniques" (81%). I am not comparing this choice because it is from a previous version of the survey. This is interesting, however, possibly indicating that respondents in this group have faith in the scientific method.

groups, as some respondents fit into more than one category. Responses from all three groups are quite close, as there is not a significant difference in answers between the three samples, therefore it is difficult to say conclusively that one sample shows more awareness or demands more access than the other. Based on comparisons between these samples, the NGO/NFP group scores highest on turning to peer reviewed articles for their research needs (65%), awareness of HSS research (78%), ability to find peer-reviewed research (75%), awareness about the OA movement (54%), and propensity to pay for a journal article (23%).

Cross-tabulating the results from the group who indicated that they "do research" on a regular basis (from Q16), results are not significantly different than from our NGO/NFP group, that is they show only slightly higher awareness of HSS research than the total group. This sample also ranks highest for a couple of questions as 92 % have encountered an access fee; and 60% were aware that academics are not paid for journal articles. Looking at the professions of this group, several are students (8), 27 are from the NGO/NFP group, with 23 indicating they are researchers, analysts, scientists or professors.

The KT or HSS Professionals column (from Q17), second from the right, scores highest on three other questions: 86% consider research produced by experts to be important; 65% would read a journal article; and 77% have consulted HSS research.

There is a more pronounced difference between the three to the left, and the far-right sample, which might be thought of as a 'control' group comprised of non-knowledge translators. This group is more likely to turn to books rather than peer reviewed articles for professional research needs; less than half have an awareness of HSS research topics; have only a 43% positive response to reading a journal article; and only 44% have consulted HSS scholarly research (even though this sample contains our 'students'). Just over half know how to find

scholarly research, and while many have encountered a paywall, almost none will pay for it (2 respondents). Finally, very few have heard about the OA movement and they are split in knowing whether researchers are paid royalties.

Analysis of Research Results

While the main purpose of this survey was to understand knowledge translators, how they do research, and whether they have access to or awareness of HSS research, the survey also provides insight into how to improve this awareness and access. First, knowing there is an engaged, aware, general audience for HSS research is important. This potential audience uses innovative ways to get access to research, such as personal contacts, contacting experts, and will go so far as to pay single article access charges. My research participants turn to a range of different sources for their research needs, and many of them will read full-length journal articles. This perhaps surprising result, is joined by another one: (almost) everyone (knowledge translators or not) does research. Finally, the question of trust of experts (or lack of) is addressed often by respondents' comments. Taken together, these conclusions have helped shape my knowledge flow theory, provide important and positive feedback for academic researchers in the HSS, and could help promote the open access cause more widely to both HSS research producers and users.

1. **The knowledge translator audience**

Knowledge translators are involved with research, have management duties, communications, or HR positions, are creating policy, teaching, and writing in their professional lives. Interestingly, the NGO/NFP group were most prolific in leaving open-ended comments to the survey. They are willing to invest more time to answer the survey, possibly indicating they are interested in the questions around scholarly research and how it affects them. They also possess much higher

levels of awareness about research and access to research issues from personal experience than a more general population. They are far more likely to read a journal article (NGO/NFP group - 63%), but also astute enough to know they can skim it, read the abstract, or look at the bibliography for further information. Lacking the demographic information, however, it's not clear whether these survey participants are from an older demographic, as the results on Q9 "Would you read a full-length journal article" among students, indicate less willingness (50%). I regret not asking more demographic questions to get to know this sample, as knowing respondents education level, income, age or gender may have proven important.[185] What is important is that a group exists that can be differentiated according to profession, that is interested in HSS research.

After completing the analysis of both my survey and interviews, I realize, however, that "audience" is the wrong word. An audience is a passive group. Knowledge flow thrives better in a reciprocal relationship (Phipps et al., 2016). I missed the opportunity to ask survey respondents about whether they produce research, or have tacit knowledge that should be shared with the academic community; or whether they would like better relationships with this research community.

2. Is there a correlation between awareness and demand?

In Q6, in the NGO/NFP group, 40/42 respondents indicated they wanted access to the latest research first for their profession (78%), second in the health and medical category (75%), and third for social issues (65%). 78% of those respondents are also aware that "research on the above topics is conducted by social sciences and humanities researchers at universities across Canada" (Q7). Q10 asked whether respondents have ever needed to consult HSS research, and

[185] It also may have been helpful to know if they had completed degrees from HSS disciplines. In my conclusions chapter I recommend revisiting whether demographics are significant factor for exclusion from research.

76% indicated they had. Q11 tells us that 75% of these respondents know how to find academic, peer reviewed research. Finally, 72% of this group looks to peer reviewed research for their professional knowledge needs.

Research results do indicate that my knowledge translator sample is very knowledgeable about HSS research and interested in or willing to use it. Comparing the results with the SSHRC (2008) survey, where "six in ten Canadians (62 per cent) say they are unfamiliar with research done in the social sciences and humanities", our survey respondents show much higher levels of awareness. While it is very difficult to establish whether better access to research leads to an increase in demand[186], certainly it is true that no access results in no awareness, and no demand will follow.

3. Innovative ways of getting access to research

In Q3 and Q4, respondents were asked "where do you go to find detailed expert information for your professional or personal life?" The comments sections to these questions revealed that many people turn to personal connections or knowledgeable humans for "expert information" (11/21 comments). People also consult with many different kinds of sources when searching for knowledge. In Q11, "do you know how to find academic, peer reviewed research", all six comments to this question revealed frustrations that respondents had with accessing research due to costs, validity of research results, or time. One person wrote, "I'm not sure what the most practical, time-efficient way is for me to access that kind of research currently," and another said, "In a professional capacity I will look to contact the author directly if I require a paper I can't get access to." Q13 asked respondents if they would pay for access, and while 81% said no, 16% were willing to do this, "when the price is low", or "work related a couple of times out of

[186] Unfortunately, this question is impossible to answer with this survey given the lack of statistical significance.

necessity." Their comments also revealed that personal connections were also important in avoiding fees and getting access, where one person admitted wittily that they had access because they used a relative's password, "but don't tell anyone."

4. Many different sources for finding "expert information" and knowledge

Results from several questions confirmed that journal articles are not the only source for expert information. Although it was not my intention to demonstrate this with Q3 and Q4, the colorful charts (page 153, 154) demonstrate graphically that there are so many options for people searching for "detailed expert information." In the debate over access to journal articles, this is something important to remember: not only are there many other sources of knowledge, there are sources that compete for people's trust, attention, investment and understanding.

5. Non-scholars might read journal articles … if there is a benefit

Although Q9 – "if the topic interested you, or was of concern to you, would you read a full-length journal article" – might be subject to a confirmation bias response, where subjects might want to appear educated and informed about research, the results are still quite positive, especially in the NGO/NFP sample. 63% in the NGO/NFP group said yes, compared to 43% for the remainder of subjects. What is also noteworthy is that 20% of respondents said, "not sure/don't know", the highest rate of uncertainty in the survey. Respondents were also prolific with their comments with 15% leaving a comment. Many people pointed out they would read an article, with several caveats: if it was relevant (2), well-written (4), credible, practical, time-permitting, for their profession, but not for their personal life. Comments also revealed that many respondents know *how* to read journal articles, preferring to skim, read the abstract and conclusions, or "may skip over the intricacies of data analysis in the results section." Despite this willingness, many respondents commented about the "form" of the journal article and

academic writing, in different places in the survey, referring to a wish for "lay-person friendly language", "plain-language summaries," and "clear written communication", and that "technical jargon can be too much for a person not in the field."

6. Everyone does "research"

In my research sample, and given the way I described "research", almost everyone indicated that they do research using the internet. Q2 asked "how often do you use the Internet to do research on topics that are of interest or importance to you?" No respondents said they "don't use the internet to do research" for their personal life, and only 3 responded that they "don't use the internet to do research" for their professional life. 70 respondents use the Internet every day to do research for either their personal and/or professional life. This high level of use is perhaps not surprising, considering that everyone answering the survey has internet access (except my 30 participants from Edmonton's Expo who answered on paper copies). In the context of open access, members of the public, in general, use the internet very frequently to do research. During the course of my research, some colleagues have commented that open access is a non-issue because members of the public can easily go to the university to access the material there. The problem with this assumption is that it does not take into account people's practices. Although I did not ask this question, this would be an excellent one to consider for future research: would you go to a university library to find the latest research articles or books? I did ask this question of several of my interview participants. My sense is that people use the Internet and expect to find their answers there.

Finally, the important realization here is that if "everyone does research", has a basic understanding of what good research is, and demands or prefers expert and cutting edge research, then scholars are uniquely positioned to answer this demand. The only barriers to creating a

better knowledge flow environment being a problem of form (numerous complaints of "academic-ese"), and improving research dissemination.

7. Trust and lack of trust in experts

The survey analysis also raises questions regarding respondents' attitudes towards "experts." While the survey uses the term "expert" or "expertise" several times throughout the survey (8), no respondents questioned this term (in the comments sections), and there was also surprisingly little 'critical' commentary towards the academy or university-produced research in general.[187] In total, only 9 what could be considered "critical" comments were mentioned, and 4 of these pertain to academic language or jargon:

- Generally, research done by experts is dense and very hard to read, so I just avoid it, skim it or search through the document (Q5)
- I've found the quality varies considerably in the rigour of the research (Q7)
- Who funds the research and the publications is important because some scientific work and publications are seriously compromised (Q8)
- I wish that university researchers would devote more resources to plain-language summaries of their work, their publications and WHY THEIR WORK MATTERS [respondent's emphasis] to the advancement of their field or to everyday life decisions (Q15)

Survey responses indicate that expert knowledge is highly valued as evidenced by Q8 "what do you consider important when looking for information for your personal or professional research needs?", where 80% of respondents chose "the research is produced by an 'expert' in that field."

[187] Note also that the survey contains 30 mentions of the word "research" or "researchers."

Yet, knowledge translators are generally themselves part of an expert, or educated, segment of society that depends on the expertise of researchers to disseminate further or apply to their context. Indeed, some comments reveal that a few respondents themselves are research experts. For example, one person responded to Q2 "How often do you use the Internet to do RESEARCH* on topics that are of interest or importance to you?", with the comment that:

> It depends upon the project researched. If it involves government then the internet is more heavily used. If it involves wildlife then (physical) books and libraries are used. The internet is also used to look up peer reviewed and published papers.

A comment to Q8, "What do you consider important when looking for information to support your personal or professional research needs?", elaborated that, "for personal searches, I have a lower standard ... for professional work, I look for peer reviewed information." Another person pointed out that, "Time frame depends on the type of information. Fields that are constantly evolving and changing should require more recent information, other fields may have data from 50 years ago that are still relevant today." The topic of expertise and trust is addressed again in the analysis of my interviews with knowledge translators.

Conclusion

This survey was an attempt to further contextualize public awareness and attitudes, motivated by, and following up on the results from the SSHRC 2008 study. The analysis of the survey accomplished several of my aims, including providing a baseline understanding of what non-scholars know about HSS research, how they carry out research in their daily lives, and whether there is a demand for HSS research among a more HSS research-aware population. Despite the low response rate, the results are important in showing that there seems to be a much higher awareness and demand for access to HSS knowledge among this group, especially among those

working in NGOs, not-for-profits and community organizations. Some surprising outcomes also bode well for HSS knowledge mobilization and transfer, considering that many respondents would be willing to read a journal article, have consulted HSS research in the past, and know how to find peer reviewed research. Awareness of the open access movement was also higher than I anticipated, though still quite low for a research-aware sample. This is perhaps an indication that the open access movement has still far to go in promoting its aims among a wider research community. In addition, the survey results presented several opportunities for triangulation of data with my interviews.

Although I overlooked some things in the survey, such as forgetting that "expert" people should have been included as response options in Q3 and Q4, this omission proved serendipitous as it helped formulate my theory around knowledge flow. Survey respondents pointed out in the comments sections of several questions that colleagues, trusted experts and opinion leaders were important sources of knowledge, not just technologically mediated forms of knowledge. This was something clearly emphasized by my interview participants as well, discussed in the next chapter.

Chapter Seven: Interview Research Analysis

> *So [there is] this new philosophy called 'outcome-based social delivery', and I end up throwing it back in their face how dysfunctional it is, and how it's really destroying kids' lives, because it's stripping money from core services. So, you critique it, but I don't critique it in the normal way. I don't write a paper on it. I fight them. Like, when they have this new theory, this new practice, I take the theory and I take the practice and I take the kid, and show how that model is affecting your life, to access the basic needs, social justice, you know, your risk factors and protective factors, and I throw it back in their face.*
>
> --Interview with MPS who works with vulnerable youth

My research interviews had a similar effect on my hypothesis as the above quote: my understanding of open access and the public good was not critiqued in "the normal way", but in the numerous real-life examples of how people working directly or indirectly with HSS research manage to find and use the knowledge they need to fulfill their responsibilities and goals. My initial understanding of the open access problem could not possibly have accounted for the diverse experiences of people that translate or communicate knowledge, create research, and put research into practice. The above visceral reaction to theory communicated very clearly the importance of reflexive communication between academic disciplines and their professional counterparts, without which problems cannot hope to be solved.

In this chapter, I will present the findings from my interview process in two different ways. First, I will present narrative summaries of what I heard, organized according to six broad occupational categories. Opening with my baseline results from my three focus groups involving members of the general public, the rest of the group and individual interviews will be from educators; social workers/psychologists/mental health professionals; legal professionals; journalists/freelance writers/researchers; business/management/research consultants; and theatre/drama professionals. This broad occupational approach is also worthy of analysis because it allows me to make meta-level observations rather than specific conclusions about any

one group. This approach also enables me to showcase the excellence and diversity of my research participants, further contributing to the reliability and quality of the interview data.

In the second part of the chapter, the analysis of the findings resulted in ten key themes around knowledge access and flow between the scholarly community and my selected publics. Also in 7.2, I revisit the survey data, and any connections between the survey results and interview themes.

Finally, the themes are further synthesized into two significant categories of barriers to knowledge flow and improving knowledge flow that serve to summarize my research findings, and reconnect the data with the theoretical framework.

Individual and Group Interview Results

In total, this research phase summarizes 27 individual or group interviews involving 51 participants and the analysis of roughly 230 280 words. The interviews were semi-structured conversations about participants' experiences with research. Sometimes, I began my interviews or encouraged discussion by asking structured questions like "how do you do research?"; "where do you get your knowledge?"; and "do you use research in your practice?" Mostly however, I allowed participants to talk about their roles, responsibilities, attitudes and ideas for improvements for how research should flow to and from their organizations. I sometimes defined open access as a concept, and talked about how I saw them as "knowledge translators." I recruited participants from the Calgary Expo, the Calgary Catholic School District, cold calls, personal contacts, snowball sampling, and targeted groups. These one-hour interviews were transcribed, summarized in research memos,[188] coded manually initially, and then analyzed again

[188] For a richer description of each individual or group conversation, research memos or transcripts are available upon request.

using NVivo and keywords from the manual coding process. Although my sample size in each category is small, I learned a vast amount from each interview about how my participants connect with academic research, what sort of issues exist for them regarding their roles as knowledge translators, and how knowledge flow might be improved. The summaries below contain snapshots of the discussions, and highlight important features gleaned from each category of participants.

Expo focus groups summary

I conducted three focus groups with participants drawn from a general population, recruited during the Calgary Comic and Entertainment Expo April 29 – 30, 2017, involving a total of 16 people. The purpose of these initial focus groups was to give me a baseline understanding of what people know about access to research, whether they want access, and their views on scholarly research in the HSS in general. I also wanted to have some practice interviewing people on my topic. Overall, these discussions were extremely useful for the formation of my thoughts and subsequent interviews. Participants came with varied backgrounds, so I asked more general questions to appeal to the diversity of participants, although the themes that came up here were often echoed in other interviews. I realize my sample was not necessarily representative of Canadian society: when I asked participants if they would read or have read scholarly journal articles, there was almost complete consensus among participants that they would (or have). This is possibly a result of response bias, but also a reflection of a more research-aware sample.

I opened the focus groups with asking people "what is research?" There was usually an uncomfortable pause when I asked this "academic" question. People had many responses ranging from "anytime you're looking for information you don't have," to "background

information", to "THIS is research," to "field research." Someone provided an almost textbook definition, "research is the process to accumulate facts and data of a particular subject from multiple sources." In general, participants were very thoughtful about their answers. They emphasized the "active" searching quality of research, the sources where you might find your answers, and the range of answers you might find. They talked about Wikipedia, and how it enables you to research something more deeply, and how sometimes "you have to take it with a grain of salt."

In all the focus groups, the topic of the trustworthiness of information on the internet, and the need for fact-checking came up. There was general agreement and anxiety about this lack of trust, concerns about fake news, Google analytics biasing your searches, and how we "seek out sources that confirm our perspectives." People spoke about their experiences as students, one graduate student sharing how easy it is to skew scientific studies, and another admitting that he plagiarized intentionally, as a sort of challenge, because teachers said not to do it. One person felt that for pop culture news items, "I'm comfortable with Wikipedia," but for more important topics, such as climate science, "You've got to go deeper. You got to get into the journals, got to get, you know, .edu sources at least." Another person subscribes to news from at least seven different news sources and then, "Compares and contrasts all of those." He trusts podcasts more than websites. He added, "They're cheaper than the paywalls for journals. Sorry to keep drumming that one out."

I also asked about the barriers to research that participants encountered. People agreed that time was a huge factor. One of the teachers mentioned that she has been doing research on how best to teach reading, and finds there is no consensus on the best method. She was interested in some of the newer neurological research, and the "science of education", but that it

is very new. She said, “Learning is still a little bit of a black box. A little bit of information goes in, information comes out. What’s happening in the middle, who knows?” She also admitted that she hasn’t gone to the university to search journal articles because “I’m a bit lazy now with the internet.”

I asked participants if there was something they thought could improve their understanding or access to scholarly research. The common themes of the credibility/truthfulness of research and information on the internet, the difficulty of conducting research, and the lack of trust in experts were countered with suggestions for better access to experts and better search engines or search skills. In all the groups, participants said they would like “access to a person”, or group of people, or reporters with first-hand knowledge, or a list of top researchers that they could consult with. One participant suggested that it would be helpful to have a list of experts in Canada, “That work at universities and stuff that actually specialize in that stuff,” like “the Kayak of research”, and there was general agreement for that idea. They talked about support groups online for different illnesses, and one person described how a friend had success on Facebook, finding people who were suffering from the same rare disease as she was, and how they have been a wealth of information and support for her. One participant talked about how he approached computer scientists at the University of Calgary, where he learned about the concept of “stack overflow” much better than if he had tried to teach himself using resources from the internet. Participants also wanted more research skills so that they could do research more effectively. A few commented that more accessible language from scholars would be helpful. Another common experience was the feeling of information overload, “I also find when I go looking for something […] I'm just overwhelmed that like, wow, I don't know where

to start. You thought you had an answer to something, and then you realize, oh no, you have 50 different answers to it."

Educators summary

12 educators participated in my research interviews. Two group interviews, one involving 6 high school teachers that teach in HSS subject areas[189], and the other 4 "curriculum consultants" (CC Group) from the Calgary Catholic School District, rounded out my research sample. I also conducted two individual interviews, one with a K-6 Montessori teacher who had just completed her Masters (Heather), and one with a recently retired high-school teacher and librarian who taught in British Columbia (Lance). Initially, my intention was to understand whether teachers felt they needed access to HSS research, how they obtained access, and how they acted as research translators for their students. Note also that there were two teachers in my Expo group interviews, but I do not include them in this group. Their initial input helped me understand some of the issues facing educators.

In general, the **high school teachers** might be knowledge translators for the curriculum, but they are not necessarily knowledge translators for scholarly work in the fields that they teach. The teachers indicated that a reading from an academic journal for students might be one resource among many, and a couple of teachers indicated they had more success with experiential learning projects, rather than readings. When it comes to their own practice, however, they are regularly exposed to pedagogical research and knowledge that they encounter through graduate education, the school district, or other teachers. They might receive a journal article from the school district, or be introduced to some pedagogical research during a

[189] HSS subject areas: social studies, religion, English language arts, French (or other) language arts, fine arts subjects such as drama, art or music. However, I also had a curriculum consultant who advised science teachers, and some of the teachers at the table taught other subjects such as math or physical education.

professional development day. As the participants came from different disciplines, they also had different concepts of what research entails or supports. One religious studies teacher felt research helped to understand the various perspectives on controversial moral/ethical topics. An English teacher defined research as critical discourse; whereas, the social studies teacher talked about data from a survey, media responses, or historical analysis as research that supports their subject.

The curriculum consultants (CC group) agreed with my labelling them as "knowledge translators" for teachers. One consultant responded that, "that's one of the more common ones [roles] that teachers see," and that teachers don't necessarily know about all the curriculum consultants' responsibilities. While they support teachers that might have individual questions, they also advise principals with programming requirements for a school, and roll-out district-wide initiatives that might be new and require broad-based training of teachers. I heard how knowledge is shared in an hierarchical way, passed down from the superintendent or trustees, to the consultants, to the principals and teachers. I explained that I am interested in tacit and explicit knowledge and how knowledge is transferred from expert to apprentice. I asked them whether there was some resource that would help them, as experts, transfer knowledge better within their communities. One of the consultants responded that they need to "break down barriers" with some of the schools that might be resistant to sharing knowledge or admitting weakness, and that "that's a difficult process because it's all relational […] but it's one of the most valuable."

Heather is one of the teachers I interviewed individually, and she had recently completed her Master of Education degree. I was interested in her project that looked at the concept of mentorship as a way of sharing experiential pedagogical knowledge between teachers. I also wanted to know how she felt about losing library database access once she graduated. She responded that she did initially miss that access because she had come to rely on or expect it, but

as her funding for her degree was over, there was no way she could afford to subscribe to journals subsequently. Her school board sometimes provides a "CBE [Calgary Board of Education] endorsed article," for teachers to read, and she has access to curriculum experts that will provide resources or support if she has a pedagogical need. But she no longer has the option of being self-directed in her research in the same way as when she was a student. She also said that when she was in school, she needed to learn how to navigate the library database, and had to be efficient in what she read because of time constraints. Unfortunately, she did not really have the chance to search for topics of personal interest when she was doing her degree. Heather felt that with the pace of life, "if we had more time to kind of enjoy that research I think that, you know, we would maybe delve into it more."

Lance has 36 years of experience teaching in British Columbia. He taught French, was a school librarian, and has his Master of Education degree. Lance was open about his scepticism and distrust of academic research because of the individual bias of researchers. Part of his opinion is based on his experience doing his Masters on what teaching method is best for teaching languages. He found that there were "so many interpretations of exactly the same thing," and that he saw this as a "weakness" in the social sciences. He was interested in the politics and history of Poland, so we did a library database search and came up with some abstracts he admitted he would like to read. I showed him that some of the articles were open access, and some of them cost money. He was not aware of the open access problem, and responded that he would not pay $40 for a journal article, but that he had read journal articles in the past. When I asked him where he finds knowledge/information that he needs, he replied that he talks to people first. But he also reads books and lamented the loss of classical education and canon. Returning to the attitude towards expert knowledge, Lance acknowledged that university

scholars have expertise, but they also have "agendas." He said, "I think professors are just people with opinions. You know they write their own narratives, I write my own narratives, the next-door neighbour writes his own narratives." Our discussion also touched on bias in the media, and the difficulty of being open to the diversity of opinions in our culture.

These interviews, coming from a diversity of perspectives, illuminated some of the larger shared issues among educators regarding access to HSS research. All the participants experienced difficulty in finding, paying for, or trusting the content of academic research. Many of them, unless they were enrolled in graduate school, did not regularly look for research to support either their subject-area knowledge or professional practice, but relied on the knowledge-delivery system put in place at the school board level to supply that knowledge. Some of the reasons for a lack of connection to HSS research was lack of time, lack of perceived need, and the absence of this requirement in teaching the curriculum. On the other hand, all the educators stayed tuned into their profession through conferences, professional development, pursuit of graduate degrees or personal interest. Teachers wanted to know how best to engage and motivate students, the best way to assess performance and provide feedback, and enable critical thinking. Interestingly, many of the educators were critical of "experts", and did not claim to be experts. Yet, the culture within the educational community is very oriented towards the sharing of knowledge and expertise, most obviously with students, but also with peers. Much of the research that is shared is oriented towards best practices. In fact, two of my participants (Lance and Heather) and all the curriculum consultant group happened to have done research about improving practice or were working specifically to teach and promote it. I was struck by the theoretical understanding that the educators shared regarding pedagogical theory: we discussed growth mindset, learning styles, outdoor education theories, resilience theory, critical thinking,

media literacy, experiential learning. One teacher summed up this orientation between, teaching and research, where "it's a lifelong learning event, and research is part of that."

Legal professionals summary[190]

I included lawyers in my list of knowledge translators because they are experts that mediate legal knowledge for laypeople. I presumed that lawyers would be interested in legal journals; and, also interested in research about their area of practice, such as social perspectives on immigration or youth crime. In this category, I interviewed six lawyers and two law librarians. I learned that research in a legal practice is usually based on understanding precedent and case law, and sometimes appeals to outside sources of knowledge such as a psychological or sociological analysis of a problem. These lawyers had a wide range of attitudes and responses to whether HSS research factored into their professional or personal lives. My participants included an immigration lawyer (VL), two research lawyers (NL and SL), an occupational health and safety lawyer (SHL), a lawyer that heads a legal aid organization (JL), and a lawyer who works for the crown defending young offenders (IL). These interviews revealed that while lawyer training is very much an academic activity, once in practice, the ties to what might be considered HSS research become very loose, if not severed completely by the realities of day-to-day legal practice.

VL is an immigration lawyer that I know personally. She provided some background understanding and acted as a knowledge translator for me. I opened our discussion by showing her some journal articles about immigration policy, refugee issues and migrant workers. She responded very strongly that she would not bother looking at academic reflections on these

[190] I abbreviated references to my participants using their first initial of their first name, and "L", to represent "legal professional."

topics as she deals every day with them, and is not interested in "social commentary." I mentioned a colleague who is writing about the mistreatment of migrant workers in the agricultural industry in Canada, and VL saw the issue from a very practical perspective – are employers compliant with the employment agreements with the migrant workers? I tried to press her to see if new immigration lawyers might find my selected scholarly articles useful, and she flat out said, "No. Not at all." New lawyers, as well as members of the public, would use Google, and would find answers in the CIC/IRCC website. She emphasized that working for a private law firm, she just does not have the time to "contextualize an issue", and "that's the norm." She apologized several times for being so straightforward, but thought perhaps that someone doing pro bono work, or who worked for a non-profit, might feel differently and be inspired by scholarly, historical or theoretical work. She also pointed out that social research might be useful at the Supreme Court level, because "all court decisions have to take into account social policy […] and what Canadian society has dictated to be decent and righteous."

NL is a research lawyer that has worked for legal firms and presently assists provincial judges interpret material presented to them during legal cases.[191] She explained that lawyers have always had to pay for database access to case law as these are private databases. In general, lawyers use Quicklaw or Westlaw databases to access cases, and these subscriptions include access to some legal journals. In the past, she has gone to the University of Calgary law library to get hard copies of journal articles if she could not obtain the full version through the databases. When access to databases was dial-up access and you paid by the minute, she found ways to minimize the expense, otherwise the charges would "really rack up." She used to do more background research (outside of case law), but now will only rarely go to the legal journals,

[191] Note that this interview was shared with two participants, NL and SJ, the former a research lawyer and the latter an author of historical non-fiction books.

or outside her discipline. NL raised the point that research lawyers have a lot of tacit knowledge that enables them to understand cases, and issues, attached to cases, that outsiders would not easily be able to understand, even if they had access to the databases. We talked about the problem of legal aid, and people wanting to represent themselves in court, which often happens in Family Court, which is where NL works. Also, she indicated that some lawyers do take social science literature into account if they are arguing "the bigger picture of why law needs to develop one way or the other." For example, a lawyer might appeal to psychology research about parenting, or brain development, when arguing a child custody case. She agreed that:

> [W]hen you're dealing with like fundamental rights and freedoms, when you're dealing with those sorts of bigger principles as you say, the other [social sciences] literature will come into it.

When I explained the open access issue, NL also mentioned the problem of higher costs for legal database access, that is affecting law firms. Court house libraries try to provide access to the public, and rising costs have become a problem for them as well.

SL is a research lawyer at a private law firm that trains new lawyers at her firm. During the interview, two law librarians joined us and we discussed the changing library and information science environment and how it affects the legal community. Our interview helped me to understand the connection between the academic legal perspective and the private sector practice of law. The participants said there was some exchange – through adjunct faculty members, the deans of the law schools who maintain a connection with the firms, a blog at the University of Calgary and University of Alberta that many lawyers follow or contribute to etc. – although not so much through journals. I also asked whether lawyers "leave behind" some of those theoretical debates around the law when they leave university? SL responded that:

> For the most of part, corporate lawyers, right, have left that type of discussion. I think the litigation lawyers hang onto that. I think there's definitely more theoretical debates with the type of conversations you have in law school in the litigation ruckus.

In a way, law students are a sort of bridge between those two worlds. She finds that new lawyers that she trains to use research tools, want easy answers, so she tries "to break them of their instinct" to just Google an answer, and instead encourages them to use textbooks, articles and other resources. SL explained that law journal articles are very useful in general for the practice of law, but that not every lawyer would use or request them, as some lawyers are more "academically inclined" than others. They shared the story of a lawyer requesting a piece of research that cost $5000. At the same time, she recounted that lawyers seem to prefer the "raw data" (i.e. the cases) rather than someone else's analysis of the cases (so journal articles are not as relevant for them). We talked about how lawyers might also refer to something in a book from their library, whereas students would not think to go to a book. Interestingly, the librarians' awareness of open access as a social movement seemed to be minimal, although they were aware of the problem of rising costs of materials.

SHL is an occupational health and safety (OHS) lawyer that works for an international construction firm as the executive vice president of health and safety. He describes part of his job as learning (constantly reading), and part of his job as "selling." He points out that communication is essential to what he does, because he has to convince people to do their jobs a certain way (to stay safe). He is active in the health and safety community, goes to conferences, reads case law, teaches law school seminars on H&S, and is "a monster" for information. He doesn't consult technical or scholarly journals, unless he needs historical background or to learn about a new topic, but he is on several email lists and receives

notification of new case law in his area. While he is very dedicated to understanding his area of specialization, he would not pay for a journal article (as an adjunct he has database access, but rarely uses it). He does not always trust what he reads and is skeptical of even peer reviewed work. He is confident he can find most things he needs on the internet, and he is very partial to podcasts, as they fit his lifestyle (travels a lot) and learning style. We discussed the new legislation that needs to deal with cannabis use and SHL was very excited to share that their company recently had a ruling that will help to define OHS law for cannabis use. We talked about sharing of OHS knowledge outside of his company. Even in this field, their work is proprietary and they will not share safety manuals, for example, with competitors. They do share information through the Alberta Construction and Safety Association, and Canadian Standards Association, and interview workers to determine their best practices. This interview emphasized for me that knowledge flows differently in a non-profit world than it does in the private sector. Even health and safety policy is considered "trade secrets" or as SHL put it, "it's our secret sauce." Yet, on a personal level, SHL believes OHS should be for the public good, because it prevents injury and death. I also realized, during the interview, that SHL is not a knowledge translator, he is a knowledge broker (he believes he sells, rather than teaches, translates, communicates). I told him this and he loved the description.

In contrast to the previous three interviewees who worked for private organizations, **JL is the director of a legal aid and education not-for-profit organization in Alberta**. His organization does research "to make sure we're current on the state of the law." They also do research on best practices – how to do public legal education – which isn't a well-developed sphere of knowledge. JL talked about the difficulty of evaluating the effectiveness of legal aid services, because so many factors go into educating someone to deal with legal issues, and in the

end, it is very difficult to measure success. JL pointed out that "we are open access" in the sense that the mandate of legal aid organizations is to enable access to information and to the justice system. JL was very aware of the critical arguments for and against sharing high level, complex knowledge with groups that might need that knowledge, but might not have the educational background, time, or other factors that enable them to benefit from it. JL related the difficulties of explaining the complexities of law to the "general public" which consists of a myriad of possible clients; the need to print materials for people without internet access; the need to keep things short, succinct, clear for short attention spans. As the Alberta Law Foundation financially supports legal aid out of lawyers' legal fees, the conundrum of legal aid is if they make it too easy for people to self-litigate, lawyers are replaced.

From a personal perspective, JL talked about his recent career change into legal aid, and how various kinds of social and symbolic capital that has enabled this change. He has been a practicing lawyer for twenty years, is presently a PhD student with research database access, and has two experts in his life – a brother and board member – that have helped him understand the new field of public legal education. These three factors – background expertise, access to explicit knowledge, and personal contacts – have allowed him to put his knowledge into action. JL related a story where he had been struggling with a theoretical issue, and he simply emailed the scholar who created the theory and had the answer to what had been challenging him for months, within hours. He emphasized that in the legal aid context, people need knowledge that will help them solve problems, not "to learn about the Canadian constitution":

> People want to know how to solve their problem, which is this narrow little thing […]. One of our roles is trying to raise the level of legal knowledge generally in society, so we publish...it used to be our paper magazine, but now it's just a website called 'Law Now'

> that is our relatively plain language articles about general legal topics for everybody. But what we find is it's a tough struggle to get people to actually care to increase their overall knowledge. They're mostly just interested in, 'Okay, I got a child support application next week. What do I do?'

The other disadvantage of self-representation is that lawyers work well together to simplify procedures and be efficient. Non-lawyers lack the social and symbolic capital that lawyers have – the understanding, the camaraderie, and the shared language.

IL works for the Alberta government, as a **criminal defense lawyer for young offenders**. His office takes an innovative approach to dealing with young offenders, as the lawyers work in conjunction with social workers, parents, teachers, and other experts (e.g. psychologists, law enforcement) to treat the whole child and work at rehabilitation rather than incarceration. He proudly revealed that before the program was implemented, they would have 250 youth in jail in Calgary at any one time. Now they have 50. IL described how their office, and the legal system, has benefited from research. One social worker created a program to promote "conferencing" fetal alcohol syndrome disorder (FASD) reports to find a better solution for the child. This involves doing extensive genetic and other FASD testing if it is suspected in a case, and then gathering all the relevant groups such as child welfare workers, a school board representative/teacher, parents, and counsellors to come up with a plan for this young person. I pointed out that their FASD approach resulted from being interdisciplinary, and from being in touch with FASD research from psychology and neuroscience. He responded that, "the social workers in the office bring that back to our practice. They bring that outside discipline." He mentioned another approach called Family Functional Therapy, that they are also beginning to implement. It involves bringing family together in youth-related assault disputes (assaults of

family members). This is another example of "social science and violence therapy brought into the context of youth law and to the benefit of our clients." I asked if there are other ways they might connect to academic research, and Ian responded (almost exasperated):

> I think our connections aren't really with academia as much as frontline, right? We're trench lawyers. We work in the trenches every day. We're in court every day where kids are in custody. We're coming across issues. So, we work in the trenches with other stakeholders and service providers in the community.

Their work is very practice-oriented, and needs-driven, and because of administrative decisions, they have not even had the opportunity to train young lawyers or students fresh out of university in their methods. Some of the social workers do this, especially MSP (interview summarized below) in their Edmonton office (whom I interviewed subsequently). He described many more of their knowledge translation challenges from the relationship between the social workers and lawyers who come from different philosophical cultures, working with children from immigrant families who see the law in a very different light, and dealing with parents in general. They often provide a lot of information to parents whose children are in the system, though they could do more public education. IL commented that we are turning into a "rights-based culture" where "no one want to take the responsibilities." This is not helpful, as young people do not have the understanding that when you break the law, you lose certain rights. In a bad news story, youth addiction to pornography is becoming very problematic in his field, because young offenders are "acting out on porn addictions". Not only him, but psychologists are noticing a causal connection. This is something he felt needed to be studied closer and the public made aware.

I asked if they have tried to share their unique approach to youth justice with other jurisdictions. Ian lamented that they are limited because of their lack of funding and resources.

Presenting at conferences can even be difficult because other jurisdictions, even in other provinces, might not be open to their ideas. IL has plans eventually to perhaps publish some of their cases, "whenever I get in the mood to think big thoughts", as they have been keeping an internal record of their files and how they have dealt with issues. He indicated that they "have been studied", mostly for funding purposes, and that the best way that they disseminate knowledge is through their connections. Their office is very tight knit and they help each other out with cases, and draw on their "collective wisdom."

These interviews with legal practitioners were very informative and useful in understanding knowledge flow and the potential for access to research to improve practice. In general, however, it was disappointing to learn that most of the lawyers I interviewed did not have or feel they needed a strong connection to academic HSS research, or access to law journals. Reasons for this varied, such as being too busy (IL and VL), feeling that their work was practice-oriented (IL, VL, SHL), or lacking the financial resources to enable dissemination of their own knowledge using scholarly journals (IL, JL). On the other hand, this might point to a systemic lack of connection between theoretical work and practice in the legal profession. On several occasions, the lawyers suggested that HSS research is useful at the Supreme Court level of discussion, or during criminal cases where outside evidence or expertise might be needed.

The interviews also addressed many other themes around the topic of access to knowledge. For example, participants frequently mentioned the importance of personal "connections" – whether to other lawyers, academics at the university, professionals from other disciplines, and other personal connections that helped them carry out their responsibilities or enhance their knowledge. The legal profession has a very effective knowledge delivery system that is essential for lawyers, and has evolved similarly to scholarly research. What is different is

the level of funding available to purchase the databases, at least for private practices -- versus those that are dependent on public funding. Some of the participants – IL, NL and JL – commented that access to these databases is not enough for laypeople to self-litigate and that tacit or experiential knowledge and understanding, as well as symbolic and social capital (shared 'language', personal connections) is also required. On the other hand, both JL and NL identified the increasing trend for laypeople to attempt self-representation. Participants also discussed the generational differences between their own experiences or perspectives and younger lawyers who tend to be more theoretically oriented coming out of university, rely on the Internet for their information, and need mentoring.

All of the interview participants were very open and excited about sharing their experiences and helping me understand their practice. Interestingly, almost every interviewee was conscious of the importance of sharing what they did with other lawyers, practitioners, or the public (SHL, IL, JL, NL), but pointed out the various obstacles to doing this: protecting intellectual property, lack of funding, negative reception to new ideas, lack of time, difficulty of translating knowledge to the public. I was surprised that the Legal Professionals group were all engaged in innovative, newsworthy or unique practices such as training and education (SL, JL), delivery of social programs (JL, IL), creation of new policy (SHL) and many forms of knowledge translation (NL, SL, JL, IL, VL, SHL).

Aside from their professional lives, these participants also provided insight into how they used the Internet to search for information in their personal lives. While some had hobbies or personal interests that motivated them (SHL), others used their search skills to understand health issues (SL librarian), or further their own education (JL). In all the interviews, participants expressed concern that the internet is causing sweeping changes socially, particularly for

younger generations (VL, JL, IL, SL, NL). Only SHL seemed hopeful about his ability to help his baby daughter navigate growing up in a digital world.

Social work/psychology/human rights summary[192]

I conducted five interviews in this category including one social worker who supports youth in crisis (MSP), one program director that works for an organization that works to improve poverty and homelessness (Robert Perry), one person involved in human rights claims, education and advocacy (CSP), the provincial director of the Canadian Mental Health Association (David Grauwiler), and a psychologist that works with people with anxiety and obsessive compulsive disorder (FSP). I have categorized these professionals together as knowledge translators for the vulnerable and people in crisis, as well as for their work promoting education and awareness about mental health, mental illness, poverty and human rights. Two of the participants are also from not-for profit organizations, two work for government agencies, and one is a private care provider.

MSP is a social worker that works with youth and has a unique approach to helping his clients and advocating for social justice. He also, like IL, expressed frustration with the academic research process that often seems disconnected from his work "on the front-line" or "in the battlefield." I opened our discussion asking him if he ever reads academic journal articles from his discipline. He responded that he is connected to academic work through his wife, who has "more degrees than a protractor." She is a senior evaluator with the federal government looking at crime prevention in the Ministry for Public Safety. She sends him relevant articles, and he also has articles that are "fed to me" from his employer on "changing aspects of the practice." MSP differentiated his work from academic work in his provocative statement that,

[192] I abbreviated reference to participants in this category using the first letter of their first name and "SP".

> So, you critique it, but I don't critique it in the normal way. I don't write a paper on it. I fight them. Like, when they have this new theory, this new practice, I take the theory and I take the practice and I take the kid, and show how that model is affecting your life to access the basic needs, social justice, you know, your risk factors and protective factors, and I throw it back in their face.

His strong reaction to the theory of "outcome-based social delivery" voiced very clearly the importance of feedback in his profession, especially when he sees the real-life consequences of government programs.

MSP related that early on in his career he realized that he was dealing with "systems", like Child Welfare and the justice system, that were "embedded in confidentiality", which meant that the government controlled communication of issues. A second issue, according to MSP, was that:

> The media was becoming very polarized in vilifying vulnerable youth. And so, I said, "Well, I've gotta change the message." So, I started looking at ways to circumvent the media or change the tone of the media.

MSP started to use social media – participating in media interviews, hosting a radio show, tweeting about his young clients and their real, extreme, every-day crises. He related numerous stories about how he used Twitter to reveal problems with the way vulnerable youth are treated, and how communicating the truth most often resulted in positive action. MSP cautioned, however, that social media can also be "a very lethal weapon":

> It's a very valuable battle ax that can cleave a lot if you know how to wield it, weld it, and you know how to throw the thing. If you don't, you're just going to end up chopping off your leg, and that's what social media is.

I raised the topic, heard in the interview with IL, of how a collaborative approach to FASD research has changed the understanding and treatment of it in the justice system. MSP responded that their current challenge is the fentanyl crisis, and also extremism (recruiting youth into gangs or terrorist groups). He brought up the work his wife is doing in these areas, trying to establish policy and programs for young offenders, victims of crime and general crime prevention.

MSP also shared his views on how knowledge flows in his discipline. He said, "at least the good social workers are always trying to access new information." Problem solving in his field is not like a hard science or mathematics, but rather, "it's a moving river. It's not like a stagnant pond. So, you're constantly having to test the waters and see what's in there and examine it." He communicated very well the magnitude of problems that he's dealing with, and how this is in part due to the nature of knowledge about humans:

> By and large, at least in the fields and the areas I'm working, it's driven by research, that we haven't found our magic bullet yet. We haven't figured out how to build that bridge yet. We don't have the laws of physics in our hands. We have this thing called the mind. And it's in a 13-year-old boy that's doing crystal meth, and it's all over the freaking place.

His eloquent metaphors of how he understands his role influenced my thinking about knowledge flow. He talked about having a "dynamic approach" to research, and even, "maybe going back to those dusty libraries and finding something that was tried in the '50s and sort of shelved."

Amazed by his narrative, I asked him if he is involved in training or if others in his office also subscribe to his methods. He responded that he has had hundreds of practicum students, and "They've all become lawyers and police officers and probation officers and politicians and, you know, even community leaders. And again, they've changed the narrative." Unfortunately, what

he does comes with a lot of risk, and not many others want to endanger their jobs or government funding for their programs.

Robert is the Senior Director, Program & Service Assessment, for the Calgary Urban Project Society (CUPS)[193]. I was interested in how this organization, as a not-for profit, connects with research. Robert described several of the many research projects they are involved in or use to support their programming. Resilience theory partially explains why CUPS clients spanned generations in the same families, why it seemed there was a cycle of poverty. The CUPS website has links explaining this theory well. The core of the theory is that "it's not what's wrong with you, it's what's happened to you," and that sometimes the stress of childhood experiences results in a greater difficulty in dealing with stress as an adult. The theory of brain plasticity, however, provides some hope as the effects on the brain can be mitigated, and young people can break out of the poverty cycle with the proper supports.

Robert was interested in the journal articles I showed him and indicated he would "send it to a bunch of people." His staff is also quite engaged with research, many of whom have graduate degrees, attend conferences, and have very good relationships with researchers from outside their organization. At the same time, he is aware that these researchers possess the knowledge, funding and time to carry out research, whereas most of his staff are involved in delivering programs for clients. He also said that he would never pay for a journal article, they don't have the in-house capacity to do their own research, and they rely on their relationships to carry out research.

Robert shared that they have been working extensively with one researcher from the Faculty of Nursing at the University of Calgary, and when she retires, it will be a huge loss to

[193] Robert consented to use his name and organization's name.

them. He also revealed that he had no time or interest in research unless it has practical use value. Referring to some research, he said, "You may think it's the most interesting thing in the world and I'm happy for you, and you got a large grant to do it, but that doesn't mean I want to read it." Robert's concern is that they have so many questions that need answering, but traditionally, research projects get funded because an academic has an idea that may or may not be connected to people's needs. We talked about how research in his field is often locally relevant, and does not have universal applicability, especially research from the United States where health care and the legal system is very different from ours. CUPS gathers metrics to demonstrate program effectiveness, and Robert was proud to share they were voted one of top ten charities in Canada because they can demonstrate outcomes which they track consistently.

CSP works for a government agency that is involved in **human rights education and advocacy**. He has a diverse background, having previously worked as a first responder, has Masters in Communications degree, and has worked extensively with First Nations and other vulnerable groups. CSP described several research projects he has directed, or been involved in, that take a participant action research (PAR) approach. One project was a series of "conversations" about racism and human rights in Alberta. This project was very successful in engaging people being affected by racism and listening to their experiences, then working with them and other agencies to create change. He felt vulnerable groups do not want to "researched" anymore, and PAR methods are meant to empower research subjects and democratize different kinds of knowledge. He has a unique skill and experience set that enables him to work as an educator, advocate, researcher and knowledge translator. He shared that:

> I look at my path, and there is no right path to get into this kind of work […] it is a cycle of learn-earn-return. And that's why I'm here now, and why I'm pleased to talk to you,

> and other people about it. Is, how do I return this? How do I give to other people, and new generations that come on board, and pass on the knowledge, not just keep it in.

CSP values experiential and tacit knowledge, and is passionate about the need for a more engaged and available kind of knowledge creation delivery system for the university than simply open access to journal articles. His message regarding academic research was critical and honest, given his experience working in public consultation and human rights advocacy:

> [When] an academic person will come in to do some research, the question we'll ask them is "how are you going to share this with the community? How are you going to share this with those impacted by the issue?" And they'll say, "Well, we're going to go out and do conferences. We're going to go on a speaking tour. We're going to go share this with other academia." Well, that […] doesn't get back to those human subjects, what happened, what was the outcome of that? And so, I think it's a catch-22 about how research is done and shared. My experience has been, and my research that I've done when I did my Masters, and even when I teach, I ask people to do research, we do PAR, and then you utilize the people and skills, they are part of the plan. And then they can take that information and start implementing right away. They don't have to wait for your thesis to come out two years later.

This scholarly research perspective, though slowly changing with greater knowledge mobilization awareness, is important for the access to research problem. From the academic research perspective, the academic community has been very involved in advocating for human rights, creating the language, theories and even social movements around these disadvantaged groups. From CSP's perspective, scholars are not engaging with these communities in the right

way, carrying out the kind of research that is most needed, nor communicating research results to the right groups.

David is the Executive Director of the Canadian Mental Health Association, Alberta Division[194]. David's role in the provincial office is not on the "frontline" but focuses on project development, education, policy, as well as government and media relations. He emphasized that they are constantly looking at ways to promote "social innovation" in mental health. Currently, they use peer educators, "people with lived experience, who can share their experience and support." The CMHA engages with research in many ways: from tracking their effectiveness for funders, to needing research to inform their projects and programs, to connecting researchers to research subjects. They have adopted a constructivist philosophy that believes that measuring success quantitatively is possible. On the other hand, David mentioned that much of their data is "narrative", which doesn't have the force or trustworthiness of numbers. He said that, "it's so ingrained in our thinking now and we have relationships with numerous funders that are not content to offer a narrative as evidence." He also emphasized that their public education programs (that are regionally disseminated) must be evidence-based. Some of their programs have evolved over the years, and have been successful, but they might not have the evidence-base, and now they are having to provide the proof of the program's effectiveness.

Another way they engage with research is through researchers who are looking for information about their organization, or who want to partner with them on a project. He expressed the need to "engage in more proactive and assertive types of relationships with researchers," as he felt that is something missing in their mandate. He responded that "You know, I think we're still, as a society, still really dependent on, thank God, relational

[194] David consented to using his name and organization's name.

connections." He spoke about the need for someone to study or evaluate their latest project on rural mental health, and that "we would benefit by having a researcher attached to the project, not only to look for evidence, but to support us in the development of evidence through the project itself." He said that:

> We need to be more engaged with our community. And so, it's interesting where within the health systems that exist in Alberta, there's more of a sense of creating more of an integrated health approach. I don't think we're quite there when it comes to research and when it comes to the dissemination of research and all of that.

While they are oriented towards research at the national level, their regions might not have the resources (people, educational, funding) to connect with that research.

FSP is a practising psychologist that specializes in treating anxiety disorders and obsessive compulsive disorders (OCD). She is passionate about what she does, and it shows in the amount of effort and expense she expends to stay current, come up with treatments for her clients, and share her knowledge. Perhaps because she did her PhD in Psychology, and worked in a clinical hospital setting, as well as her own practice, she is very interested in research. I asked if this was typical for practicing psychologists, and she felt that it varied a lot. She attends conferences to connect with peers (though she is careful about which ones as they are expensive), subscribes to various research groups or associations (e.g. Canadian Association of Cognitive-Behavioural Therapists), and is on the board of Anxiety BC (a non-profit public-health organization) which allows her access to some journals through her membership. She is also on their list-serves, which keeps her abreast of published works, symposia etc. She also listens to podcasts that come from these associations or university departments, from experts in their fields. She said that because her community is fairly small, if there is a newly published

article, she can usually contact the researcher directly, or someone she knows who has university access, and they will send it to her. She does not like to pay for them. She is also a member of academia.edu, and she has alerts set up for her search terms there and in another database called Medscape. Finally, FSP described an initiative she has started, a "Run for OCD", public awareness and fundraising initiative to help improve understanding around the disorder, especially to catch it in young people so that treatment can begin sooner, which significantly impacts success rates.

All these things contribute to her credibility as an expert, as well as to how she shares her knowledge with the academic or teaching community. She acknowledged that she also learns a great deal from her clients saying:

> I learn so much from my clients that that's actually a huge piece of my knowledge. That's where my knowledge comes from, is the clients, too. And you know, I might frame something to a kid, and then they'll say something back to me like, "Wow, yeah, that's cool." And then I'll kind of, like, use that further to help other kids understand. […] And that's what a lot of us say, is that some of our greatest teachers are our clients.

I also asked FSP if, as a private practitioner, she has any qualms about sharing her "trade secrets." She told a story about someone asking her for her slides from a conference presentation – and she had to pause and think about if she should. In the end, she did, as she reasoned that she has benefitted from others that have shared their knowledge with her.

My interviews in this category reveal how important HSS research is for professionals working with vulnerable people, as helping people is a "fluid" science. All of the interviewees are tuned into research, and felt they needed to stay current in the latest research for their professions. Social work and psychology, as disciplines, are very practice oriented, and

interviewees possess a wealth of tacit knowledge, that they realize needs to be shared as well as fed. They all rely on personal connections to get access to research articles, help them carry out research, or provide advice. All of these professionals are involved in producing research, or had the higher education or expertise that gave them critical insight into how research is produced or distributed. From an organizational perspective, all of them might have the expertise or understanding, but not necessarily the resources to carry out research to solve problems, do a literature review to support a new program proposal, or stay abreast of innovative theories. The organizations in this small sample are also under pressure to track their effectiveness; rely on consultants, specialists or academics to carry out in-house or practice-related research; and are also pressed for funds to be able to pay for journal articles and subscriptions. Yet, all the interviewees, even FSP in private practice, emphasized the need for knowledge sharing in their fields. Finally, three out of the five interviewees offered very critical perspectives on the value of some HSS research to their practice. These participants emphasized that they needed research that was going to make a difference to their clients, solve problems or provide justifications for programs.

Journalists, writers and researchers summary[195]

This group is comprised of two journalists, one television journalist (Len), and one print (KJR), two research consultants that work for research institutes (Andrea and Marco), and one freelance writer that writes non-fiction books (SJR). They are connected by the need to maintain copyright protection of their works; they are challenged by the changing media environment that has crowded out the voices of experts in the public sphere; and they are affected by an economic

[195] Abbreviation for this category is first initial and "JR".

imperative to produce research and stories that will sell, but at the same time are motivated to serve the public good.

Len is a retired VP of Bell Media[196] in Calgary, and is also a journalist that has received the Broadcaster of the Year award for his journalism reporting. During our interview, we discussed how both journalism and academia are changing, but how these changes can also be seen as opportunities for better communication. I opened the interview by showing him the open access version of *How Canadian's Communicate: Sports (*Taras & Waddell, 2017*)*, which is an open access publication through Athabasca University Press. Knowing his interest in sports, I wanted to know whether he would read an academic article in the collection, or was even aware that academics were writing on this topic. He responded very positively that he would like to read it, and was completely unaware that it existed. I asked about journalists as knowledge translators for the university. He responded that journalists used to really rely on "the rolodex," where they had a list of experts they could contact for a story. He shared that, "the thing that I'm seeing that kind of hurts the most, is people [not] being able to have the opportunity and the time to invest in those relationships." He talked about the problem of journalism having less journalists, and less time to produce their stories. He pointed out that it is much harder now to get people's attention, press releases are not effective, and there are so many outlets for news. As journalism is in a state of transition, and driven by profit, in-depth investigative reporting is suffering.

By contrast, we discussed how the University as an institution is changing. From his perspective, the university has the resources to communicate to the public what is happening in research fields, not necessarily needing journalists to translate for them. Len is very

[196] Len consented to using his name and former employer's name.

entrepreneurial, and believes the university should promote their own stories, and use many different forms of media to do it. He suggested that people with a broadcast background could help with knowledge dissemination. He observed that a lot of his journalist colleagues are being hired by universities, but he "doesn't see the output" from these departments. He also emphasized that academic writing style is not conducive to good communication. He agreed that people should have online access to published research, but thought that the numbers interested would be small. While Len was not anti-intellectual, he was surprised how long academic publishing takes, mentioning a professor he knew that received a course release to write a book, that was "focusing on [his] own political agenda." We talked about the moral obligation that both scholars and journalists have to communicate events or issues to the public. I asked the provocative question, "So if we're the experts, why do we need to pander to the public?" Len said:

> If you want to wash your hands and give up and just see what happens if the wrong people get elected, and in society when a dictator comes in or books get burned, right away, university professors get arrested. We're seeing that in Venezuela. You've seen that in Egypt not that long ago. Turkey. Don't kid yourself. Why try? For your livelihood, your life.

While he conceded that journalists often favour governments that support them (e.g. Liberals and the CBC), and journalists also have a left-wing bent (as do academics), both groups share a critical and somewhat idealistic perspective. The idealism comes from the hope that their work will make a difference in people's lives. Len was careful to emphasize, however, that "the sky isn't falling", and though journalism is in a time of crisis, something else will fill the demand for knowledge, for news, for truth.

KJR works as reporter for a Canadian newspaper and felt anonymity was important given the tenuous security of keeping a job in journalism. This interview was very helpful in confirming many things about the changing environment for journalists that might be preventing them from carrying out the knowledge translator role for research that is produced at the university. She emphasized that "always our biggest challenge is time." There used to be beat reporters, who would cover information coming from the university, or city hall, and while science reporters still exist (who are not necessarily covering social science), there is less time and resources to cover anything other than headline-worthy research. She also pointed out that, "It seems like each specific school and department has a media relations person." She challenged me on the perception that the loss of journalists covering university news was a bad thing, but rather has resulted in a situation where that knowledge might find a better audience elsewhere, like LinkedIn. She acknowledged that journalists write clearly and make things understandable, to translate, literally; like Len, she expressed her frustration over scholarly writing style being unnecessarily complex. She was also concerned about how social media and technology are changing our reading abilities, and the need for digital media literacy. She is of the belief that technology is changing us (referencing a recent article about how reading novels is getting more difficult).

Andrea is program director for **Cardus Family[197],** a non-profit research institute. She was one of only a couple of participants who regularly accessed a university library for their research.[198] She would pay for an article online if it was $5, but not $45. Andrea described the different ways that her organization publishes their research, as she described herself as being in

[197] Andrea consented to using her name and the name of her employer.
[198] The University of Calgary allows public members to check out books, but not to access materials online unless on site.

the “research amplification business”. She commented that it is difficult to get into mainstream media, although she recently had an article published in the *Globe and Mail*. She said the most common kind of dissemination would be self-publishing on their own website, or through their online magazines. Regarding university research, she commented:

> I absolutely consider it useful and important […]. I mean the reason why we do our own stuff and not really rely exclusively on others is because […] I think there's a bias in academic circles where they're not actually addressing the questions.

One of her current research projects was on child care policy. She pointed out that every academic study focused on outcomes of children in day care centres, and failed to address outcomes of children who are cared for by their parents, which was a gap in the research. We discussed whether it is better to reach the masses, or decision-makers, or experts with our research. Andrea felt that some of the problems we have as knowledge disseminators is the lack of listeners, how to bring about cultural change, and information overload. She indicated that they try to make personal connections with experts, or leaders, who might then act as knowledge translators. She has the sense that people are not reading very much anymore, publishers are losing money, and audiences for news, and perhaps fiction, are shrinking. In other words, there are plenty of books being published but not the audience. We talked about whether this was a class divide or a perception issue. She gave the example of a monthly talk she attends, “Books for Breakfast”, where authors share their ideas with a small but key group of people that might have the ability to implement their ideas or promote change. I explained the case of scholarly publishing, which continues to be a successful business with a high demand for journal articles. She was unaware of this and commented that lots of high level research is being done by think

tanks in Canada (and the US), and that certainly there should be a connection between university research and research produced by think tanks.

Marco Navarro-Genie is the president and CEO of the charitable research institute, Atlantic Institute for Market Studies (AIMS).[199] This non-profit organization makes their research publicly available, does not do fee for service-type research, and receives no government funding in order to stay at arms-length from the government. Being a charitable organization, their greatest challenge is funding. The mandate of his organization is "to do public policy research, mostly economic public policy research and make it available to the public so that the public can be better informed." Marco indicated his organization operates similarly to a university research team, but with more focus on knowledge dissemination to the public. They often partner with individuals or organizations that are doing the best research in an area that they would like to investigate. AIMS uses HSS scholarly research, Statscan data, and other government information. AIMS spends considerable energy obtaining this information, and that "if we're talking about the availability of public information, taxpayers' information, essentially, the biggest obstacle and threat, really, to what we do, are governments themselves." He lamented that governments "treat public information as proprietary, and they treat public information as weapons that can be used against them." Having access to university databases would be very valuable to them. They have connections to scholarly research through student interns that they employ to do literature reviews, and usually conduct thorough literature reviews on topics they are studying. They have university presidents on their board who do not contribute to the research or the research agenda. They also have a research advisory council that has academic scholars who will either act as a sounding board, or provide peer review of the

[199] Marco requested that we use his name and the name of his research organization.

research. They do seek out peer review of their research, to ensure its integrity. Their staff attend academic or policy conferences to present their research, stay informed, and make connections.

Knowledge transfer is a primary concern for AIMS. Marco puts considerable effort into dissemination of the research they produce, and has started to promote their work more widely and in different formats, such as radio clips, social media, press releases. They strive for media attention to further promote their research results (local, national, or international). They track the level of interest and uptake very carefully and closely. They also produce op-eds weekly. Marco emphasized that although they use academic-based research or theory, that is not their audience:

> Our aim, essentially right now, is to try to reach the average person. We still produce fairly rigorous and sophisticated research designed to be consumed by policy analysts and government officials and policymakers and decision makers. But our goal is also to be able to produce things that are also consumable by the average person, the bus driver, the janitor, and what have you. […] We're trying to provide information to those who seek to be better informed.

He was open to having us use the name of his organization, and saw involvement in my project as a positive, and pointed out, "that sometimes being able to identify the source has more weight."

SJR is a freelance writer who has written numerous non-fiction history books. Speaking to SJR improved my understanding of access to humanities research, but also highlighted the importance of copyright for writers who make their living from publishing. SJR emphasized that his research process has become much easier since the ability to search things

online. He has benefitted from digital humanities efforts that allow him access to resources. He would have to pay for special university library access and courier fees if he needed a book from another institution. SJR said that in the past he would sometimes look at what journal articles might be saying about a topic he is writing about, but he has found that the cost of access and the lack of important information in those articles makes it not worth the time or effort. He lamented that:

> You pay all these massive piles of money and you get this little article and it's some 250 words long. It's poorly written and full of a bunch of basic, generic information not much different than what's on Wikipedia. But you can't tell that beforehand, so I felt really scammed.

He would also read old newspaper articles to get historical information, and the digitization of these archives has also been very helpful, as he no longer needs to look on microfiche at a library.

SJR is affected by the pirating of his work, where his books have also been digitized and offered for free download in so many places, he cannot keep up. He commented that the Canada Council has the "Public Lending Fund", which compensates authors for having books in libraries, that could otherwise be a sale for them. But there is nothing like this for compensating for free copies in the digital realm. We talked about how the nature of knowledge allows it to be shared infinitely, which can be positive or negative. SJR shared a conversation he had with a friend who is a professor that said:

> 'Everyone should have access to everything and there should be no such thing as a copyright and it should illegal.' Well, it's all fine for you and you're going to be paid your salary by the government. I mean me, I spent two years in research and writing a book.

SJR related the example of the polar explorer, Roald Armundsen, about whom he has written a biography. Armundsen had plans to sell the story of his historic expedition to the New York Times, but the telegraph operator sent the story off to a whole bunch of other places, and his story became "news" rather than an exclusive piece that he could have used to fund his enormously expensive expedition. Finally, we talked about open access, and SJR was somewhat aware of the problem, but more so from the point of view of predatory publishing. He commented that academics are "desperate to get the people to take their work for free."

The audience is a major difference between scholarly research and journalism, policy research, or non-fiction writing. The interviewees seemed to have similar perspectives because their audience is the public. For this reason, these participants were keenly aware of the need to appeal to their audience to promote knowledge transfer, and to sell and or distribute information to turn a profit, change opinions, or inform voters.

The group could also relate to the scholarly research publishing community, in the sense that all publishing is undergoing major changes. They are positively affected by the digitization of knowledge they need; and sometimes negatively affected by the electronic distribution of the knowledge they produce. My participants also participate in a mostly one-way transfer model of knowledge distribution, and are motivated to use different forms of communication to do this e.g. podcasts, video, social media, in-house publications, the major media outlets. While all of the interviewees expressed reluctance when it came to paying for access to scholarly HSS research, some did consider it essential to their work (Andrea, Marco). Lack of time to connect with research, as well as a lack of money to buy research were also commonly shared. Both journalists lamented the loss of relationships with academics, such as the loss of beats to cover the university and its news. Some interviewees mentioned the importance of their personal

connections in accessing or creating research: students with university ID access hired to do literature reviews (Marco), opinion leaders that could help with knowledge distribution (Andrea), experts on the Rolodex (Len). Finally, the problem of expertise came up in the interviews – where their effectiveness as journalists, researchers and writers, was dependent on their abilities to do their job well in a society where listeners are hard to capture, and where the communication environment is a major challenge to their profession.

Consultant group summary

I interviewed three consultants who focus on different kinds of consulting. One participant is an investment consultant (Vanessa), one a management consultant (Rick), and the third a public consultation/public planning consultant (Richard). I expected people working in consulting roles would be quite actively engaged in research or aware of research outcomes and trends in their fields. I wanted to know whether they read academic journal articles, had connections to the university (i.e. adjunct positions), or agreed that they fulfilled the role of knowledge translator for their clients.[200]

When I first met **Vanessa, an investment consultant**, in a social setting, I felt that she had a somewhat critical attitude towards SSH education, and I wanted to understand her perspective better. She teaches women about personal financial investment through an investment program, in a book club format, that she calls the "Money Club." She noticed that women in general do not have a lot of confidence about financial planning and investments, and realized this was something she could share with others. She has developed some investment strategies and modules to explain financial concepts to women. She was also partly unaware that what she did was very grounded in HSS knowledge – drawing from psychology (Maslow's

[200] None of my participants wanted to remain anonymous in this category.

hierarch of needs, personality testing), feminism (addressing the gap in financial knowledge among women), and communications/education (creating a unique way to approach financial advising through a "book club" format).

She related how she reads books and articles, and has the education that she can pass on to other women who "don't want to read books on the subject." She acts as a mediator to the financial knowledge that women need to make good choices about their own finances. She was excited by my use of the term "knowledge translator" and liked the analogy, as in her personality testing she carries out with clients, she is defined as a "knowledge person." She spoke about how the women in her money club feel empowered with the knowledge that she gives them, that this knowledge is the same as men would need, but that she teaches it in a different way. I felt that her hands-on approach to communicating with women about finances is something that other communication and feminist scholars would be interested in understanding. Her motivation to start the business came from seeing a need and knowing she could provide a service, more from an entrepreneurial perspective, rather than a social change perspective.

We talked a bit about the value of mentorship, as she is also dedicated to her own personal coaching: she believes it is important to not stop learning even as you are trying to teach others. She said, "studies show" on a couple of occasions, and when I showed her some journal articles about women and investing, she responded very positively. She asked how to get access to scholarly research, and felt it was a "huge deterrent" to pay $45 for a journal article:

Vanessa: See, but how do I search that? I'd search on the University of Calgary?

Interviewer: You can. No, if you went to the library at the university you could get this yourself.

Vanessa: Like the physical library?

Interviewer: Yeah, you have to actually go there.

Vanessa: Lord.

I felt this response was very important to consider, as it is indicative of an expectation that access to research should mean convenient access. Especially in our current communication environment where there is so much information available through a single Google search, scholarly research that requires a trip to a university library cannot compete. Also, by the end of our conversation, Vanessa and I had found many points of connection, and I felt that my initial assumption that she had some "anti-intellectual" attitudes was incomplete. This can be interpreted as an example of how communication between "the town and the gown" can build awareness and trust.

Rick, President of MGI, built his consulting practice around the idea of "team building," and has become a pioneer of the concept, consulting with NHL hockey teams and international corporations.[201] In our initial discussion, I heard he had a friend at university who did his PhD dissertation on the concept of "holistic leadership model learning." Rick and his friend developed this concept and applied it to numerous human resources and management contexts. Rick said that he "embodied" this research. He described how their focus was on the "behavioural and systemic evolution" of an organization which might include team building, building communication effectiveness, and leadership. I showed him some journal articles about team building, hoping to get his feedback on the scholarship that has exploded around that topic. He was not very interested in the articles or the scholarly discussion. I asked about whether they track their performance metrics, such as client satisfaction surveys, and he responded that most of what he does he cannot quantify. We spoke about the effectiveness of team building in so

[201] Note that Rick responded to my member-checking request and was the only participant to offer edits of my research memo and transcripts of our interview.

many different environments. His views are that he does not feel he needs to have a connection to academic research, nor do his clients. He just does not encounter it:

> I say this respectfully, but academia never shows up in our work. It's just not on the lips. I mean, people may have evolved as human beings to be able to get capabilities, the tactile ability to move an organization. They never talk about academia, about research, about the kinds of things you're sharing with me, isn't in their vocabulary, because it's all performance-driven.

His tacit knowledge gained from working with hundreds of companies is what brings insight to his consulting practice.

We also talked about Rick being a knowledge translator, or mediator of knowledge. Rick agreed with this, and told a humorous story about how he tried to impress a vice-president of a corporation where he was going to do a consulting project, by bringing to the meeting with the VP all the books he had read on management, and dumping them on his desk. The VP said he "couldn't give a sh*t about" what books Rick read; it was his reputation that was important. The VP "wanted to believe he was hiring the best team builder money could buy." This resonates with Vanessa's interview as well, where she reads to distill knowledge for her clients. In the end, we talked about Rick passing down his knowledge to his son, who is taking over his practice.

Richard is the President of a Calgary area research consulting firm, Praxis, A Social Planning Company.[202] Richard has worked in the field of public consultation since 1980, involved in public engagement, community assessments, social impact assessments, and resource development assessments. He has seen his practice evolve, and has wrestled with encouraging people to participate in consultation processes over the years. He mentioned a recent project,

[202] I worked for Richard 20 years ago, before and after doing my Masters.

however, where they went door to door in a community to be able to engage community members, because hardly anyone has land lines anymore (they dubbed it "back to the future"). He told me the story of his favourite project, Imagine Calgary, where they engaged over 800 youth in a session, and won an award for this engagement process. Richard related that clients hardly ever want a full-blown research report anymore. His firm makes a presentation to the client and provides an executive summary. He also indicated that the Calgary Municipal and Alberta governments have not been doing large consultation projects, only online consultations. He said his consulting practice has practically dried up as a result.

Richard is an adjunct with the Haskayne School of Business at the University of Calgary, and acts as a mentor for grad students. He has been on the board and past-president of the International Association of Public Participation Professionals. He indicated his company will do a literature review from time to time to see what has been done in the academic world. He does not regularly read or pay for journal articles, but would read one if it was warranted. He was not aware of OA as a concept or issue, so I did a bit of explaining. I asked him, "How do you share your knowledge?" I told him he has a great deal of methodological-related knowledge to share with academic researchers. He is a public consultation expert, and has carried out probably hundreds (maybe thousands) of projects – something an academic could never do. This is a great reason for HSS researchers to forge relationships with research consultants – despite all the talk about "research", consultants might easily have more "hands-on" methodological expertise than scholars. At the end of the interview, he realized that he would like to write a paper about some of his experiences.

The participants in the consultant group were all extremely eager to share their ideas and views with me concerning their practice and projects. They had abundant enthusiasm and energy regarding their consulting, and I realized they each possessed valuable knowledge and understanding that enabled them to provide services for others based on their tacit and explicit knowledge. Contrary to my preconceptions, however, they were not all engaged, aware, or even interested in HSS research, or having access to journal articles. Unlike my other interviews, I sometimes found it difficult to engage them in discussions about scholarly research. The first participant, Vanessa, seemed the most open to HSS research, partly because she uses statistics and research outcomes to educate her clients. Richard is fairly connected to the university as an adjunct professor. Rick is the least interested in a connection with university-based knowledge, though the initial impetus for his practice came from a PhD dissertation. All of the consultants, however, agreed they were knowledge translators, enjoyed mentoring others, and subconsciously "embodied" theories in their practice. While I was concerned about knowledge flow from the university to consultants who might use it, as well as whether research is being duplicated in these two worlds, it was clear from these interviews that the flow of knowledge should also go the other way: Richard is a premier authority on public consultation methodology; Rick's consulting practice was a pioneer of experiential learning and team-building approaches in the business community; and Vanessa is educating women about finances and investment, a field that has historically excluded women.

Humanities professionals summary

I had a great deal of difficulty securing interviews for the "humanities" side of my research. I contacted many people, from the director of WordFest Alberta, to editors of magazines, to playwrights, and musicians. Despite the small number of interviews, these two conversations

were very enlightening and raised important issues I had not considered in my analysis and critique of the open access movement, and how public access to HSS research from these disciplines are perceived, even from within their own professions.

CT is the director of "learning and engagement", for a local theater. He creates or directs elementary school programs, public talks with directors, broadway training programs, behind the scenes tours, and lobby displays. His position is always changing to better market the theater company, but also to improve community outreach, education and public relations in general. This interview highlighted the difficulty of quantifying the use or value of the arts. CT talked about marketing or educating people in the public, but never knowing whether that translates to someone coming to see a play. Being a non-profit organization, they are conscious of their bottom line, "to keep our doors open." He revealed that having a dedicated person for public outreach, not just a marketing or social media person, is a new kind of initiative for theater in general across the country, and other theaters are interested in their approach. CT indicated that his theater company is constantly searching for ideas, whether through podcasts, trade articles, or sharing information with colleagues at other theaters, and there is no magic formula about how to get or keep your patrons.

He also described how in a theater company there are layers of research that go into a production: the dramaturge, the set design, the director, the actors, are all doing something for "their part in the process." We talked about whether he, or any of these other people involved in production, would draw on scholarly articles for their research. He felt they would not, if it cost money, or was difficult to find. I asked about how they find experts in their industry and he talked about how it is a small community, where your relationships mean a lot. He said, "I would be shocked if there's more than three degrees of separation between me and any expert.

Someone knows someone all the time." He also would not pay for a journal article, "I don't waste my time. I'll go somewhere else because I'll find it free somewhere else on the internet." CT was humble about the value of his own knowledge when I asked him about sharing his "cutting edge" practice with other theater companies:

> I think sometimes, we don't know what we know. […] And we don't know how special what we know is, and we take it for granted. So, I don't know that I would ever hit a point where I go, 'Oh yes, someone else might be interested in hearing that,' unless someone says, 'Hey, I'm interested in hearing about that,' you know? And […], we do it every day, so it's just our reality. But someone's who's never been involved in theater is, like, 'What do you mean you pull ropes with counterbalanced weights?' […] I think it would be hard for someone who's not doing it to fully be able to understand how to translate what that is. […] You know, and hard for the person who's doing it sometimes to even articulate their knowledge because it's just what they know.

His struggle to communicate his expertise prompted my realization that scholars could have a more prominent, formalized place in assisting professionals in translating their knowledge, but that there are challenges to being an outsider.

CT described how popular the "behind the scenes" tours were for the theatre, a different concept of access than my research is exploring. While it is a learning experience, it is also about seeing how the magic is made, and about creating an appreciation for the work that goes into theatre. We talked about the importance of creating a human connection between the theatre and the patron, which hopefully leads to sustainability, and a more enriched experience. This is somewhat comparable to scholars who benefit when people in the public can access their scholarship and understand its value. Passing on tacit knowledge is important for the

sustainability of your practice, but also for the understanding of non-experts/outsiders to continue to support what you do.

HT has had a full career in theater working as an instructor, as an actor, dramaturge, director, producer and theatre critic for the CBC, and as a board member of local theatre companies. He struck me as the perfect knowledge translator who has experience in almost all aspects of theatre production, performance, communication and education. I learned a great deal in this interview about the separation between "the town and the gown" in the theatre world. HT's "heart is with the profession" or theatre practice, rather than with publishing, tenure, and promotion in the academy. He said that the ultimate end of scholarly work in the theatre is to enhance performance not publishing. However, scholarly knowledge does inform the work of everyone in the theatre. HT said that:

> Most of the work I've done is either what I would call practical criticism, being a critic on the CBC and things like that. I'm not talking through academics. I'm talking to the general public, or I'm writing for "The Herald," or I'm performing downtown, or directing in a professional theater and so forth. And they call that often here creative research.

He pointed out that the theatre critic work is another way that knowledge about theatre gets shared, but this is a journalism function more than a drama or scholarly function.

HT also explained the role of dramatist, or dramaturgy. Dramaturgy is a sort of bridge profession between the academic world and the world of performance that enhances dramatic performances in two ways. The first is as a content expert, who has expertise and knowledge about a certain dead playwright and will consult with a director and actors as a literary advisor. The second role is as a consultant to living playwrights to help them craft their work. Both tasks require a wealth of tacit and not just explicit (or academic) knowledge. HT also noted that the

performance of theatre almost always draws on collective knowledge among all the members involved.

We talked about open access, and HT revealed scholarly publishing is a significant issue for him because tenure and advancement is dependent only on publishing, even in his department. In addition, performers like to get paid for their work, so humanities professionals feel conflicted by the concept of free access. HT was somewhat dismissive of academic research and scholarship, as from his perspective:

> People with experience will know what's useful information or what's not useful information, and sometimes very knowledgeable people are very little use to the making of the theater because their knowledge is purely literary.

I was also interested in scholarly publications that might reveal a new discovery, such as "who is the 'Dark Lady' in Shakespeare's writing?" He acknowledged that some literate publics might have an interest in scholarly discoveries, but that "I have a feeling 'The Calgary Herald' just wouldn't publish it. They would just assume nobody here knows or cares about the dark lady of the sonnets."

I was not surprised that these two interviewees working in the theater world did not have a strong perceived need for academic perspectives, ideas or knowledge. Both participants were very oriented towards professional practice, and they mentioned that knowledge they might need comes almost exclusively from the team of experts working to produce a play. In their world, knowledge is disseminated to the public through the play not the journal article:

> The important thing is the dissemination of knowledge. Now whether I go produce 'En Attendant Godot' in Paris and it revolutionizes the whole understanding of Beckett -- that's much more important than me writing some dry little book that fourteen people

will read. You've got to give weight to creative work because it can be as powerful a disseminator of information, it can transform the world. Just like a great book can.

These interviews revealed the tension between scholarship about theatre, analysis of theatrical work, and performance of that work.

These interviews were extremely important, however, for my creation of a more open concept of open access. Access to scholarly journal articles are just a small part of the kind of access that non-scholars would find beneficial or interesting; and likewise, would be beneficial for the sustainability and usefulness of scholarship. In addition, using the term "flow of knowledge" seems to be more useful and less controversial in the arts context. In some ways, I was trying to fit these interviews into my static concept of knowledge translators working to disseminate knowledge from the university to the public. I started to realize that access to knowledge not only enables action, but enriches experience.

These two interviews only scratched the surface of the concerns in the Humanities and Fine Arts communities about access to research, the relationship between the academic world and the performance world, and knowledge flow in general. I would have like to have interviewed more people in this category, such as those working in museums, other kinds of artists, linguists or archeologists. Arguably, some of my other interviewees fall into the 'humanities' category: SJR (freelance writer who writes history books), Lance (high school language teacher), or the legal professionals (law arguably being a Humanities discipline).

Interviews Analysis – From Codes to Common Themes

The conversations around access to research were varied and interesting, making synthesis and coding more challenging. At the same time, most of the interviews addressed the same key topics that can be distilled down to the following ten themes:

- Research definitions
- Praxis
- Bias/trust
- Knowledge sharing
- Intellectual Property
- Open Access Awareness
- Access Issues
- Attitude to HSS Research
- Media Technology and Innovation
- Personal Research

These ten codes/themes can be further assimilated into two broad categories that correspond to my theory of knowledge flow: barriers to flow and improving flow. The two meta-themes support the argument that some people outside of the academy do need and want access to scholarly research, they experience this research in many ways, and that the one-way flow of open access is just one way that knowledge flows from the scholarly research community to the public. The themes also take into account the negative reactions to scholarly research, the difficulties people experience when trying to access it, and the participants' suggestions for how to improve the system. Discussing how the barriers and ways to improve flow takes into account the total research life cycle, the double hermeneutic, and the superior concept of knowledge

sharing versus dissemination, allows me to construct a more complete picture of what open access should look like.

What is research?

Initially, I asked this question as a sort of ice-breaking exercise during interviews, resulting in interesting data regarding how interview participants understood research. This was more effective in group interviews, than one-on-one. It also gave me the opportunity to set up the parameters of my research, to talk about HSS research, and addressed the difficulty of talking about knowledge in general, head-on. Sometimes responses were quite insightful and accurate, such as "research is the process to accumulate facts and data on a particular subject from multiple sources" (Expo FG3), and research "allows you to learn" (Expo FG3); to, research is "whatever interests you" (Expo FG3). In the majority of interviews, however, this question often was answered by another question I asked, "how do you engage with research in your profession or day to day life?" Participants gave three main responses to this question: performance evaluation, research about best practices, and research aimed at answering a question or solving a problem.

For many participants, research is collecting data and evaluating performance for internal performance or assessment metrics. The Educators (High School teachers, Curriculum Consultants), Social Work/Psychology/Human Rights group (David, Robert), the Humanities Group (CT and HT), and some in the Journalists, Writers and Researchers Group (Andrea, Marco) mentioned the need to collect and analyze performance-related data. Two participants, Rick and MSP, clearly rejected this imperative, pointing out that what they did was almost

impossible to quantify, and CT and HT both mentioned the difficulty of measuring the value of the arts. David (CMHA), on the other hand, saw the value of this practice:

> There is a requirement from funders to provide evidence of the work that we're doing. And so, we often hire evaluators. We engage our team members and partners in the collection of data, and then that data is generally formatted into some sort of deployable format that goes to a funder or may be used to inform and improve projects, programs that we're involved in. So that's a very in-house approach, but it didn't come because we thought we should be doing it. It really came as a response to what funders are requiring, but I think that it's added rigor to our work. In the past, maybe it was okay to say, 'Well, you know, this feels like the right thing to do.'

This kind of research contributes to the sustainability of a project or organization, as long as funders are satisfied that a program is effective (Chris, Robert).

Research is also something that establishes best practices. Both the educators and the SPH group were keenly interested in research that supported their profession. The teachers were somewhat interested in research that supported their curriculum, but also in how to evaluate students: for example, knowing how best to provide feedback to students on their writing (Curriculum Consultants). They would also receive journal articles or training from their school districts to improve pedagogy. Other participants acknowledged that research kept them up to date in their profession, or improved their professional skills (Vanessa, FSP, IL, JL, SL). MSP felt that:

> I think, at least the good social workers are always trying to access new information. Because it's not like engineering. It's not a mathematical formula, and that's how you build a bridge, and it's never going to change unless the laws of physics change. The

> Humanities is a very fluid science or quasi-science or whatever. And there's all sorts of interpretations of it. And so, it's a moving river. It's not like a stagnant pond. So, you're constantly having to test the waters and see what's in there and examine it.

This comparison between quantitative and qualitative research, hard science and soft science subjects, and data and narrative was also mentioned during some of the discussions (Lance, Expo FG, Marco, David).

Some of the participants raised the issue that research does not always provide an answer, but rather, multiple perspectives. One of the curriculum consultants said:

> I've been presented with research from teachers that says, 'Here, this is the way it is,' and then you can find even more articles why it's a different way. But usually, again, one of the two is the one that's usually not the effective research. It's very superficial. I think that as far as where it's taught, I feel like this is something that's, like, self-learned as a more educated person the more you go through school, the more you read things. I don't think anyone taught me, ever, that, but we all are aware.

A participant in the Expo focus groups also expressed frustration about how to judge among the many perspectives offered online:

> When I go looking for something, and that happens, I'm just overwhelmed that like, wow, I don't know where to start. You thought you had an answer to something, and then you realize, oh no, you have 50 different answers to it. And people have devoted their life to researching this, and you're like, oh gosh, what do I trust now.

Conversations often included the need for better training or resources for doing research. For example, the problem of plagiarism was discussed in the Educators group and the Expo focus groups. Participants also expressed frustration with searching on the internet, and would like

better skills. SL and VL talked about the need to train new lawyers, who rely exclusively on Google, to understand the research process required for legal practice. CSP felt that in his field HSS research needs to be more participation focused, that much of academic research does not include or respect their research subjects, and research dissemination practices are inadequate (see Attitude to HSS research). Robert (CUPS) realized that while they can collect data to satisfy their funders, they do not have the in-house expertise to carry out a research study. Many people mentioned that other people – experts, university contacts, colleagues – help them conduct research, understand it, or stay up-to-date with the latest research in their fields, or field of interest.

For legal professionals, research is dependent on case law: looking for precedents to support their arguments in or out of court. On rare occasions, at least according to my participants, lawyers might need social science research to provide background support, in criminal cases, family court, or the supreme court, for example.

Some of my participants expressed a use value attitude towards research. For them, research should solve a problem (Robert, CSP). Some others felt that research that meets their needs has to be evidence-based (David, FSP, Educators), local (Robert, IL), or very current (Expo FG1). Finally, a few participants did not see the value of HSS research for their purposes (VL, Rick, CSP).

Praxis

This category addresses the interplay between theory and practice, as the conversations with participants focused on their engagement with, and access to, research, and found that research is somehow a part of their professional work or affects them in a personal way. These conversations about practise and theory, influenced my thinking about knowledge flow from the

research community to the public, and back again. Specific theoretical concepts were mentioned in the interviews such as resilience (Robert), learning styles (Expo FG, Educators) growth mindset (High School FG), team building/experiential learning (Rick), FASD (IL, MSP) cultural sensitivity training (IL, MSP, Robert, CSP), feminism, and Maslow's hierarchy of needs (Vanessa). In an Expo focus group, two participants talked about "learning styles," where one participant felt he is a "tactile" learner – preferring hands-on demonstrations. The teacher in the group responded that the latest research shows that people do not necessarily have learning styles that are static, but that teachers should match the learning style to the topic being taught. This was an interesting exchange between someone who had interpreted a theoretical concept from their own perspective and experience, compared to someone who is more expert and understood the concept more deeply. On a few occasions, I brought up the theory of the double hermeneutic to describe how research flows, and in several instances, I saw it in action.

In many of my interviews, I felt that the practices of my research participants needed to be communicated back to the academic community for fresh analysis: the innovative use of social media that MSP is employing to help youth at risk; the lifetime of experience that Rick has had applying experiential learning and team building to benefit the workplace; the unique approach to youth criminal law that IL is applying to young offenders; the methodological expertise in the area of public participation research that Richard has gained; the innovative approach to experiential learning and audience engagement that Chris is developing; and the excellent example of empowering women that Vanessa practices.

The interviews helped me understand that the relationship between academic theory and professional practice is stronger in some professions or applications than others. For example, the interviewees in psychology, education, and social work had a strong connection and

awareness about theories that affect their practices. On the other hand, the legal professionals, for the most part, had a weaker connection to academic research in their fields. They had a very strong connection, however, to what they considered research, that is the body of case law or policy (for health and safety as well as immigration law) that applies to their practice. FSP was keenly aware of the latest research in her field, and was involved in creating theory based on her work with patients experiencing obsessive compulsive disorder or anxiety. The educators were also all immersed in theoretical pedagogical concepts, and, un-self-consciously, used terms like "inquiry-based learning", "growth mindset" and "formative assessment" indicating their familiarity with pedagogical theory.

On the opposite side of the double hermeneutic, David (CMHA) pointed out that much of their work on mental health arose out of practice, or "what works", and now needs to be reassessed in light of established theory or evidence. SL talked about how he needed to gather feedback from the public about the health and safety concerns for legalizing cannabis to understand how to establish organizational policies:

> 'What does the general populace think?' Because then you get an idea. I may think of something that's really important, however, what I think is important, and what are the actual challenges to my client, are two very different things. I'm coming from a different perspective. So, a lot of conversations I would have usually would be in conjunction when I was teaching in classes or when I do conferences. I spent a lot of time talking with people because I usually, when I do presentations, and usually for conferences, I would either be a keynote or a presenter. They'd always want me to talk about contentious stuff because if you get people talking, they're interested, and that type of thing. So, no matter

> what, it would cause further discussion. So, I would utilize that to be like, 'Oh, wow, that's what you think is important? Oh, well, sh*t. Let me help you.'

Some participants seemed to initially lack awareness, or did not agree that theory or research underpinned their practice (Rick, Vanessa), but during the course of the conversation modified their views. Rick said that he "embodied" research, and some of my participants were very pleased to be called "knowledge translators" (SHL, Rick, Vanessa).

Finally, it is not surprising at all that people trained and working in social sciences and humanities disciplines would have insights, create innovations, and draw on theories encountered during their university education (consciously or subconsciously), or subsequent learning. This is consistent with the more extensive impacts research findings of Bastow et al. (2014), who found that the "hidden innovations" in business (NESTA 2007) result from the circulation of social sciences ideas and are promoted not only by academics, but by "staff in these organizations drawing on their own social science skillsets, most often (although not necessarily) underpinned by university social science degrees or training" (p. 273).

Bias/trust

Participants often expressed a wariness about academic research in general, a distrust or a lack of quality in the research they have encountered, as well as a distrust in the experts that produce research. Some of the opinions about bias and distrust seem to stem from a general critique of information available on the internet. As many of my participants did not regularly engage with peer-reviewed scholarly journal articles reporting on research, it was not always clear if their comments addressed actual research, or their perception of that research. On the other hand, several people also commented that they would like to be able to consult with experts in their

fields, currently have access to such an expert they trust, or would like to see a system that provides access to experts.

Considering widespread concern about the truthfulness of the news media, politicians, social media users, celebrities, the justice system, and corporations, it is not surprising that participants were wary about research they have encountered online as well. In the Expo focus groups, participants were concerned about current issues like anti-vaccination perspectives, negative attitudes towards climate change, and the power of Google and YouTube to control information. Several of the Educators Group participants pointed out that children are particularly vulnerable to believing false information they find online, and the need for media literacy (Lance, Heather, High School Teachers, NL, IL); and also, that older adults sometimes lack the ability to analyze the credibility of sources (NL). One of the teachers said:

> We try to teach kids at the secondary level that the closer you can get to a source, like if it's a primary source, that research is probably going to inform you a little bit better at that time, right? The further away you get from that source, question, you know, the integrity of it, the accuracy of it.

IL was very concerned about young people's exposure to pornography online, and SHL was certain that as a new parent, he would be able to guide his daughter's online experiences.

Some participants raised the problem of bias in the media, even those in the media themselves. Len said:

> Certainly, when you're a younger journalist at least, you're more left, left-center, I would say. You're trying to change the world, you have ideals, you are trying to take care of the poor, the neglected, you're challenging the rich, because you […] tend to come from middle class backgrounds, and then maybe, later on, you become a little more...maybe

> you gather some resources and you adjust your way of thinking and are maybe more in the middle, or you even come to tend towards the right on some issues. But most journalists just didn't get in it to be famous. They have a social conscience. And I would expect people in academia might be of a similar bent.

Lance felt that the media's left-wing bias was problematic for him, given his experiences in Communist Poland. KJR, also a journalist, pointed out that the media, like everyone else, is affected by their own echo chambers, where:

> A lot of journalists couldn't believe Donald Trump got elected because they're only listening to people who agreed with them, right? And they missed this huge swath of people […] A political scientist said, 'I've never met a Trump supporter in my life.' And I'm like, 'Really. You're not talking to anybody outside of your circle of thinking, right?'

Participants commented on the quality of research they have encountered. For example, the curriculum consultants (Educators Group) found some educational studies have small sample sizes, yet make big claims in their research. In addition, participants in the Educators group seemed to be loath to claim they were experts, perhaps as a reflection of the negativity felt towards experts in contemporary society, in general:

> We're the voices of our subject areas. And so, if there's something that comes up that they need...and the term 'expert' isn't the right word. I mean, I think it's more like you have a vast knowledge base on the area (Curriculum Consultants)

> The way school is now, no one is asking us to be the expert, because that would be way too much of an ask. But the research piece is important, I think, to impart to kids so that they can get there on their own. And recognize in our disciplines that there is no hard and fast answer, right? (High School Teachers)

Possibly, this attitude might also be a consequence of the sociological trend towards breaking down expertise and hierarchy, also arguably a postmodern impulse that has permeated the workplace, education and gender theory (Eisenberg and Goodall, 2001; Gross & Simmons, 2006; Lynn, 2011; Stehr & Ruser, 2017).

While some negative attitudes towards research come from this perception that it is poor quality; others feel that the people who produce the research (or knowledge) have biases that taint their work, making the work, and the expert, untrustworthy. Lance commented that:

> Just like I have an agenda, just like you have an agenda. We all have our agendas. And you know, sometimes I think that overcomes any kind of objective looking at the knowledge and the details. So that's an issue. It's one that I'm convinced is a big part, maybe a problem in universities. Especially in the social sciences. Because I think a lot of people have agendas. And they come into universities with agendas.

Andrea, one of the researchers that works for a research institute, felt that her research filled in the gaps in academic research, because "I think there's a bias in academic circles where they're not actually addressing the questions." Len also objected to academics who "we're paying for you to supposedly educate people, and you're not, you're writing a book actually, which will make you money and maybe in the end educate some people. But I think the book is focused on your own political agenda and what you're interested in."

Despite concerns about people in academia with personal agendas and biased research, many participants expressed trust in expert knowledge. Especially in the social work/psychology/human rights group, people seek out experts, either as a link to research, as a source of expertise, or as a needed resource to help carry out research projects (MSP, FSP, David, Robert). MSP shared that his wife is an academic that "feeds me research." FSP has a

strong network of colleagues that she can ask for journal articles. Robert shared that they have been fortunate to have a researcher from the Faculty of Nursing, who has "done probably 15-20 different papers on folks here." Participants from the Educators Group talked about mentorship (Heather), and the hierarchy of expertise (Curriculum Consultants) they can tap into for advice and support.

As a somewhat representative sample, participants in the Expo Focus groups also expressed trust in the knowledge available online:

> The internet is an amazing and terrifying thing all at the same time. But we have people who, you know, still, ardently believe in some ridiculous nonsense. And it's like, but you can look up the answers. You don't even have to wonder, like, suppose your own answer. Look it up. Look at the research.

When asked for suggestions about how we could improve our system of research knowledge dissemination participants said they wanted more, rather than less, access to researchers themselves. One person suggested a "database of experts", and another called it "the Kayak of research."[203]

Knowledge sharing

In every single interview or focus group, people were eager to share their knowledge with me. This eagerness and openness took me by surprise, especially considering the proprietary nature of some participants' work, concerns about privacy of individuals they treat or work with, or critical comments about their challenges or personal opinions. The other almost ubiquitous comment was that knowledge sharing in their professional contexts was highly dependent on

[203] In this case, "Kayak" refers to a metasearch engine that looks for travel information across many different sites and aggregates this information for users.

personal connections. The relational approach to knowledge sharing was often perceived as the best or alternative way to access knowledge they needed or needed to communicate. Considering that I chose my research subjects based on their roles as knowledge translators, I perhaps should not have been surprised. The difference between translating, as a one-way transmission concept, and sharing as a more reflexive flow concept was also reinforced repeatedly.

Some participants talked about the personal connections they had with people that they could ask for guidance, or colleagues at universities they could ask for journal articles. This seems to be a kind of social capital where my participants can rely on experts they know to provide a short-cut to acquiring knowledge (Bourdieu, 1986). Vanessa's life coach, MSP's wife who is a senior policy maker and an Oxford PhD, Rick's best friend from college, JL's brother who worked in legal aid – these people provided an added advantage for my research participants. Some of these relationships were more personal, and took on a mentorship quality, while others were weaker, but still effective in getting answers. One of the curriculum consultants, himself an expert, related that his tactic for getting access to expert knowledge is "I ask people":

> Like, I know a lot of people, that know a lot of things, that have a lot of experience. So, I might go, 'Hey,' if there's something similar, I can ask, 'Nancy, can you give me a reference for this idea?' Right? That's probably one of my main ways for most things, is talking to someone else.

KJR, a print journalist, felt that one-on-one conversations with people were her most useful sources of knowledge:

> My most useful knowledge I pick up is in casual conversation with people, when people forget that I'm a reporter. They're talking about what concerns them, what's on their mind, what's interesting right now. And I just pick up a little nugget of knowledge and I think, 'Hey, that could turn into a story, right?' And I think that is the best way to learn about things, you know. I use a lot of documents and a lot of access to information with press and everything like that too. But I think really my best source of knowledge is just meeting people, having coffee like this.

Sharing knowledge through mentorship was also a popular subtheme within this category. The Educators Group are embedded in an organizational structure that promotes and values mentorship, whether its teachers who have completed graduate degrees, expected to formally share their knowledge with their co-workers (high school educators, Heather), or curriculum consultants whose job is to mentor other teachers. Some of my participants were senior professionals who are actively passing on their knowledge to new recruits (MSP, Rick), consultants who mentor clients (Richard, Vanessa, Rick), or people at the peak of their careers with abundant experiential knowledge, and the awareness they need to share what they have learned (CSP, FSP). Len, a recently retired journalist, mused:

> I think there are two halves to our life, and the first half of our life we try and accumulate. So, we're filling our vessel up with information and everything like that, and the second half of our life, when we hit the mentoring stage, and some people never hit that stage, but in theory we should, that's when we want to share, that's when our greatest joy comes.

That most of my research participants were in the second half of their careers may be another reason why mentorship was a common theme.

The idea of knowledge sharing implies ease, reciprocation and collaboration. Often, my conversations with participants addressed their knowledge sharing challenges. One of the curriculum consultants pointed out that mentoring others is not easy because of resistance to authority, personality differences and the time required. Andrea, who works for a non-profit research institute, discussed the pros and cons of mass research dissemination, versus targeting specific contacts that you know will be interested in your work, and have more power to implement the research or pass it on:

> We do go out of our way to develop connections […], our communication strategy on that is much more personal. So, I would do a research team. I would maybe frame, I don't know, let's say we look at welfare views as correlated with family structure. And then that's pretty specific, so then we would find academics working on that topic. We would try to find the people who are doing policy on that topic, federally or provincially, and then we would find the specific people doing research. And since we have somebody here who does this very valuable service of promoting the research individually with these people […] so, if only 10 people read it, but they are those people who addressed this issue inside out, and we are forging in that, like a network of those people, then that could be stronger than having 1,000 people say they like it on Facebook or whatever.

Heather, a teacher, described how her school district expects “leaders of learning” to be extremely energetic in sharing knowledge in their communities:

> The way the CBE vets their leaders now is that you apply to these learning cohorts. And to even get in you have to basically show that you have been a leader of learning and show that you have taken your knowledge beyond the four walls of your classroom. And so how have you tapped in, as a mentor, to other people in your building and outside your

> building? How have you reached out to the broader community and shared your work? And so, you have to have evidence of that.

Many of my participants formed the center of a knowledge hub for peers, clients, government, researchers or the public (IL, JL, Robert, Vanessa, MSP, HT), knowledge transfer being the primary concern of teachers, think tanks, legal aid, consultants, journalists, artists, and writers. David (CMHA) emphasized the important role his office plays in mental health policy because of the access they have to knowledge about mental health:

> I think that a lot of the knowledge that we have, we use to speak to, you know, it sounds dramatic, but to speak to power. And so, the knowledge we have that we gather from our regional experience, from our frontline experience, we take into our considerations around what are we going to elevate to government.

He went on to talk about CMHA's research database which is open to the public.[204]

Research participants could also be categorized as "highly qualified personnel" who possess the tacit knowledge required to interpret, apply, or share research. Wolfe (2005), referring to the transfer of scientific knowledge transfer from universities to industry, points out that "the transfer of knowledge from universities is highly localized, and is underpinned by the pool of tacit knowledge that is shared across robust personal networks of highly qualified personnel, including academic researchers and scientists working in industry" (p. 3). Robert, who works in an organization to alleviate homelessness and poverty, and was very aware of the latest research in his field, echoes Wolfe's point as research in the field of social work is also local and contingent. Several interviews reinforced the notion that HSS professionals are to HSS

[204] (https://cmha.ca/document-category/research-reports).

scholars, as industrial scientists are to university researchers, possessing similar education but divergent experience.

The need to share knowledge, however, was sometimes at odds with the need to protect it. JL, the director of a non-profit legal aid organization, pointed out the catch-22 of legal aid is if their organization is too good at their job, enabling members of the public to self-represent, lawyers lose out on business. The consultants also must protect their own intellectual property by not sharing their ideas for free, otherwise their source of income disappears. SHL, who works for a private company, voiced the problem that even company policies on health and safety are considered proprietary, and therefore cannot be shared with competitors, even if that might mean lives are saved.

At the other end of the knowledge sharing spectrum, one distinct advantage of research in the humanities and social sciences is that ideas in these knowledge domains are not necessarily proprietary. As this research lacks a profit motive, there is one less layer of protection. NGOs and NFPs can share ideas with each other (JL, Robert, David), people working in the arts can share approaches with each other (CT, HT), and people serving the public do not have to be protectionist about their discoveries (MPS, IL, CPS, FPS).

Intellectual property

Discussions about intellectual property arose within the context of talking about open access, including plagiarism, copyright infringement, the ease of pirating information using digital technologies, and the views of professionals who depend on intellectual property enforcement for their livelihoods. While few of my participants had heard of the open access problem (see below), most felt favourable towards the aims of the movement once I described the issues, except participants working in a humanities field.

Addressing the problem of plagiarism with the Educators group revealed that while teachers will warn the students not to plagiarize, it is not part of the curriculum in the Calgary area school district, or is part of the "unwritten curriculum." I felt the topic of plagiarism was important in the context of open access, as it demonstrates both the ease of copying and pasting information online, as well as the possibly ignorant attitudes of younger generations regarding intellectual property. Lance, a high school teacher from British Columbia, was also concerned about how technology makes it easy for students to plagiarize, and "enables us to be lazy."

Participants representing humanities professionals expressed concern about intellectual property and the goal of open access to provide free access. The notion of free access to published work is problematic as writers, playwrights and others working in arts industries need intellectual and creative property rights enforced for their livelihoods. When I described copyright laws as "too stringent and there needs to be more sharing", HT, a university instructor and theatre professional, responded, "you tell that to struggling artists." SJR, a freelance writer, retold a conversation with a friend who is a university professor, that argued in favour of open access, not realizing that he spoke from a position of privilege considering his livelihood does not depend on royalties. Len, a journalist, also agreed that the economic model was different for him where:

> [A]s a journalist, and I sign a piece of paper working for Bell Media, that everything I produce belongs to Bell Media, and will be published and owned forevermore under Bell Media copyright. I don't think it's the same thing for academics.

Open Access awareness

The level of awareness of the Open Access movement was slightly lower in my interview sample compared to the findings in my survey. Among knowledge translators, about 41% of

respondents had heard about the open access movement. For the most part, interview participants who were enrolled in or had completed graduate education were somewhat aware, including the high school teachers doing their masters (2): JL, also enrolled in a PhD program; and Heather, who had just completed her Master in Education degree. People who I might have expected to have heard about it, did not necessarily, including the research lawyers, law librarians, and high school librarian (Lance). Interestingly, one person (SJR) had heard about "predatory publishers", as this issue has appeared in mainstream media. The research consultants, and most of the participants were aware that access to research was an issue for them, because of paywalls and fees, but were not aware that there was a push in the academic community to address this topic.

When I described the open access problem, most people agreed with the argument that because taxes fund the cost of research, and the cost of scholarly publishing, that citizens should get access (Lance, Len, High School Teachers, IL, JL, NL). The only participants who had critical comments about open access were those who needed intellectual property rights to be enforced for their livelihoods (writers, journalists, artist community).

It was sometimes difficult to capture attitudes of my interview participants to open access properly because I often had off-line conversations with my research participants where I explained the context of my research. In some interviews, I also allowed participants to talk more about their engagement with research, rather than my interest in open access as an issue. Particularly as my project progressed, I spoke more about access to knowledge, and engagement with research, than the Open Access movement per se.

Access to research issues

Every interview addressed in some way the barriers or problems participants had in accessing research for their profession or personal lives. Although I did not ask the question in every interview, a question that I often asked was whether participants would pay for or read scholarly journal articles. This question helped establish participants' attitudes towards HSS research, and scholarly research in general, and adds to the information already gathered in my online survey. Conversations also addressed people's attitudes towards the form – particularly the language or length – of journal articles. While open access might not have been a concern for everyone, the majority of respondents had some kind of issue with lack of access to scholarly research, whether it was the need to conduct literature reviews or research (David, Robert, Richard, Andrea, Marco); the need to stay current or in tune with best practices for their profession (Educator group, PSH Group, Vanessa); and people who had access at one time and now miss having it (Heather).

At least 6 participants have paid or would pay to read a scholarly journal article. The lawyers pay for access to their research databases (e.g. Quicklaw and Westlaw) that are essential for their practice, and the law librarians reported that if a journal article was needed it would be purchased. Two other respondents indicated they would pay if it was an affordable price: Andrea, who said she would pay $5, and Lance who said he couldn't afford $40, as that was a meal out. There were others who said they would not pay for an article, but have read or would read a journal article (Expo FG3, Heather, MSP, Robert, high school teachers). Four of my participants said they have gone or would go regularly to a university library to access HSS knowledge (Andrea, Steve, law librarians). Andrea said, "I'm not under any illusion that there's tons of people like me who head off to the university library on a regular basis. Like that's just not the reality." A few participants have had access in the past, such as those who were enrolled

in graduate studies and miss it (Heather, Lance, FSP), and a few are presently enrolled in graduate education (JL, high school teachers). Finally, a few respondents felt they did not have the time or inclination to read scholarly journal articles, let alone pay for them (CSP, Rick, VL). One teacher said, "either in a professional or in a personal context, if I run into an article with a paywall, I don't pay and I don't read it. That simple."

Participants also mentioned other features of scholarly research that either turned them off from wanting access, or made knowledge access difficult. One teacher was of the view that many teachers, if they did not complete graduate work, would not have the skills to find or understand research journals articles:

> The average person or the average teacher who has not gone on to do a Master's degree, they don't have that academic language yet. And so, I think there needs to be journals out there which will share that information with teachers that's at a level that's readable, you know? (Heather).

A couple of people, both journalists, referred to the pedantic or dense quality of HSS writing (Len, KJ). Based on his work with legal aid clients, JL felt that the content of scholarly research was difficult for non-experts to grasp. Some also believed that there was a lack of connection between scholarly work and their practice (Legal Professionals Group, HT, Rick). SHL touches on a key problem with regard to the flow of knowledge because, from his perspective, the knowledge people need is available "and it's a sh*t ton of it." The problem is:

> People have to be smart enough to disseminate it in such a right way, and find the stuff that is actually of value, and then properly apply it. That is a taught skill. That is not something that is inherent. It's not something that's intuitive. You can't just walk into a room and know it right away. You have to be taught that, and I think we're falling down

> for my side with what I'm doing. We're falling down on the education side because the information is out there.

His comment refers to a much bigger problem than dissemination, but includes the skills required to apply knowledge as well.

Time to read research was also a significant barrier for almost everyone. This is related, on the one hand, to the time it takes to read an article, and on the other, to the lack of time in a person's day. One of the curriculum consultants pointed out that people are inundated with emails, so if they were to recommend to teachers to read a journal article, saying, " 'Look at this. This is interesting research that just came from, you know, Harvard, blah, blah, blah,' what are the chances that they will have time to look at it and read it, right?" Another teacher said, "if we had more time to kind of enjoy that research I think that, you know, we would maybe delve into it more." One of the lawyers who works with young offenders admitted that:

> Professionally, you know working the trenches, we work in the muck of people's lives, right? And so, you know, I don't…we don't have a large connection with academic research. It's more like what's going to work for this kid, for this problem right now is like… I know that's to our detriment. We're not thinking, you know, big enough pictures.

The lack of time to "think big" is also a consequence of people feeling overloaded. Information overload was commonly appealed to as a feature of our culture, as well as a reason why there might not be a demand for scholarly research either for them personally, or for people in general. One participant dismissed the excuse that people might not have time to read research articles, or do their own research saying, "You can always find the time. If you have the time to binge a Netflix series, you know, or order a pizza...Yeah, there's always time."

Finally, some of the access to research issues are resource problems that are endemic to the potential audience for HSS research: a lack of human resources or people who can do research for an organization (David, Robert); a lack of funding or curating resources to create or maintain in-house research databases (David, Andrea); and a lack of funds for purchasing single journal articles or subscriptions to journals or databases (all participants, Educators group). The economic barriers to researchers outside of the academy are a significant issue because the potential users of this research are on tight budgets. Educators, social workers, those working for NGOs or non-profits may benefit from or even demand access to HSS research in their fields, however the user pay system prohibits knowledge sharing in these cases.

Attitudes to HSS research

While I did not encounter outright hostility or strong anti-intellectual attitudes in my research participants, several interviewees were critical of HSS research.[205] I maintain that the attitudes were not a result of anti-intellectualism, but could have been a result of "unawareness" (Beck, 2005 [1992]). Indeed, the existence of a divide between academics and practitioners is not surprising and has been explored by Rynes, Bartunek and Daft (2001) and others who have tried to bridge that gap. Participants' critiques, outlined below, are an important issue for the problem of access to research, and for HSS scholars in general to take note. Overall, however, people were open to my questions about humanities and social sciences research, many were obviously very engaged with it, and a few valued HSS research and were highly supportive of improving access.

[205] Grouped together and somewhat out of context, the comments below might give the impression that my research subjects were very anti-intellectual. In the moment, I did not feel that respondents were overly critical or dismissive of scholarly work. Rather, they were honest with me about their experiences, impressions and views.

One of the lawyers I interviewed pointed out the painfully obvious problem regarding the lack of access to scholarly research for the public: if people do not have access to your research "you're screwed right off the start." But even if they do have access, they might not be interested as, "Your 60-page paper is probably the most legit thing, but this kid or cat video is going to win you every single time. You're toast" (SHL). This points to the problem of audience – open access can be easily dismissed if one assumes there is no audience outside of the academy for the scholarly research knowledge. One of the aims of this PhD research project was to investigate whether there was an audience, and what the needs and perspectives were regarding HSS research for publics who choose journal articles over cat videos. VL suggested that the problem with HSS research is, "researchers have given themselves a mandate, and that's why they're delving deeper into it. The reason why the public has been slower to catch up on it is because nobody cares about it until it actually affects them."

Some of the critiques of HSS research were already mentioned, such as the perception of bias in academic research (Andrea, CSP, Lance, Len), and the use of jargon or overly-complicated language (Lan, KJR, Expo FG1). One focus group participant quipped, "there are some people who will unapologetically make their journal article as complicated as is humanly impossible. They like to show off how many words they know." Another journalist recounted that:

> I edited a sociology paper for a friend of mine who's a PhD […] I read compound sentence, compound sentence, can't see where that's going, can't see where that's going, and then I started to read his quotes in some of the stuff he was referring to, or references, they wrote the same way, and I realized … I can't (Len).

Another critique that was mentioned was the notion of HSS knowledge being current and relevant. A couple of participants referred to the problem that scholarly research takes a long time to produce (CSP, Len). Two others used metaphors to refer to university scholarship such as “dusty tomes” and “dusty libraries”, insinuating that this knowledge is out of date. A focus group participant expressed frustration with doing academic research, because research can be “out of date” because “someone had proved them wrong”, and another said, “how can you always know that what you have is the latest and greatest information?” In contrast to this view, two teachers who were newly enrolled in a Masters of education program realized they were not “relevant” anymore, as current pedagogical knowledge they encountered in their coursework had advanced far beyond their undergraduate training.

A commonly held opinion about HSS research was that it is disconnected from lived experience, or “real life”. VL voiced this very clearly, saying:

> I don't think, for most of us who are busy with practices, dealing with real clients and real people, are necessarily going out to look at what appears to be in some cases really social commentary, right? They're like, ‘I've got real problems to deal with.’

For teachers, while some would encourage students to read a journal article, others felt that experiential learning was a more powerful and learning-level appropriate teaching tool for their students. CSP was critical of HSS research that “works at the problem, but it doesn’t really come up with answers to the problem. Mostly it looks at the past.” He was very much in favour, however, of research that fully engaged participants in the research process. Rick said apologetically, “academia never shows up in our work. It's just not on the lips.” Although both IL and MSP felt that their work “on the front-line” and “in the trenches” prevented them from

paying close attention to scholarly work, they still acknowledged that important and useful research was being done in their fields.

In some discussions, I had to differentiate between a negative attitude towards views about "the internet" in general, and specific critiques of scholarly discourse. For example, in the Expo focus groups, people talked more generally about their experiences online, where according to one participant there is a "loss of the middle ground in any form of political discussion," or the tendency for people to remain in their own "echo chambers." KJR talked about the public commentary to news articles and "that people say things on social media that they would never say to another human being in person." She also pointed out that journalists are also guilty of dwelling in their own echo chambers, saying,

> I think our biggest problem nowadays is we have all these ways of communication, but still, you know, like I mentioned the algorithms and the social media sites and the people we choose to follow, we are limiting ourselves very much. And that's why people... A lot of journalists couldn't believe Donald Trump got elected because they're only listening to people who agreed with them, right?

This tendency towards cyber-balkanization (echo chambers, filter bubbles) limits the spread of knowledge and exposure to new ideas (Van Alstyne & Brynjolfsson, 1996; Sunstein, 2002; Morozov, 2012). This problem also applies to the research community, where it is difficult to go outside one's comfortable sphere of communication where views might be challenged. This is a strong argument in favour of open access where scholars themselves need to distribute their ideas more widely, rather than to their select peer group.

Other participants considered academic research very useful, and would like better access. Marco, the director of a research institute, said, "we do not have access to university

databases. I would love to. It would be extremely useful." Andrea also needs access to university research, but that does not mean she is not critical about it. Both Vanessa and JL referred to research in our conversations, saying "studies show" or "the research shows," quoting research as a true reflection of reality. Many others would like easier access for personal interest (Lance, Expo focus groups, Heather), or for their professional practice (FSP, David).

Finally, the negative reactions to HSS scholarship are just as important as the positive ones. The argument that there is a demand for HSS research (instrumental or otherwise) is just as important as the argument that without any access there be no awareness, or even erroneous impressions. Neither can interest be cultivated, nor can the academic community expect positive public attitudes to research if what we do as academics is shadowy and hidden.

Media technologies and innovation

This theme takes into account the diversity of media technologies that research participants use to find knowledge they need, the innovative work they are doing, and the connection between access to research and innovation. SSSHRC's knowledge mobilization strategy (2012), for example, puts forward the possibility of social innovation that results from conscious efforts to promote research knowledge flow (p. 4).

A surprising realization regarding how my participants access and engage with research is the diversity of technologies, preferences and practices used among this small sample of people. Not surprisingly, many conversations discussed the ease of searching online for answers, especially among young people. SL, a research lawyer that trains law school graduates, reported that:

> The students, when they come now, they just want to be able to Google their answers. […] And we have to break them of their instinct. Their instinct is they want to just go

> straight to that search box, type in some words, and get an answer and get the cases. So, we're always trying to encourage them to back up and look at the textbooks and look at articles first.

Several people expressed their preferences for podcasts (FSP, SHL, Len, Expo FG). SHL felt, for example, that podcasts present research but in an easier attainable, more convenient and passive way:

> Whatever topic you want to think about, they will have researchers similar to yourself that will come up and talk about their thesis paper, what are they trying to do, what are some of the early findings that they had, or those people that have already conducted the research and now are speaking to it. And I do everything from, you name it, behavior-based to psychologies, psychosis even, drug and alcohol history. I'm a monster on all those ones […] it's a passive way to find knowledge.

Len quipped, now that he's retired, "podcasts are my life." Many others attend conferences to stay current, but also acknowledge that this is expensive (FSP, Educators group, IL, MSP, Andrea). Marco related that they go to conferences to present their research, influence policy, to "cross-pollinate" with other experts, as well as to connect with like-minded people with whom they might want to partner. MSP described his research process as an "octopus approach" that is multi-faceted, where he's using Google, contacting experts he knows, and letting his client lead the research (that he's doing for them). Some people expressed an interest for the hard copy of a work, or talked about the evolution of research technologies in their practice (Legal Professionals group, SJR, Lance). NL, a research lawyer said, "I will always go down to the library and look at the physical copy rather than browse a copy online. Because I can't stand the online, I like the physical, tangible, flipping table of contents, index, all of that."

A question I sometimes asked during an interview was, “do you have any suggestions for a better system of knowledge distribution, or a way to access research that would help you?” Some people talked about creating research databases (David, Andrea, Expo FG), having better connections to experts (mentioned above), or using more video. Len, a TV journalist, had plenty of ideas about offering more ways to “transport the ideas”, from podcasts, to three-minute videos, to a central database with different media options. He said, “and then I would recruit the best [communicators].” Andrea also mused that, when it comes to reaching a public audience, “sometimes I feel like we just need to put all our money into really great video production.”

Some of my participants use communications technology to do innovative things, while others are demonstrating innovative practices in their profession. As a financial advisor, Vanessa is using a “book club” format to make her female clients feel comfortable and communicate knowledge in a non-threatening, inclusive way. I mentioned to her that she is practicing feminism in a unique way that would be very interesting for feminist scholars to hear about. MSP uses Twitter to help his clients and reveal the systemic injustices affecting youth at risk. The technology is instantaneous, but also can be dangerous. He said:

> Twitter is very sort of a micro-blog. And it's very real narrative like, ‘I'm a starving kid tonight. I don't know what I'm gonna do.’ You don't have to pretext it with, you know, ‘It was a dark and stormy night,’ […] So it hits you as a message. It's like an SOS. So, social media has become a very powerful tool, but it's also, I mean, using social media has really put the profile of what I do, and the kids I work with, into sometimes a very stressful situation in the sense that, you know, I'm highlighting kids that are, let's say the system is not helping them in any way.

His innovative use of Twitter warrants detailed analysis from both a communication and a social work perspective.

Marco described how they use many different kinds of media to promote a new research report: from different kinds of press releases, to op-eds, to radio talk shows. This usually attracts national media coverage, and they hope for international media attention. Their tactic is to consistently demonstrate their expertise on a particular topic, to get the mainstream media's attention. Scholars might benefit from following this approach to knowledge mobilization and their communication approach would be worthwhile studying further.

Rick admitted that:

> I'd never seen myself as doing research, but I have acknowledged that the people I read do, and I use their knowledge, because I'm not a creator of knowledge, I don't have that kind of brain […] But I'm an innovator of other people's good stuff, that's just what I do.

While he does not use a particular media technology to help him, his communications tools are his consulting practice, where he acts as the filtering medium for his clients.

Finally, David (CMHA) is highly conscious of the opportunities for social innovation in the field of mental health, and he is eager to take advantage of this moment, by making their knowledge freely available for the public:

> One of the things we're talking about with our public policy working group is the need for a repository of this evidence. So, if we are citing articles, then those articles, really, to be...legitimately, they need to be accessible to anybody who's reading that citation. And it's on us to make sure that, you know, that there's the ability to link to those things. And also, it would foster deeper learning if you're actually able to go back to citations. I think that's kind of the reason you have citations, right?

His organization is conscious of the need to provide open access research evidence to support mental health practices, in a similar way to how open access in the scholarly community is trying to "foster deeper learning."

York's knowledge mobilization unit has pioneered many successful strategies that could be used to answer the needs of many of my research participants. From providing financial support for knowledge brokers or research interns to work with HSS organizations, to fostering conversations between scholars and citizens in the KM in the AM morning talks, to helping researchers create knowledge mobilization strategies for research grant applications, these institutional-level tactics work in a multifaceted way to promote knowledge flow in a way that open access, *as a strategy alone*, cannot (Phipps and Shapson, 2009).

Personal research

In both my on-line surveys and face-to-face interviews, participants talked about both their professional and personal research needs. From the Expo focus groups as well as the surveys, it was evident that almost everyone does research on the internet for their personal lives. People approached personal research in different ways. VL commented that people have "search styles." Participants googled for answers, relied on personal connections or experts, read journal articles, joined support groups, and expressed a personal preference for books they would take out from the library. Several people shared that they appreciated being able to access journal articles for research on medical problems and illnesses. One of the law librarians said that not everyone knows how to do in-depth research. She has done extensive research because people in her family suffer from a rare genetic muscular disorder. She said that, "if my solution is to google, my googling is very different than other people's googling. And I know that, like, now because I'm looking for the best sites possible and I'm being selective about that." One teacher

responded with a personal experience about depression in her family, where she was very eager for knowledge about the topic, talking to doctors, medical professionals and looking at data. While she wanted to know what "the experts" say, she found there was "hundreds of research articles, thousands" that were repetitive, and even contradictory. SL shared that while he does not use journal articles for his professional research needs, he does for his personal interests. One Expo FG participant shared that he'd been investigating Nazi death camps, wanting to understand what happened historically. Another person, who is a high school student, said she's been learning about Mars and NASA. A woman shared that she wanted to know information about her heritage. VL thought that, "You and I both know that the way society works these days is, as much as people can glean, they will, right? The quick answers is [sic] what they want, as superficial, or incorrect, or completely fictitious as it might be right?" Another added that there is no excuse for not knowing the answer to something, or being "willfully ignorant" because of the internet (and the ease of finding answers there).

Conclusion: Barriers to Knowledge Flow and Improving Knowledge Flow

I proposed a theory of knowledge flow in Chapter 4 to replace the one-way model of knowledge transfer upon which the dissemination of scholarly research is often based. Knowledge flow theory acknowledges the importance of both tacit and explicit knowledge in the humanities and social sciences, encourages the use of multiple forms and channels of communication to bypass the institutional monopolies of knowledge, and promotes reflexive, multi-way communication with practitioners, knowledge translators, research subjects, government and publics. As demonstrated, my research participants, who represent a range of HSS professionals and knowledge translators, possess a wealth of tacit, experience-based knowledge that allows them to understand issues, solve problems, teach others, and think critically about their disciplines. They

also use different ways to find, obtain or access knowledge they need for their work or personal life – ranging from Google searches, to podcasts, to asking colleagues for journal articles. Finally, they value relationships with experts, researchers, clients and colleagues, and regularly share their knowledge with others, either for profit or for the sake of helping one another.

The notion of a feedback loop for knowledge sharing, expressed in Giddens' concept of the double hermeneutic, is evidently needed, based on the interviews I conducted. The impetus for knowledge flow theory was the realization that the current system is not working for most practitioners or publics that could benefit from access to scholarly research in their fields. At the same time, while my research participants had a range of opinions about HSS research, and demand for access to scholarly research also varied, they all had acquired important knowledge themselves that warranted sharing further. MSP is doing amazing work with youth in the criminal justice system; Vanessa is teaching investment knowledge within a feminist framework supported by social sciences research; and David's organization is connecting peer educators, scholarly researchers, clinicians, and politicians to promote mental health, to name just a few success stories.

Each of my interviews could be re-evaluated in terms of knowledge flow theory – how to promote knowledge flow and what the barriers are to knowledge flow. The chart below summarizes the recommendations and observations gleaned from these conversations.

Table 7.1 Knowledge Flow Barriers and Ways of Improving Flow

Barriers to Knowledge Flow	Improving Knowledge Flow
Paywalls	Open access
Attitude that research is conducted by experts on research subjects	Research includes people under investigation in the research, and shares results with them
Pressure to measure impacts, outcomes and performance	Acknowledging that impacts and performance metrics cannot be captured easily in HSS professions or disciplines but can be helpful in sharpening research agendas

Research is top down and universally applicable	Research should also be locally relevant, connected to practice and experience-based
Lack of trust in scholarly community; distrust of experts	Scholars more active in community
Weak connection between scholarly researchers and professional practitioners	Strong connection between scholarly researchers and professional practitioners
Lack of understanding about differences between quantitative and qualitative research	"Research literacy" needed for publics to understand research as well as research community
Perceptions of bias in academic research	Research solves problems, rather than just studies issues
Cyber-balkanism, echo chambers online and in ivory towers	Multiple perspectives, voices and opinions indicative of healthy public sphere
Changing journalism landscape – less knowledge translators for HSS research	University community has resources to do more public outreach and engagement
Lack of trust in online resources	Teaching critical media literacy earlier
Non-profits lack resources to access research or conduct research themselves	NGOs and NFP can hire university students to help with research access
Academic writing styles	More plain language writing
Access to research databases restricted	Access to university research databases granted to public
Lack of personal contacts/opinion leaders/experts to guide understanding	Social capital/connections to experts to enable research access and access to knowledge
Access requires foundational knowledge, expertise in a subject	Educational deficits can be overcome with exposure to research content
Explicit knowledge valued	Tacit and explicit knowledge valued
Information overload	Access to best available knowledge resources requires less time to search
Difficult to reach audience that is not listening	Expanding notion of audience for research beyond walls of academy
Lack of attention, poor reading habits to focus on a long, detailed journal article	Disseminating research in more than one way – podcasts, videos, radio interviews, op-eds
People will protect knowledge if they can capitalize personally from it	Sharing knowledge as "greatest joy"
Difficulty of teaching others	Importance of mentorship
Research subjects may or may not be informed of research results	Community Based Research Methods demand full disclosure of research results
Commodification of research has made research an exclusive commodity	Evolution of research communication industry an opportunity for better flow
Lack of time to indulge in personal research, read journal articles, stay connected to scholarly research	"You can always find the time. If you have the time to binge a Netflix series, you know, or order a pizza...Yeah, there's always time."
Research as disconnected from lived experience, "real life"	Researchers engaged with communities
Scholarly research found in dusty libraries	Scholarly research in digital and other formats

Too strong intellectual property stifles creativity and innovation	Copyright protects producers and users
Audience is other academics	Audience includes research participants, practitioners, policy-makers, and interested publics

Organizing participants' comments in a two-columned chart is not to suggest that there is a clear dichotomy between traditional forms of research and community-based research; between good and bad approaches to research communication; or that the issues on the left side can be easily fixed by adopting the views and practices on the right. Rather, because I asked knowledge translators and HSS professionals to comment on their attitudes, experiences, access and preferences, discussions revolved around what is not working for these interested publics, and what is helpful and positive. Clearly some practices, like not informing research subjects of research results, are negative, but this problem is already improving thanks to better awareness of research ethics, and would not require major resources to change. Others issues, like strong intellectual property barriers, information overload, and the perception that academic researchers are biased will take far more analysis and effort. In addition, references to community based research strategies as a way to improve knowledge flow obviously do not preclude other kinds of research in the HSS as also being conducive to positive knowledge flow practices. Considering that many of my research participants worked in not for profit or community organizations, their comments reflect their experiences.

Finally, one of the outcomes of this research is to add weight to the arguments concerning the impacts of the HSS disciplines, and the need for understanding the value of our work, from the perspectives of non-scholars. While this research indicated that the research participants might be more interested in and aware of HSS research than the average Canadian, better arguments need to be made about the value of humanities and social sciences research, and more

effort needs to be made to increase public awareness of and accessibility to HSS research. Comments from participants also make very clear that open access to research is one way to improve knowledge flow, however scholars need to be aware of the needs of their wider community when choosing research projects, when engaging with research participants, and when communicating research results. According to my interview participants, the scholarly community would do well to reimagine public outreach to the community in a way that promotes and includes feedback, not only to establish trust but also to be open to learning from professional practice counterparts.

Chapter Eight - Conclusions

> Without an academic collective voice demanding open access to their research, the movement will never completely take off. It's a case of either giving broad society access to scientific advances or allowing these breakthroughs to stay locked away for financial gain. For the majority of academics, the choice should be easy.
>
> -- Jason Schmitt, March 28, 2019, *The Guardian Newspaper*

This investigation of open access and the public good contributes important arguments for renewed attention to the Open Access movement especially in the humanities and social sciences disciplines, for promotion of the value and impacts of HSS research, and for support of the values of knowledge sharing for the benefit of society. Including public stakeholders in the debate about access to research has provided the opportunity to interrogate the normative basis of access to research, as well as the impetus for a meta-theoretical vision for knowledge flow between scholars and their publics. This chapter will summarize the research, provide conclusions that take into account the historical, theoretical, methodological and research outcomes, discuss the contributions the research has made to scholarship, and finally suggest directions for further study.

Summary of Research

This chapter by chapter synopsis demonstrates the thorough investigation of the topic of open access and the public good with a focus on access to research in the humanities and social sciences. This research was guided by an initial focused research question and a broader, reformulated question:

Initial: What are the attitudes towards social sciences and humanities research, perceived needs for Open Access to this research, and preferred methods of access among selected groups of Canadian citizens?

Revised: How can we improve knowledge flow between humanities and social sciences scholars and knowledge users and creators outside of the university?

Chapter two set the stage for understanding the Open Access debate within the long history of scholarly journal publishing. This understanding is important for explaining how non-scholars became distanced from scholarly journal communication, how publishers gained power over the distribution of research knowledge, and how the system of knowledge dissemination was shaped by a centuries-long process of marketization, making it resistant to short-term renovation by OA advocates. Drawing on scholarship by Guedon (2001), Meadows (2008), Willinsky (2018) and others, the original motivation for the development of scholarly journals can be understood as a need to improve communication efficiency for scholars, spread new knowledge among a wide audience, assign ownership over ideas, as well as turn a modest profit. The development of learned societies, or academies, illustrates the early heterogeneity of the membership interested in scholarly pursuits of scientific discoveries or humanist ideas. An historical account of early scholarly publishing also illustrates the complexity of this development amidst political, technological, economic and social developments and events. In the latter twentieth century, when the profit motive for journal publishing outweighed the other motivations, the relationship between publishers, scholars and librarians shifted from one based on collegial relations to a perceptually and actually more exploitative basis. Finally, the chapter sets the development of the serials crisis in scholarly publishing within a wider explanatory field than that of economics and library and information science.

Chapter three details some of the challenges to improving knowledge flow through open access to journal articles. The chapter describes the recent history of Open Access -- the social movement-- born from utopian concepts, but also practical concerns about renovating the scholarly publishing system originating in the crisis in scholarly publishing. The chapter summarizes some of the challenges to renovation, such as the search for new business models, the growth of OA, the rise of predatory journals, and researcher attitudes towards OA. I argue that opening access to journal articles, leading to greater public access to research, means that "other curious minds" should be considered stakeholders in the debate about access. The chapter looks at how "open discourse" has motivated the open access movement, but how cultural tendencies towards "talk amongst ourselves" approaches to scholarship still prevail. Finally, the OA story has taken a turn with the announcement of Plan S, an ambitious plan for open access to European Union-funded research, that might kick-start a movement that seems to be bogged down in intellectual property barriers and scholar apathy in the HSS disciplines.

Chapter four presents a meta-theoretical framework in the concept of knowledge flow, for the discussion and justification of open access, and argues for a broadening of the open access vision. In the first section, I describe the knowledge society perspective situated mostly inside the political economy of communications, but also within the sociology and economics of knowledge. In the second part, I look at the notion of the public good within the context of the value and impacts of HSS research knowledge. In this section, I argue that understanding HSS research as a public good is important for justifying open access, as well as ensuring the sustainability of HSS scholarship in general. In the third section, I describe the concept of knowledge flow, defining the differences between knowledge and information, and tacit and explicit knowledge. Drawing on Giddens' (1984) idea of the double hermeneutic, I propose that

this sociological explanation of how social science functions, makes adoption of open access an imperative. In this light, sharing HSS research with the people who are our object of inquiry is the bare minimum of openness required for ethical HSS practice. In addition, research openness enables feedback from publics, promoting praxis and confirming whether HSS knowledge has had positive impacts, or requires revision. The features of knowledge flow take into account the complete research life cycle, enable reflexivity, or feedback to research, encourage multi-way communication with all research stakeholders, and appeal to multiple media formats requiring different levels of engagement and reflexivity. Finally, the chapter acknowledges practices that are already promoting knowledge flow in the academy, as well as challenges that the academy faces when expanding outreach to and engagement with the public.

Chapter five explains how this research project was guided by a critical theory approach to understanding the OA movement and the public good from the perspective of public stakeholders. The methodology and methods were designed to answer my research question "What is the level of access and awareness among selected publics regarding HSS research?" Using a mixed-methods research design I conducted an on-line survey and face-to-face interviews to find out how my selected publics fulfill their research needs, perceive HSS research, and value or want access to it. My research population included "knowledge translators" or "knowledge professionals," that would possibly have more of an interest than a general Canadian population in HSS research, including those working for NGOs and non-profit organizations, teachers, lawyers, research consultants, journalists, social workers, psychologists and those working in the arts. I recruited participants via snowball sampling, word of mouth, email requests, personal contacts, Facebook, Twitter and advertising at the Calgary and Edmonton Comic and Entertainment Expo events. The online survey contained 16 questions,

gathered responses from 119 people, and was distributed and analyzed using Survey Monkey software. I also conducted 27 individual and group interviews, engaging 51 people in one-hour discussions about their experiences with HSS research and access to expert knowledge in general. I created research memos from the qualitative data from these interviews, manually coded the transcripts, as well as used NVivo software to help summarize the findings. I member checked my summaries with 10 participants, to ensure that my analyses were a fair and accurate reflection of the discussions. Finally, my two research instruments enabled me to triangulate some of the research results, reinforcing my conclusions about how selected publics in my sample engage with HSS research.

Chapter six presents the results of my survey that was designed to answer my initial research question, and give me a baseline understanding about how my research sample understands and experiences the access to research issue. The question that first motivated my research program was to understand whether the lack of awareness about HSS research, as shown in the SSHRC 2008 survey of Canadians (Ekos Research Associates, 2008), is related to a lack of access to that research. Although it was not possible to prove a correlation, no access results in no awareness. Despite the low response rate, the research sample, defined according to occupation, well represents a knowledge translator or HSS professional sample. My research sample proved to be a group that has a high level of interest in and awareness of HSS research, and an openness to research in general, the majority using the Internet to "do research" every day, either personally or professionally. For example, respondents in all categories do seek out "peer-reviewed research", which ranked second overall, for their professional knowledge needs.[206] A majority of all respondents would also read a journal article (59%). The data

[206] (59%)

analysis also selected out respondents from NGOs and non-profits who were the most aware of HSS research; want peer reviewed research for their professional needs; know how to find it; and the majority would read a journal article (63%). Participants also shared innovative ways of getting access to research, commented about the use of academic jargon, and used many different sources for finding expert information and knowledge. Personal connections to knowledgeable people was frequently mentioned as a source of expert knowledge. In summary, this selected population sample was more aware of HSS research than the SSHRC survey respondents, had read journal articles and would read them in the future, wanted access to research for their professional and personal lives, but were also not willing to pay for access. The analysis of knowledge as a commodity, investigated in chapter 4, partially explains the reluctance of interested citizens to pay for knowledge that they are not certain they can put to use. The research interviews then provided more insight into why publics are unable or unwilling to pay for HSS knowledge.

The group and individual interviews in **Chapter seven** illustrated the challenges and attitudes of HSS knowledge translators and professionals regarding access to research. These interviews changed the direction of my analysis from how to promote a one-way information delivery system to how to create a more inclusive and reflexive ecosystem for knowledge sharing. The interviews also highlighted the complexity of the relationship between research and practice, and the difficulty of talking about "HSS" as a unified area of inquiry. The chapter presented the data first as a narrative based on five occupational categories, and second as a thematic analysis summarized by ten categories. The occupational summaries allowed me to showcase the diversity of my participants and to highlight occupation-specific conclusions. The thematic analysis identified the dominant themes and concerns raised during the interviews:

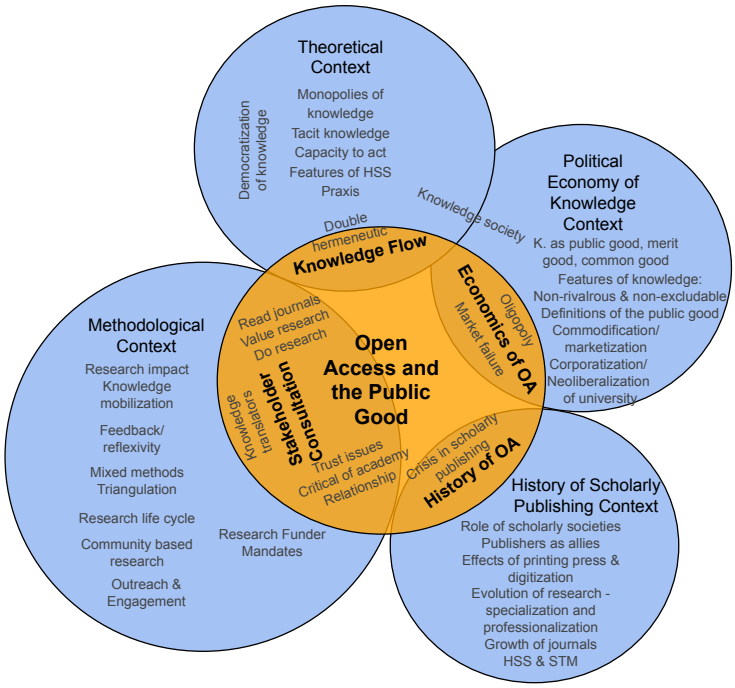
definitions of research, praxis, bias/trust, knowledge sharing, intellectual property, open access awareness, access issues, attitude to HSS research, media technologies and innovation, and personal research. The ten categories were then condensed into two meta-themes, "barriers to knowledge flow" and "improving knowledge flow". My research participants represent a range of HSS professions. They possess valuable tacit, experience-based knowledge enabling them to understand issues, solve problems, teach others, and think critically about their disciplines. They also use innovative ways to find, obtain or access knowledge – such as Google searches, podcasts, and asking colleagues for journal articles. The relationships they have with experts, researchers, clients and colleagues are not only important for access to research but also to help them carry out personal and professional research. Finally, the interview participants also share their knowledge with others, either for profit, or to pass their knowledge on to others who can learn from and implement it. Overall, these stakeholder interviews reinforced the argument that people outside of the university need and want access to scholarly research. Scholars, however, would also benefit from forging relationships with professionals in their fields.

Each stage of this research project deepened my investigation, helping me to understand the breadth of issues affecting the success of the open access movement, and the goal of serving the public good. The barriers to research flow are economic, historical, physical, cognitive, social, and even perceptual such as: market failure in the scholarly journal industry; path dependence on historically established and prestigious journals; access tolls that shut out HSS professionals; specialized language that deters readers; lack of human resources to carry out research; or the attitude that scholars do not deal with "real world" problems. The pathways to research access also depend on the backing of the scholarly community and individual researchers themselves, and involve a re-evaluation of how and why research is carried out, an

evaluation of the methods used to disseminate research, and the decision for more community interaction to increase trust of researchers and awareness of HSS research.

The following diagram illustrates how the ideas, themes and theories discussed in this dissertation supported the investigation of open access and the public good. The circles do not necessarily correspond to respective chapters, nor are the ideas within the circles confined to one context. Rather, the whole is meant to simplify the many strands of discussion required to thoroughly elucidate the problem of access to research from the perspective of the public good.

Figure 8.1 Open Access and the Public Good



The circles are intentionally different sizes to emphasize that the main focus of the research was to start a conversation with citizen stakeholders about OA (methodological context, chapters 5-7). The other contexts (circles) are meant to support that project by providing an historical (chapters 2 and 3), theoretical (chapter 4 - especially communications theory), and economics understanding ("political economy", chapters 3 and 4) of open access and the notion of the public good.

Research Conclusions

This investigation of open access to research and the public good, in the context of humanities and social sciences research, evaluated the Open Access movement, the experiences of interested publics with accessing and using HSS research, and the idea of knowledge as a public good. As a result of this investigation I have interrogated the open access movement, suggested a communication theory to explain the research process that takes into account the value of HSS scholarship, and provided suggestions for how to improve the relationship between the town and the gown by encouraging better knowledge flow. While open access may have been the impetus for this research, the results of the inquiry have addressed deeper issues about the purpose of research, and what it means to fulfill the public good. This section provides further analysis of my findings to demonstrate the significance of the research, and the contribution of this research to scholarship, as well as to the public good.

Historical legacy of Open Access

Reaching back 350 years into the past, and finding that the early modern scientific era began with *a certain kind*[207] of openness to other curious minds, provides a lesson in history, pedagogy, culture and communication. The development of journal communication, the creation of copyright, the separation of the disciplines, the rise of professional scholarship in the humanities and social sciences, the digitization of information and the dominance of the internet, illustrate the structural forces that created the serials crisis and resulted in closed access publishing. An historical view also illustrates how access to knowledge plays a central role in

[207] As mentioned in Chapter 2, learned societies initially had a heterogeneous membership, though it was limited to educated, upper class and mostly male members.

civil society and democracy. Setting the problem of access into historical context also highlights perennial debates within the social sciences such as structure versus agency, elite versus democratic rule, and individualism versus collectivism. Historical analysis is also an important tool for the political economy of communications approach.

The two-fold problem of open access, how scholarly researchers ended up with an expensive and slow system of publishing, and how they lost control of the dissemination of their work, might both be interpreted as examples of how the economic structures of the publishing industry have dominated the individual agency of researchers. The OA movement is working to change both structures – publishing business models – and agency – scholars' practices. The knowledge flow concept reminds scholars that they do possess the means to overcome structural forces in the form of tacit knowledge.

Finally, the history of open access can be seen through an historical lens that emphasizes the dichotomy of individualism and collectivism. On the one hand, collectivism is one of the four pillars upon which Merton bases the norms of science (1973 [1942]). On the other hand, his comments arguably pertain to common ownership of knowledge within the science community. The history of copyright shows that the legislation is meant to protect the rights of the individual creator, as well as the collective rights of those who want access to knowledge. Copyright is often described as a "balance" (Aufderheide and Jaszi, 2018; Drassinower, 2008; Geist, 2010; Ginsburg, 2001). Copyright legislation and practice, however, has given some publishers an unequal balance of power over the research community. Open access as a concept also participates in this dichotomy, scholars are expected to work under a knowledge commons paradigm and contribute to the public good; and at the same time publish their works for individual prestige and promotion. The public pays taxes to support research scholarship for the

greater good; but there is also the expectation that access to this knowledge should also be accessible and benefit individual citizens.

Critique of the Open Access movement

My dissertation contributed to deficiencies in the OA literature in three ways: by focusing on open access to HSS research, by engaging the views of citizen stakeholders, and by looking at OA in the context of the complete research life cycle. Much of OA literature focuses on access to STM research, and OA adoption levels among STM researchers have been much higher than in HSS disciplines.

Various studies have established that HSS scholars are less convinced by open access arguments, choose to publish OA less than their STM counterparts, and publish research to communicate with peers more so than the public (Osborne 2013; Eve, 2014; Mandler, 2014; Palgrave Macmillan, 2015; Wickham 2013; Todd, 2015; Rowley et al., 2017; Yates et al., 2015). While I have not fully explored the problem of *why* OA has become a "two cultures" movement, these differences can be explained somewhat by the historical development of journal publishing, the perception of low public demand for HSS research, the lower funding levels for this research, and the separation of HSS scholarship from practice. My argument has maintained that HSS scholars do have agency to choose OA publishing as an option, however.

One of my significant critiques is that the OA movement has not provided enough good arguments for HSS scholars to participate, unless one holds the personal conviction that knowledge should be shared for the good of the public. My research has added to the argument by maintaining that better knowledge flow between the public and the research community has the potential to improve research outcomes, that open access to research is just the first step to

improving knowledge flow, and that HSS scholars hold more power than they think, and contribute a great deal to society.

By engaging public stakeholders in the debate about access to HSS research, I have contributed to the small amount of OA scholarship that has addresses the role of non-scholars in the access to research debate, by either providing access to research databases, or asking publics about their research needs to prove demand exists (Alperin, 2015; Willinsky, 2003; Moorhead et al, 2015). Similar to the results of these studies, the approach also established that there is awareness and even demand for HSS research among selected publics. My conversations with stakeholders, and subsequent analysis, did not end with the question of open access, however, but addressed the whole research ecosystem. Research participants indicated that they also want more relational connections to researchers, offered their own critiques about HSS research dissemination, and how they would like to see the system changed to enable more problem-solving research that serves their needs.

Knowledge flow conclusions

The theoretical content of this dissertation could have been situated just as easily after the research analysis, as input from research participants motivated and inspired the theory. The concept of knowledge flow is important for understanding open access in the humanities and social sciences because it emphasizes researcher engagement with society, reflexivity as the key to knowledge transfer, capturing the benefits of HSS research, and ethical research practice. The Open Access movement's purview was problematic for an inquiry that sought to understand the public good, because the aims of the movement do not extend as far as "transfer", though claims from within the movement emphasized that the transfer and uptake of research in society is an important outcome of access to research. The central feature of reflexivity in this theory was

instigated by conversations with research participants, the results of my survey, and by the search for a communications-based theoretical explanation that could tie together the numerous features of open access and the public good, including: the role of the researcher, the nature of knowledge, the motivation for knowledge sharing, the barriers to open access, the way research happens, how to capture tacit knowledge created outside the academy, and what the best features of a system for knowledge communication would look like.

To review, knowledge flow conceptualizes how knowledge travels; but is also a preliminary attempt at uniting many strands of discussion and inquiry about knowledge. These strands are borrowed from Bell's information society theory (1973); Machlup's formulations around stocks and flows of knowledge (1979); Stehr's inquiries into the knowledge society (2005[1994]); Giddens' concept of the double hermeneutic (1984; 1990); Stiglitz's definition of knowledge as "almost a pure public good"(1999, p. 308-309); Polanyi's understanding of tacit and explicit knowledge (1962; 1966); Hess and Ostrom's vision of the "knowledge commons" (2011[2007]); Willinsky's convictions about the "access principle"(2006) and Innis' observations about "monopolies of knowledge" (1991 [1951]).

Knowledge flow can be described from the individual and the institutional perspective. On the individual level, tacit knowledge is embodied or contained in a person, which enables them to act (a kind of power), and also gives them the cognitive capacity to interpret information they receive. This definition of tacit knowledge emphasizes the agency of the individual, and the emancipatory nature of tacit knowledge that defines the person as more important than the research journal article, or any explicit form of knowledge designed to be shared. The notion of knowledge as emancipatory is also emphasized by Stehr (2005 [1994]) who points out that an increase in the "capacity to act" is directly related to a decrease in the ability of institutions to

impose its will over knowledgeable agents (p.125). Although it is difficult to share tacit knowledge, sharing knowledge requires it to be made explicit. Knowledge sharing is conceptualized as a flow because unlike a linear model of information transfer, knowledge flow emphasizes mediation, diffusion, interpretation and exchange. At the micro-level, knowledge flow can be compared to learning, or knowledge transfer, but flow emphasizes knowledge creation as a continuous process, rather than an endpoint. Admittedly, the details about knowledge flow here are still open to interpretation and further conceptualization, but the most important aspects for open access and the public good in the HSS are:

1. Knowledge, as the product of research, is embodied in the researcher. This is important because, while it can be owned and controlled in an explicit form such as a journal article, the tacit nature of knowledge means that it is a well-spring for more explicit forms and infinite opportunities for sharing, such as teaching, podcasts or public lectures.
2. Scholars, who possess tacit knowledge learned through experience, research or scholarship, are experts with the potential to act. They can also mediate or teach that knowledge to others, and expedite the knowledge flow process.
3. Barriers that affect a scholar's ability to act may be institutional, economic, political or cultural. For example, lack of institutional support or government funding for research mobilization, a political environment hostile to certain kinds of scholarship or intellectuals in general, or a disciplinary bias against the popularization of research, might restrict the scholar's willingness or ability to share knowledge. Another critical element for successful institutional support is for acceptance of open access principles at the disciplinary level, in individual departments, and informing hiring and performance evaluation practices. However, green open access, where scholars archive pre-print

versions of their work in institutional or other repositories is a way to achieve open access, especially for HSS scholars that do not have funding to pay for gold open access. Other kinds of knowledge mobilization, ranging from public lectures, media engagement, blogs or community based research projects are increasingly being supported at the institutional level as evidenced by York University's knowledge mobilization efforts and the growing number of institutions that have joined Research Impact Canada, and SSHRC's willingness to finance these efforts (SSHRC and Goss Gilroy, 2018). This dissertation could not address these concerns fully but acknowledges the significant institutional barriers to OA that some researchers face.

4. While individuals can learn from explicit forms of knowledge (made into information), the mediating presence of an actual expert assists in the cognitive decoding of that knowledge. This means that when a researcher engages with their research population, or communicates research results to stakeholders, or makes an effort to share knowledge outside of the scholarly community, this helps knowledge flow more efficiently. Based on my discussions with research participants, promoting relational connections between researchers and their disciplinary communities also has the potential to improve levels of trust. Communication theorists, like Harold Innis (1991 [1951])[208] have demonstrated that oral modes of communication that prioritize dialogue and relationships, are one way of overcoming monopolies of knowledge (as in the control of journal articles by large publishers).
5. Initially, my research project focused on the role of knowledge translators that are non-scholars who mediate knowledge from the academy to the public, like journalists or

[208] And other media ecologists like Walter Ong (2002 [1982]),

teachers. Possessing the cognitive capacity to interpret knowledge enables someone to act as a knowledge translator. However, knowledge translators do not necessarily have the same ability or responsibility to reflect on feedback like someone whose focus is on knowledge creation.

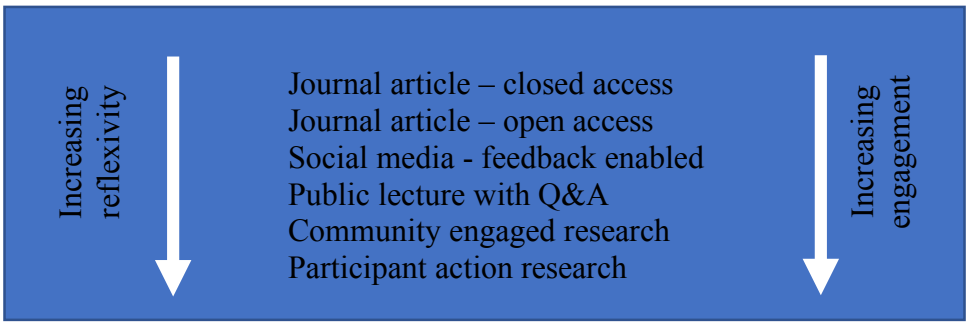
6. Flow requires engagement with others, which depends on motivation, time, effort and cognitive capacity on the part of the knowledge sharer as well as the receiver.

At the institutional level, knowledge flow explains some of the differences between HSS and STM cultures. First, the value or impacts of HSS research are difficult to know unless flow to society happens. The concept of the double hermeneutic is central to knowledge flow at the institutional level. As the object of HSS inquiry is society, or humanity, unless new theories flow to where they can be implemented, reflected on, and communicated back to the research community, it is unknown whether the theory has any explanatory or practical value. Knowledge flow from the academy to society and back again completes the research life cycle. However, the research life cycle does not flow in a continuous circle but can be described as a spiral pattern of flow, because research changes the research participants/population/stakeholders as well as the researcher. In this way, while flow on the individual or micro level can be compared to learning, flow on the macro level is akin to innovation. HSS research can result in knowledge that enables social innovation or problem solving, however the pace of innovation, or the flow of ideas, is also affected by the level of engagement and reflexivity.

The knowledge flow dynamic is also dependent on whether flow is mediated by technology, or directly through a person. The research interviews indicated that human mediation has a better chance of improving trust and building inclusive research communities than technological mediation. This was confirmed by comments from my research participants

who want a human resource, more so than a journal article. They trust expertise mediated through an actual expert, more so than through the internet.

Figure 8.2 Relationship between Engagement and Reflexivity



Knowledge flow is dependent on a continuum of engagement with increased levels of community engagement resulting in more opportunities for reflexivity/feedback. For example, when my research participant, SHL, communicated with stakeholders about cannabis use, this engagement with his community resulted in significant changes to occupational health and safety policy within his organization.

The table below illustrates the continuum of engagement, where more engagement is required depending on the media form and the intentions of the knowledge owner.

Table 8.1 Changes in Flow, Level of Engagement and Reflexivity Varies with Choice of Media Format

Media Format	Intended audience	Kind of Flow	Level of Engagement	Reflexivity
Journal (non-OA)	Peers Scholarly community	One-way for non-scholars Mostly one-way but peers have the ability to answer back through subsequent publications or contact with researcher	No engagement required outside academy Engagement with peers in the form of citations and referencing in subsequent research	Reflexivity is "trickle down" on the societal level Reflexivity is slow for scholarly community in present publishing environment
Journal OA	Peers Scholarly community Professionals practitioners Interested publics	Same as above, slow two-way for peers	Increased level of self-consciousness considering audience is wider; possibility of engagement with other audiences More commitment to openness	Pace of reflexivity faster than non-OA Increased likelihood that community of practice will have access to research and implement it

As increased levels of engagement expedite knowledge flow and increase the likelihood of knowledge transfer, engagement could be used as a measure for merit evaluation for HSS scholars. While publishing in a prestigious journal, with high impact factors, resulting in many citations, is one measure for research success; engaging directly with research populations, ensuring knowledge flow, and receiving valuable feedback is another, arguably more important measure of success.

At the same time, high levels of engagement (or motivation) on the part of the knowledge receiver, might also result in more successful transfer. Someone can learn (knowledge transfer can happen) if a student/interested public/knowledge translator is motivated to learn and has access to journal articles, enrolls in a university course, or attends a public lecture.

Finally, improving HSS knowledge flow has the potential to ensure the sustainability of the humanities and social sciences as well as to ensure that this scholarship is directed towards the public good.

1. The double hermeneutic ensures there is always fresh fodder for interpretation. Despite that HSS knowledge might have a short shelf life and research results might be local in nature, these features of HSS knowledge mean that the quest for answers to problems, and the need for understanding issues that are continually being transformed will continue.
2. Integrating HSS scholarship with the input from research participants, practitioners, stakeholders, policy makers, and other interested citizens is an essential response in a knowledge society where knowledgeable agents demand respect, are motivated and engaged, are highly educated, and are able to provide "on the ground" feedback. My interview research participants all fit this categorization. At the same time, the potential for misinterpretation is also a danger if a theoretical concept is not well understood when taken up in civil society or by a/the public sphere.
3. Protecting HSS research knowledge could be considered the ultimate form of privilege, especially if that research is paid for by public funding, and investigates the social, economic, political and cultural world, with the potential to affect or be of interest to select groups or all of society. In this sense, open access becomes not only a publishing choice, but a methodological imperative. Despite the claims that open access satisfies both left and right wing political perspectives regarding knowledge flow (Morrison, 2012), if research knowledge remains closed, this reinforces the privilege of the educated, "knowledge" class.
4. The conclusion that all research journal articles should be open access is impractical in the short term, somewhat foreseeable in the medium term, and may take a generation of new scholars to finally implement. Given the knowledge of the long history of scholarly

publishing, combined with Harold Innis' (1991[1951]) sweeping historical analysis of knowledge monopolies, it is not known whether Minerva's owl is coming or going, whether the OA movement will be the tipping point for paradigmatic change, or whether knowledge monopolies are even now reasserting their structural dominance.

5. Praxis has played a central role in this thesis. How can research (theory) translate into action if awareness of the research is limited? Before digitization of research results and open access, knowledge did flow to publics and get translated eventually, what I refer to as the "trickle down" effect that occurs when affected populations become aware of research. This is why OA is a key consideration for the double hermeneutic: the question is whether the double hermeneutic is expedited through open access, and other kinds of communication exchange with publics; or slowly permeates public awareness through teaching or research translation through the media, for example, rather than more universal and direct accessibility through the internet (access to journal articles). In addition, not all HSS research is emancipatory but communication of that research is valuable. Awareness of feminist theory or indigenous rights is obviously emancipatory, but even understanding research about video game use, teenage depression, or dystopian fiction is enlightening for parents struggling to raise teens. For example, there is a large body of communication research that studies the effects of video game use. Parents might benefit from knowing more about this research. Researchers might benefit from talking to even more parents and teachers about what kinds of effects video gaming is having on children.

Despite the ostensible assumption in this dissertation that research will lead to social innovation, solve problems and benefit the public, it is unrealistic to assume that all research has obvious public benefits, would be interesting to a non-specialist audience, or will contribute to social problem solving. As mentioned in Chapter four, numerous scholars (Funtowicz & Ravetz, 1993; Giddens, 1984; Grundmann & Stehr, 2003) argue that science cannot always provide reliable knowledge, and often creates more uncertainty. The central argument of this dissertation, however, that open access to research, or an even broader definition of open scholarship which includes more than just access to published research, has the potential to change the research dynamic from a top-down, one way communication approach, to a more inclusive and broader communicated form of scholarly inquiry. While the content of HSS research might change with more interaction with publics and stakeholder research communities, knowledge flow is about ensuring that the content reaches those who can use it, and perhaps benefit from it. Knowledge flow is about the evolution of the scholarly communication environment, though unintended consequences are always a fact of change.

At the outset of this project, knowledge mobilization was not considered as a framework for discussion of open access and the public good. Indeed, the concept of knowledge flow, and the conclusions reached through surveying and interviewing HSS knowledge translators and professionals came from a bottom up understanding of my research participants' experiences, attitudes and needs. KMb was introduced as one possible solution to the problem of knowledge flow that is hampered by closed access to research. In this sense, KMb becomes a strategy for overcoming the monopoly of knowledge enjoyed by publishers, by offering alternative ways of disseminating knowledge to those who need it. Indeed, OA and KMb are complementary strategies for enabling knowledge flow in the HSS.

Survey and interview research conclusions

Motivated by my original research question, the purpose of my survey and interviews was to understand knowledge translators, how they do research, and whether they have access to or awareness of HSS research. Many of my participants are informed, aware and active about research in general, have found their own ways of managing where access is difficult or scarce (e.g. hire university students, go to the library, order inter-library loans), and while some might be critical of university research, very few were university research –averse. Interview participants could define research well, were concerned about research quality, many have read or would read journal articles, and everyone does some kind of research on a regular basis. This is an indication that research is important to them. Conceivably, if they had access to more research, they would seek it out.

The research results provide insight into how to improve access and by extension promote knowledge flow. Integrating results from the survey with the many different responses from the interviews, and tying these together conceptually demanded a broad theoretical vision that could take into account the perspectives of researchers and publics, the themes that were raised by the research, and the challenges facing open access scholarship: tacit knowledge and mentorship, the value of HSS research; public stakeholder attitudes towards research; history and economics of scholarly communication; and monopolization of knowledge by scholarly publishers. The views of public stakeholders, the difficulties of knowledge translation for non-experts, and the discussion around HSS research impacts is actually much larger than the parameters of open access. The broad view offered by a knowledge flow metaphor takes into account the many stakeholders, viewpoints, disciplines and literatures that are discussing the issues around knowledge openness.

Several questions in the survey (Q6, Q7, Q10, Q11) tried to establish how aware or informed respondents were about HSS research. Showing journal research articles to interview participants was one tactic used to gauge interest in scholarly research and triangulate the research. The results of these methods indicate the perhaps banal conclusion that there *is* a connection between lack of access and lack of awareness, demand, understanding, or positive perception of HSS research. For example, when my interview participant, Lance, was shown articles about politics in Poland, his interest in access to research was piqued and his negative tone towards scholarly research softened. This seemingly simple point is connected to another realization about the value of HSS research: because the value of knowledge cannot be known completely in advance of acquiring it, knowledge acquires value because of the *perception* of its value. The question of the value of HSS is central to the problem of *access* to the HSS, because without access, there can be no perception of value, let alone realized value; no awareness will also result in no demand. Many of the research participants, from both the survey and the interviews, *are aware* of HSS research, despite paywalls. They use innovative ways to access research, and made numerous valuable suggestions on how to improve the research ecosystem.

The question of value is not only related to access to research but also to the content of that research. As I could not provide access to content for research participants, I could not ask questions specifically about research content. Interview participants did have opinions or judgements about HSS research they had encountered in the past. Concerns about research being driven by personal agendas, and by extension biased reporting on research, were mentioned in discussions. Other participants, however, acknowledge that the content was important to them, especially if they are involved in research outside of the university. Avoiding duplication of studies, understanding intellectual history, completing a literature review, conducting science-

based research, or filling in gaps in research are excellent reasons for open access to HSS journals for researchers outside of the academy.

Returning to the theoretical concept of value in a knowledge society, whether knowledge is "the axial principle" (Bell, 1980; p. 501); a productive force in society (Stehr 2005 [1994], p. 114); or an "almost pure public good" (Stiglitz, 1999, p. 308), scholars agree that knowledge has value in society, but measuring the value of HSS knowledge will always be problematic. Whether one critiques the need to measure impacts as a form of neoliberal ideology, sharing the results of HSS research and celebrating the successes of that research can also be understood as a benefit for the HSS community. As James Wilsdon, the Chair of the "Report of the Independent Review of the Role of Metrics in Research Assessment and Management" (2015), stated "some of the most precious qualities of academic culture resist simple quantification, and individual indicators can struggle to do justice to the richness and plurality of our research" (p. iii). Although not all research has practical, measureable, problem-solving value, all research has some kind of value for someone. This report critiquing the Research Excellence Framework in the UK likens the trend towards quantifying research impacts with a rising tide. Not only is research communication in a state of flux, but demands for new ways to measure the value of scholars' work have also destabilized trusted methods based on publishing efforts. University administrations lack mechanisms to reward researchers' engagement efforts, although knowledge mobilization scholarship (Phipps et al, 2016) and research impacts scholarship are studying this problem (Wilsdon et al, 2015.) Despite fears that HSS research will drown in a sea of quantitative indicators, encouraging public engagement with research might actually mutually benefit the research impacts challenge.

Research participants also made comments about the form of journal communication, such as confusing academic language or jargon, length, or complexity of ideas. These comments might indicate that the journal medium may not be the ideal form to use when communicating with the public. This critique, however, is also a practical commentary on what constitutes effective communication. Comments about clarity, language, and complexity bears consideration when deciding how best to reach any audience, let alone a public audience. These comments, however, were not universal, and were balanced by the willingness that survey participants and interview participants showed to read journals.

In discussing HSS research as a public good and the benefits of improving knowledge flow, the arguments presented also apply to the many examples of intangible value that the humanities and social sciences has to offer: the strange beauty of poetic language, the numinous mystery of religious thought, the reflective power of the play, the profound insight of the psychological assessment, the broad vision of the sociological theory, or the sound wisdom of the teacher. The products of HSS disciplines are not just research. Research, especially in the humanities, is not always presented in a journal-based format. This study has mostly focused on knowledge with a capital K that originates in research with a capital R, and published in a journal with a capital J. This discussion of open access, research impacts, the economics of scholarly publishing, and knowledge flow, which seems to be grounded in a positivist systems-based rationality, does not want to diminish the contributions to research that resist fitting into such a system. The purpose of envisioning knowledge flow is to be inclusive of all forms of scholarly research. Indeed, many performative forms of research are already oriented towards using innovative forms of research communication to promote knowledge flow (Douglas & Carless, 2013; Gergen & Gergen, 2011; Haseman, 2006; Liamputtong, 2010).

HSS research has value because somehow, somewhere, someone has a stake in it. While we may not be able to say that there is a market for every kind of research produced, sometimes there clearly is a market that is willing to pay. For example, governments and industries have consistently valued economics research to aid in economic forecasting. Several of my interviewees will pay for access to journal articles, or go to a university library, to ensure they are well-informed, especially those in research organizations outside of universities.

Many kinds of HSS research also have audiences – groups that would be interested in being intellectually enriched, better informed or entertained by research findings. For example, while some might consider research on the history of Japanese symbolism esoteric and obscure, anime artists and enthusiasts would be fascinated. This audience might demand access to this research if they knew it existed. My interviews with theatre professionals revealed that theatre-goers are highly interested in backstage production knowledge to enrich their understanding as audience members. This experiential approach to knowledge flow captures the attention of people in a way that access to a journal article might not. The concept of knowledge flow makes room for the myriad types of research the HSS disciplines encompass, and encourages creative and interactive ways to disseminate HSS knowledge outside the university.

Above all, this dissertation argues that Canadian citizens are stakeholders for all HSS research. First, Canadians are stakeholders by virtue of being taxpayers who support the merit good aspects of education and the creation of knowledge in general. Second, the population I focused on, the interested publics who are knowledge translators, HSS professionals and work for not for profit organizations, are direct stakeholders for HSS research. These publics sometimes even depend on the flow of HSS knowledge as it affects their operations and delivery of services, and helps to justify their funding. My research process was an attempt to tap into the

views and experiences of this group of stakeholders through surveys and interviews that confirmed there is interest, awareness and even demand. The key difference for this group is that although they may be interested and aware, they often lack the resources – either human or capital – to access HSS research that could inform their work. This group is neither audience, nor market – their need for access to knowledge that affects them elevates their right to access, yet their lack of ability to pay means that they are not able to participate in the research journal market as subscribers. For example, non-profit or government organizations that support people living in poverty need research about poverty and homelessness to create arguments for their continued funding. Calling them an audience for this research trivializes their level of need and their stake in research outcomes. They are also not simply consumers that demand the research for their continued financial benefit, yet cannot afford to pay.

Open Access methodology, research design conclusions and limitations

Publishing in an open access format is one method for making research open to anyone who might be interested. This decision, however, is only the tip of the methodological iceberg of choices that can promote knowledge flow. Judging by the example of SSHRC research funding applications, the choice of where and how to disseminate one's research (knowledge mobilization) is mostly considered separate from discussions of the research or methodology.[209] A major conclusion from this dissertation research is that the choice of openness motivated by the public good is a methodological decision that makes demands on how research is understood and why it is undertaken. Open access raises many questions about how research is conducted,

[209] SSHRC's Kmb definition: http://www.sshrc-crsh.gc.ca/funding-financement/programs-programmes/definitions-eng.aspx#km-mc; http://www.sshrc-crsh.gc.ca/funding-financement/policies-politiques/knowledge_mobilisation-mobilisation_des_connaissances-eng.aspx [for guidelines]

communicated and reassessed: whether the researcher will choose to use more accessible language in their work; how research participants will be involved and informed; and how feedback will be promoted or incorporated into subsequent iterations of that research. The concept of research that starts with the researcher's idea, is enabled with funding, and ends with a publication, does not take fully into account the exciting opportunities to create better research, with more impact, and greater awareness of the needs of public stakeholders. When knowledge mobilization becomes a central feature of how the research project is conducted, the researcher is making a methodological choice to enable greater knowledge flow.

Reflecting on the methodological choices made in this doctoral research project, greater clarity of purpose comes only with hindsight. Researchers learn throughout the research process, and the learning curve is steep in a PhD research project. Fortunately, hindsight keeps the wheels of research rolling. Narrowing my scope to just one humanities or social sciences discipline's response to open access, rather than attempting to account for all of the humanities and social sciences, would have focused the conclusions and cut down on the work involved. However, as explained in the introduction, there were good reasons to look at the whole HSS community as well. Regarding the survey, many questions now come to mind that could have been asked such as more follow-up questions around research transfer like, "If you could have access to the latest research in your field, what would be the best delivery format?", and "Would you visit a university library to get access to the latest research?" In both the survey and the interviews, I would have included questions that addressed reflexivity and communication between academic researchers and those who translate or use that research. While the research process for me was filled with many challenges, these unasked questions leave the door open for further research. I also would have formally interviewed key figures in the OA movement,

especially Canadian advocates, knowledge mobilization experts, and perhaps SSHRC policy analysts[210], as a way to expedite understanding of the topic, and tap into the benefits of knowledge flow.

Another methodological oversight was with respect to not gathering complete demographic data about gender, age, race, and education level that could have been shown to be significant for the access to research question. While demographic data was gathered for the survey initially, in the last version the choice was made to not include these questions due to the news event around personal data shared between Facebook and Cambridge Analytica, and a concern that potential participants would be more highly sensitized to sharing any personal information. Certainly, given the focus of the dissertation on the importance of access to knowledge for all, the intention was not to dismiss the importance of equity, diversity and inclusion.

In hindsight, and with more time or space, I may have also focused more on the humanities side of scholarly publishing, interviewing more humanities-related stakeholders and further contextualizing the OA debate within the humanities disciplines.

Space and time permitting I would have considered more closely some of the problems posed by OA publishing such as predatory publishers, scholars' motivations for publishing open access, and the problem of poor peer review practices. These issues undermine the scholarly communication system by flooding the market with possibly substandard work, and sow doubt in scholars' minds (and members of the public as demonstrated by some of the research interviews) about the merits of open access publishing.

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[210] I did arrange a conversation with SSHRC's OA policy person at Congress 2016 in Calgary, and arranged a joint panel presentation at Congress 2015 with three OA experts John Willinsky, Martin Eve and Heather Morrison. These were all informal interactions, however, and I would have liked to have recorded material to draw on.

Contributions to Scholarship

It is my hope that this dissertation will contribute to better understanding about the OA movement, the role of humanities and social sciences research, and the importance of knowledge flow for the public good, in both the scholarly community and the public sphere. This work has drawn upon many different areas of scholarship, and could be relevant for library and information studies perspectives on open access, knowledge mobilization and open scholarship discourse, scholarship addressing HSS methodology, and work in intellectual property.

This dissertation has also attempted to contribute to epistemological discussions about research and knowledge, within the fields of the economics of knowledge, the sociology of knowledge, and critical communication theory. More specifically, the research adds to knowledge society thinking, drawing together work from various scholars that work in this area such as Daniel Bell, Anthony Giddens and Nico Stehr.

Directions for Further Study

The research undertaken and the theoretical groundwork laid out in this exploratory dissertation offer many directions for further study. Some potential subsequent studies could include refining the knowledge flow concept, devising a practical way to conduct a knowledge flow analysis, and investigating connections between scholarly disciplines and professional practice with respect to knowledge sharing. Publishing all or part of the dissertation in either book or journal formats is high on my list of next steps.

Certainly, any contribution to communication theory and open access scholarship will be open to critique and refinement, both from within the scholarly community and from interested publics. I look forward to review and critique from the Open Access community, my research

participants, Canada's research policy organizations including SSHRC and CFHSS, and any other interested citizens. I intend to post a version of my dissertation online on a personal website that enables feedback. Borrowing an idea from one of my interview participants, I also intend to send an executive summary of my research to my research participants, open access scholars I met during my project, and targeted individuals.

Knowledge management scholarship has resulted in the practical application of many knowledge concepts in the analysis of firms. While this dissertation borrows somewhat from this scholarship, I would like to study knowledge management literature more closely to devise a comparable way of evaluating knowledge flow in non-profit organizations, government departments and other organizations with connections to HSS disciplines. Integrating the concept "communities of practice" (Lesser and Everest, 2001; Wenger, McDermott and Snyder, 2002) with the idea of a knowledge flow audit/analysis might result in a fruitful way of promoting access to research between scholarly and professional communities.

Many of my research participants indicated their organizations could benefit from more access to HSS research. The Alberta Mental Health Association and the Calgary Urban Project Society expressed the need for research to support their mandates, and their desire to have better research capacity. I have approached the Taylor Institute for Teaching and Learning to discuss creating a community-based research program for undergraduates and graduate students to engage in service learning co-ops with NGOs and non-profit organizations.

More research into public attitudes about scholarly research and expertise is also needed within a Canadian context, to improve the understanding we have about the impacts of HSS research, public understanding of HSS research, and anti-intellectualism. The SSHRC Ekos

surveys (2006, 2008) alerted the HSS community to the need for better knowledge mobilization practices, and further follow-up could be done to gauge progress.

A deeper analysis of who is included or excluded from access to research would be an extremely important addition to the OA literature. As referred to above, concerns surrounding equity, diversity and exclusion with respect to gender, race and others barriers such as geography i.e. rural versus urban citizens, should be addressed by future research. Questions around access to research are also related to research about other kinds of communication access such as Internet accessibility, access to government services, and access for people with disabilities.

Recently, I proposed a post-doctoral project, along with Heather de Forest of the Simon Fraser University library, analyzing the "Community Scholars Program." This program is being funded through Simon Fraser University's library, where NGOs across British Columbia have been given access to the university library database. I would like to study the experiences of these organizations with using the database, and see how access to research may have changed or enriched their practice.

At some point in my scholarly future, I would like to investigate the double hermeneutic in action, studying how scholarly or academic concepts and theories get taken up in practice. In several places in this dissertation I have mentioned ideas like colonialism, team-building, learning styles, and resilience that began as theoretical concepts that subsequently saw widespread diffusion into society. These concepts transformed practice, increased understanding, and were in turn edited by other scholars, practitioners, and citizens reflecting back changes to the concepts. This would be one way of studying the diffusion of knowledge

through case studies of HSS-based theories, as well as testing explanatory ability in the theory of knowledge flow.[211]

Finally, at several points in my dissertation I encountered aspects of the open access problem that need further investigation. While the academic literature on open access within library and information science is extensive, more interdisciplinary approaches to the problem will appeal to a greater proportion of the HSS community. A detailed analysis of the Open Access social movement and its key players would be very important, this dissertation only delving partially into the history of the movement. A critical discourse analysis of commercial publisher responses to Open Access would also be an important addition to the literature. An in-depth analysis of anti-intellectual perspectives, including interviews with people who hold these values to contextualize their understanding and experiences with post-secondary education, is also very much needed in our current political climate, and might promote the access to research cause further.

Conclusion

Open Access, as a strategy, can be seen as a grassroots movement that grew out of frustrations over unfair pricing and concerns about universal research access in the academic and library communities. The movement, however, is now reaching the point where institutions and funders are taking a strong stand in favour of access, evidenced by *Plan S* in Europe, and the many other institutional and funder mandates. This dissertation has tapped into the need for more collaboration and understanding between areas of scholarship that are similarly interested in

[211] This study would be following somewhat in the footsteps of the social construction of knowledge, and using the methods of science and technology studies that investigates the process of science making, but diverges from this science-war ravaged path to trace how social sciences concepts flow through and around agents rather than constructively shape them. It might also follow in the tradition that studies the history of ideas.

knowledge flow, but might not be connected in the minds of its specialists or proponents. The aims and purview of open access, knowledge mobilization, open science and community-based research share philosophical underpinnings that believe in the importance of research for the public good. Knowledge mobilization also is in a time of transition, where grassroots origins in community-based research and action research are now being adopted into discussions and analysis of research impacts. Even while the good news of institutional support is welcome, the concern over the next few years is to ensure that these grassroots concepts remain focused on the public good, and driven by scholars, researchers, interested publics, and other stakeholders in the knowledge creation process, rather than a strategy to control research funding based on instrumental research requirements and quantitative measurement of impacts.

This dissertation aimed to fill a gap in open access scholarship regarding the attitudes, experiences and needs of interested publics for humanities and social sciences research. It approached the problem from the perspective of citizen stakeholders in the access to knowledge debate. To date, new ways of publishing research have proliferated under the open access banner, but change has taken place mostly with the attitude that "if we build it they will they come." A key consideration of this approach is whether publics are "interested publics" – whether people are open to using university research, despite anti-intellectualism, despite lack of access, despite lack of deep understanding of disciplines. If there is evidence that publics want access, an even weak demand for it, then scholars are no longer just working from a knowledge-push perspective. There is also evidence of a reciprocal pull, or demand, from interested publics for research that might fulfill their needs. In the final analysis then, open access is more than a knowledge dissemination exercise, a way of bending the strong-arm of the major commercial

scholarly publishers, or an academic social movement of concern only to the academy. Open access is a way of putting research into action for the benefit of all.

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Appendix 1 Chart of Political Economy of Communications

Area of analysis	Major critique	Important concepts	Scholars/critics
Cultural Industries	More nuanced and complex analysis about the production of culture than Frankfurt School but continuing that heritage	Marketization, conglomeration,	Hesmondhalgh, Liege, Toynbee, du Gaye and Pryke, Wasko
Government policy and regulation of communication industries	Control of information and information technologies, critique of Western economies	Digital divide, net neutrality, access, NWICO	Smythe, Middleton, Mosco, OECD, Fuchs
Mass media, media ownership and democracy	How the mass media affects democracy and culture and identity. Economic analysis of the cultural industries focusing on ownership	Cultural imperialism. Media monopolies, vertical and horizontal integration. Audience commodity	H. Schiller, D. Schiller, McChesney, Curran, McChesney, Winseck
Information Society/Knowledge Economy, political economy of information	Study and Critique of the concept that changes in labour (numbers of information related jobs) combined with new technology have transformed society and economy	Postindustrial society, networks, ICT, information superhighway, neoliberalism, digitizalization	Porat, Machlup, Bell, Castells, Garnham, Webster, Mansell, Melody, Babe, Fuchs

Appendix 2 Versions of the Survey

As mentioned, the last version of the survey was edited down to encourage more participation, cut down on the time to complete the survey, and delete some of the questions that might have been considered too leading. The last version was also sent to a more specific population than the first version, focusing on community organizations, non-profits (NFP) and non-governmental organizations (NGOs). Survey Monkey records the time it takes to finish the survey, and the last version averaged 7 minutes, whereas the first 15 minutes.

Versions 2 and 3 were initially changed because of errors in the way the questions were gathering information in SurveyMonkey. For example, in V.1 Q7, the question was not set up correctly and would not allow respondents to select answers for both "my professional life" and "my personal life". As I had already started gathering responses, the SurveyMonkey program does not allow changes to the survey if this might somehow compromise the potential results. The only option is to create a new version of the survey and gather responses in the corrected version, later adding the first version respondents to this corrected batch. Given this requirement to create a new version, I used the opportunity to do a more detailed edit by clarifying text, changing question order, and adding or deleting questions.

Version 1	**Version 2**	**Version 3**	**Final**
Title: Accessing Canadian Social Sciences and Humanities Research Online – A Survey of Interested Citizens	**Title: Accessing Canadian SSH Research Online – A Survey of How Canadians Do Research**	**Title: How Canadians Do Research: Access to and Awareness of Research in the Humanities and Social Sciences**	**Title: How Canadians Do Research: Access to and Awareness of Research in the Humanities and Social Sciences**
Q2 Where do you go to find detailed expert information for your personal life? [List of choices see footnote][212]	Same	Amalgamated Q2 & Q3 V3 Q2: Where do you go to find detailed expert information* needed for your PERSONAL or PROFESSIONAL life?	**Q2 Final** Replaced with Q7 How often do you use the Internet to do research on topics that are of interest or importance to you?
Q3 Where do you go to find detailed expert information for your professional life?	Same	Deleted Replaced with V1 Q4: In the past month, did you search for expert information on a topic that is of interest or importance to you?	**Q3 Final** Where do you go to find detailed expert information for your professional life? [Note that list of choices edited slightly – see footnote][213]
Q4 In the past month, did you search for expert information on a topic	Same	Replaced with V1 Q5:	**Q4 Final** Replaced with Q2

[212] Trade publications; Internet (in general); professional association publications; peer reviewed research articles; public library; books; popular magazines; newspaper; news website; personal weblogs (blogs); social media i.e. Facebook; social media i.e. Twitter; All of the above; N/A I don't really need expert information

[213] Trade or professional association publications; peer reviewed research; books; national or local newspaper; public library; blogs or video blogs; magazines; facebook; news agency; carry out my own research; Wikipedia; Twitter; Hire a research firm; News headlines to my cell; All of the above; N/A I don't really need; Other social media

that is of interest or importance to you?		If yes, what sort of expert information were you searching for?	Where do you go to find detailed expert information for your personal life?
Q5 If yes, what sort of expert information were you searching for?	Same	Replaced with V1 Q6 What do you consider important when looking for information to support your personal or professional research needs?	**Q5 Final** Replaced with Q10 V1 In general, when doing research using the internet, how satisfied are you with the quality of expert information that is available to you?
Q6 What do you consider important when looking for information to support your personal or professional research needs?	Same	Replaced with V1 Q7 How often do you use the Internet to do research[214] on topics that are of interest or importance to you?	**Q6 Final** Replaced with Do you need or would you like access to the latest research in any of the topics below, for either your professional or personal life? The choices are from Q8 V.1 See below for list[215]
Q7 How often do you use the Internet to do research[216] on topics that are of interest or importance to you?	Fixed error to enable respondents to choose answers in both columns	Replaced with V1Q8 In the past month, can you recall doing research using the internet regarding (may choose more than one)	**Q7 Final** Replaced with Q9 V. 1 Are you aware that research on the above topics is conducted by SSH researchers at universities across Canada?
Q8 In the past month, can you recall doing research using the internet regarding (may choose more than one)[217]	Same	Replaced with V1 Q9 Are you aware that research on the above topics is conducted by SSH researchers at universities across Canada	**Q8 Final** Replaced with Q6 V1: What do you consider important when looking for information to support your personal or professional research needs?
Q9 Are you aware that research on the above topics is conducted by SSH	Same	Replaced with V1 Q10 In general, when doing research using the internet, how satisfied	**Q9 Final** Replaced with: Q11 V1 Generally, new research findings produced by university

[214] Definition: research on the internet, for the purposes of this survey, means using an internet search engine (such as Google) to find resources that will educate you about a topic of interest more deeply, to gain expertise in the area. This research is more than just searching for information like movie times, an address, or the latest news.
[215] Health and Medical; Parenting; Financial; Work/profession-related; social issue, current events; Local, provincial, or federal politics; Environment and Climate change; Financial; International news; Aboriginal issues; Law and justice; Parenting; The Internet and Digital Culture; Education; Entertainment
[216] Definition: research on the internet, for the purposes of this survey, means using an internet search engine (such as Google) to find resources that will educate you about a topic of interest more deeply, to gain expertise in the area. This research is more than just searching for information like movie times, an address, or the latest news.
[217] List: health and medical; parenting; financial; work/profession-related; current events; local, provincial or federal politics; international news; social issues; law and justice; aboriginal issues; environment and climate changes; education; entertainment; the digital world; other

researchers at universities across Canada		are you with the quality of expert information that is available to you?	researchers are communicated to peers and the public as an article in a peer-reviewed scholarly journal. If the topic interested you, or was of concern to you, would you read a full-length journal article (avg. 5000-7000 words?
Q10 In general, when doing research using the internet, how satisfied are you with the quality of expert information that is available to you?	Same	Replaced with Q11 V1Generally, new research findings produced by university researchers are communicated to peers and the public as an article in a peer-reviewed scholarly journal. If the topic interested you, or was of concern to you, would you read a full-length journal article (avg. 5000-7000 words?	**Q10 Final** Replaced with Q16 V1 Aside from post-secondary education you may have completed, since that time, have you ever needed to consult SSH research publications for your personal or professional life? [218]
Q11 Generally, new research findings produced by university researchers are communicated to peers and the public as an article in a peer-reviewed scholarly journal. If the topic interested you, or was of concern to you, would you read a full-length journal article (avg. 5000-7000 words?	Same	Replaced with V1 Q12 Right now, do you find yourself in a situation where you would like expert information on a topic that might be addressed by social sciences and humanities research?	**Q11 Final** Replaced with Q14 V1 Do you know how to find academic, peer-reviewed research?
Q12 Right now do you find yourself in a situation where you would like expert information on a topic that might be addressed by social sciences and humanities research?	Same	Replaced with V1 Q13 If yes, do you need expert information in any of the following areas? (list of SSHRC funding categories)	**Q12 Final** Replaced with Q18 V1 Currently, many SSH academic research articles posted on the internet are copyright protected and cannot be read unless an access toll (fee) is paid first to the publisher. Have you

[218] Additional text: Note that academic publications might include journal articles, chapters in books, or monographs (full-length books written by a single author).

			ever encountered an access fee when trying to access information on the internet? Deleted: Note: the funds are collected by the publisher and do not transfer to the researcher or their institution
Q13 If yes, do you need expert information in any of the following areas? (list of SSHRC funding categories)[219]	Same	Replaced with V1 Q16 Aside from post-secondary education you may have completed, since that time, have you ever needed to consult SSH research publications for your personal or professional life?	**Q13 Final** Replaced with Q19 V1: If yes, have you ever agree to pay for access to a full journal article on the internet that you were interested in reading for your personal or professional life?
Q14 Do you know how to find academic, peer-reviewed research?	Switched with Q15	Same as V1 Q14 Do you know how to find academic, peer-reviewed research?	**Q14 Final** Replaced with Q20 V1 One of the goals of the open access movement is to improve access worldwide to academic research results. Before completing this survey, have you ever heard about the issue of open access to research?
Q15 Are you interested in knowing more details about what kind of research is carried out at Canadian universities in any of the above areas?	Switched with Q14	Replaced with V1 Q24 Please indicate whether you have ever heard of, visited, or used these databases, many of which contain open access research articles, to find free SSH research	**Q15 Final** Replaced with V2 Q20 Did you know that university researchers are not paid royalties by the publisher when their published journal article is downloaded or purchased?
Q16 Aside from post-secondary education you may have completed,	Same	Replaced with V1 Q18	Moved to Q10 Final

[219] Agriculture; arts and culture; biotechnology; children & youth; communication; economic, regional and industrial development; education; elderly; employment and labour; energy and natural resources; environment and sustainability; ethics; family; financial and monetary systems; fisheries and forestry; gender issues; global climate change; globalization; health; housing; immigration; indigenous people; information technologies; innovation, industrial and technological development; international relations, development & trade; law and justice; leisure, recreation & tourism; literacy; management; mental health; multiculturalism & ethnic studies; northern development; official language minority communities; politics & government; population studies; post-secondary education & research; poverty; science & technology; social development & welfare; transportation; violence; women

since that time, have you ever needed to consult SSH research publications for your personal or professional life? [220]			
Q17 If yes, in what subject area did you need to find out more detailed information (in the past)? (SSHRC list) see previous footnote	Deleted. Replaced with V1 Q24: Please indicate whether you have ever heard of, visited, or used these databases, many of which contain open access research articles, to find free SSH research [V1 Q24)	Same as V1 Q19 If yes, have you ever agree to pay for access to a full journal article on the internet that you were interested in reading for your personal or professional life?	Deleted
Q18 Currently, many SSH academic research articles posted on the internet are copyright protected and cannot be read unless an access toll (fee) is paid first to the publisher. Have you ever encountered an access fee when trying to access information on the internet? Note: the funds are collected by the publisher and do not transfer to the researcher or their institution	Same	Replaced with V2 Q20 Did you know that university researchers are not paid royalties by the publisher when their published journal article is downloaded or purchased?	Moved to Q12 Final
Q19 If yes, have you ever agree to pay for access to a full journal article on the internet that you were interested in reading for your personal or professional life?	Same	Replaced with V1 Q20 One of the goals of the open access movement is to improve access worldwide to academic research results. Before completing this survey, have you ever heard	Moved to Q10 Final

[220] Additional text: Note that academic publications might include journal articles, chapters in books, or monographs (full-length books written by a single author).

Q20 One of the goals of the open access movement is to improve access worldwide to academic research results. Before completing this survey, have you ever heard about the issue of open access to research?	Moved to Q21 Add Question V2 Q20: Did you know that university researchers are not paid royalties by the publisher when their published journal article is downloaded or purchased?	Replaced with V2 Q23: The Open Access issue involves different views on the purpose of new knowledge produced through research. Open access advocates see research (especially information produced at publicly funded universities) as a public good, that should be shared for the benefit of all. Other positions might see research as a commodity, something that can be bought and sold, and the distribution should therefore be protected and controlled. Please indicate what side of the argument you favour, and provide any comments or questions you might have about this issue.	Moved to Q15 Final
Q21 One of the arguments used by the **Open Access** movement is that … [see p. --below for full text]	Moved to Q22 Replaced with: V1 Q20 One of the goals of the **Open Access** movement is to improve access worldwide to academic research results. Before completing this survey, have you ever heard about the issue of open access to research?	Replaced with V1 Q25 In 2015, the Canadian government created a policy that requires that all government funded research be made open access on the Internet within 12 months of publication. […] Are there other barriers that you consider a possible deterrent when it comes to accessing or using social sciences and humanities research for your personal or professional use? [See p. – for full text]	Deleted
Q22 The large multinational scholarly publishers, and some in the university community, would like to preserve how research is disseminated presently… [seep. -- below for full text]	Moved to Q23 Replaced with V1 Q21: One of the arguments used by the **Open Access** movement is that … [see p. --below for full text]	Replaced with V2 Q25 Before answering this survey, had you heard about this new policy?	Deleted

Q23 The arguments for and against open access have different views on the purpose of new knowledge produced through research. [see p. --below for full text]	Edited text of question: V2 Q23 The Open Access issue involves different views on the purpose of new knowledge produced through research. Open access advocates see research (especially information produced at publicly funded universities) as a public good, that should be shared for the benefit of all. Other positions might see research as a commodity, something that can be bought and sold, and the distribution should therefore be protected and controlled. Please indicate what side of the argument you favour, and provide any comments or questions you might have about this issue.	Replaced with V1 Q26 On the political spectrum, are your views usually: Added text: Generally speaking, a Right Wing political orientation prefers low taxes and little government intervention in the marketplace, lacks trust in government's ability to administer services, and values traditional institutions such as family as well as personal freedoms and a strong work ethic. A Left Wing political orientation favours higher taxes to allow for income redistribution and services, believes government should provide public goods such as healthcare, values human rights, equality and individual moral choice.	Deleted
Q24 Please indicate whether you have ever heard of, visited, or used these databases, many of which contain open access research articles, to find free SSH research	Moved to V2 Q17 Replaced with: V1 Q24: In 2015, the Canadian government created a policy that requires that all government funded research be made open access on the Internet within 12 months of publication. […] Are there other barriers that you consider a possible deterrent when it comes to accessing or using social sciences and humanities research for your personal or professional use? [See p. – for full text]	Replaced with V1 Q27 What is your highest level of formal educational achievement?	Deleted
Q25 In 2015, the Canadian government created a policy that requires that all government funded research be made open access on the Internet	Moved to V2 Q24 Added new question: V2 Q25 Before answering this survey, had you heard about this new policy?	Replaced with V1 Q28 What province/territory do you live in?	Deleted

within 12 months of publication. […] Are there other barriers that you consider a possible deterrent when it comes to accessing or using social sciences and humanities research for your personal or professional use? [See p. – for full text]			
Q26 On the political spectrum, are your views usually:	Same	Replaced withV1 Q29 What is your age?	Deleted
Q27 What is your highest level of formal educational achievement?	Same	Replaced withV1 Q30 What is your profession?	Deleted
Q28 What province/territory do you live in?	Same	Replaced with V1 Q31 Please indicate if your profession requires you to do any of the following tasks	Deleted
Q29 What is your age?	Same	Replaced with Q32 Are you presently affiliated with a post-secondary institution as a student, instructor, professor, administrator, or staff?	Deleted
Q30 What is your profession?	Same	Replaced with V1 Q33 Are you presently affiliated with a publishing company or with the publishing industry?	**Q16 Final**: Replaced with Q31 V1 [with edited phrasing] Please indicate if you perform any of the following tasks on a regular basis
Q31 Please indicate if your profession requires you to do any of the following tasks	Same	Replaced with V1 Q34 Would someone you know be interested in participating in this survey?	**Q17 Final**: Replaced with Q30 V1 What is your profession?
Q32 Are you presently affiliated with a post-secondary institution as a student, instructor, professor, administrator, or staff?	Same	Replaced with V1 Q35 Would you or someone you know be interested in participating in a focus group on the subject of public access to research in Canada?	**Q18 Final**: Replaced with Q32 V1 Are you presently affiliated with a post-secondary institution as a student, instructor, professor, administrator, or staff?
Q33 Are you presently affiliated with a publishing company or with the publishing industry?	Same	Replaced with V1 Q36 Would you be interested in the results of this research project?	**Q19 Final** Replaced with Q33 V1 Are you presently affiliated with a publishing company or with the publishing industry?

Q34 Would someone you know be interested in participating in this survey?	Same	Moved to V3 Q31	Deleted
Q35 Would you or someone you know be interested in participating in a focus group on the subject of public access to research in Canada?	Same	Moved to V3 Q32	Deleted
Q36 Would you be interested in the results of this research project?	Same	Moved to V3 Q33	Deleted

The changes to the title and opening question demonstrate the consistent internal debate I had regarding how to hook respondents with an easy but interesting title/first question that would motivate them to answer the rest of the survey. I wanted to ensure that respondents understood the survey was about research in the HSS in the Canadian public context. I experimented with different first questions, and felt the final version opener, **Q2 Final "How often do you use the Internet to do research on topics that are of interest or importance to you?"** was interesting and innocuous enough to reassure participants about the content of the survey and draw them in to participating. The next two questions (**Q3 Final and Q4 Final**), which also went through several iterations, established background research habits for my participants. **Q3 Final**, **"Where do you go to find expert information for your professional/personal life",** is a useful piece of information for many of my potential dissertation readers: publishers, librarians, communications scholars, journalists, research participants, and social scientists in general would be interested in knowing more about "information seeking behaviours" of the general public. This imagined audience influenced my choice of questions throughout the survey.

Note that the choices for participants for Q3 and Q4 went through a couple of iterations (Footnote 2 and 3). This editing was a result of participants' responses to the 'other' category, as well as an attempt to tighten up the choices and shorten the survey.

I worked at making the final version easier, as well as shorter to answer. I moved up **Q5 Final "how satisfied are you with the quality of expert information that is available to you?"** from Q10 V1, because of its general nature and to improve the flow of the survey.

In **Q6 Final "do you need or would you like access to the latest research in any of the topics below, for either your professional or personal life"** I was able to significantly shorten the survey. This question amalgamates the redundancy in Q8 V1, Q12 V1, Q13 V1, Q15 V1 and Q17 V1. Asking one question with a shorter set of choices is more precise and takes less time to read and answer. The results were complicated, however, by the different lists I provided in each of the versions of the survey, as well as the different wording of the question. I was attempting to determine if respondents wanted access to research from HSS disciplines, and also if respondents were aware of the various kinds of research in the HSS using follow-up questions that referred back to this list. I was also hoping to educate respondents about the different topics covered by HSS researchers, as originally, I used the list of disciplines identified by SSHRC. In hindsight however, I should have kept the list of choices the same, for better comparison

between versions. For this reason, I'm not comparing the popularity of topics, but rather whether respondents wanted access or not.

The follow-up question in **Q7 Final "Are you aware that research on the above topics is conducted by SSH researchers at universities across Canada?"** starts to differentiate between respondents' understanding and awareness of HSS research, aimed at directly answering my research question.

In **Q8 Final "What do you consider important when looking for information to support your personal or professional research needs?"** I also changed the responses somewhat. In the final version, I deleted answer choices: "The research is independently produced, without conflicts of interest," "The research has been conducted using reliable research methods and techniques," and
"The research is very new or cutting edge." I added answer choices: "The research results are very new," and "The research has been produced in the last five years." When analyzing the survey, I realized that the deleted choices were very popular with respondents: "the research has been conducted using reliable research methods and techniques" (57 people selected), and "the research is independently produced without conflicts of interest" (33 people selected). I deleted these options in the final version because I felt they required more elaboration or a definition. I also felt that if a research article is peer reviewed, it should be produced without conflicts of interest and using reliable research methods and techniques, so these are somewhat redundant. However, the high number of people that chose "the research has been conducted using reliable research method and techniques" was surprising to me. In retrospect, I should have not changed the answer responses to this question, despite the redundancy and lack of definitions. I also regret that I did not probe further what respondents thought 'reliability' meant, which would have been a very interesting question.

Q9 Final **"If the topic interested you, or was of concern to you, would you read a full-length journal article"** was not changed from the original Q16 V1.

Q10 Final (moved from Q16 V1) **"Aside from post-secondary education you may have completed, since that time, have you ever needed to consult SSH research publications for your personal or professional life"** was also not changed from its original.

Q11 Final **(**moved from Q14 V1) **"Do you know how to find academic, peer-reviewed research?"** was also not changed between versions.

Q12 Final (moved from Q18 V1), "**Have you ever encountered an access fee when trying to access information on the internet?**" was shortened by deleting the information: "Note: the funds are collected by the publisher and do not transfer to the researcher or their institution." This was deleted so that I could ask the more important question, in **Q15 Final** (moved from Q20 V2) "**Did you know that university researchers are not paid royalties by the publisher when their published journal article is downloaded or purchased**?" Asking this question allowed me to probe a bit deeper into how much respondents understood about the scholarly publishing process.

In Q13 Final and Q14 Final, not edited from first version, I conclude with specific questions about open access. **Q13 Final** (moved from Q19 V1) follows directly from Q12, **"If yes, have you ever agreed to pay for access to a full journal article on the internet that you were interested in reading for your personal or professional life?"** Q14 Final **(**moved from Q20 V1) **"One of the goals of the open access movement is to improve access worldwide to academic research results. Before completing this survey, have you ever heard about the issue of open access to research?",** zeros in specifically on my research question. The survey was designed to start out asking general questions and finish by asking the most specific ones I was really interested in.

The remaining questions (Q21 – 25 V1), were deleted because they were somewhat leading. Although they might have added to the understanding of the respondents, the complexity of the issues could not be fairly addressed by a survey.

In early versions of the survey, I asked demographic questions such as age, position on the political spectrum, education level, and province. In the final version, however, I deleted most of the demographic questions (Q26 – 29 V1) except those pertaining to respondents' professional practices or professions. This decision was based on whether I was concerned about the demographic indicators and what they might tell me. It was also a way to ensure people that I was not collecting data about them, in the wake of the Cambridge Analytica/Facebook scandal. Although these results would have provided some interesting data, and helped me to understand my research sample, I do not think it would have changed my understanding of the issues. I was not personally interested in the age of respondents or their political views, although this information would have been interesting to know if I had a much larger sample and could extrapolate results to the general population.