Organizing Intellectual Enterprise: An Institutional Ethnography of Social Science and the Canadian Institutes for Health Research (CIHR)

by

Katelin Elizabeth Bowes
B.A., Vancouver Island University, 2008

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in the Department of Sociology

Supervisory Committee

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Abstract

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This research investigates the work involved for social science graduate students (SSGS) in their development of an application for the Canadian Institutes of Health Research (CIHR). Central to CIHR's mandate is the desire to "excel according to internationally accepted standards of scientific excellence" (CIHR, 2010, p. 3) which frames its epistemological stance around a traditional conception of science. Social scientists utilize a wide range of methodologies and work from a variety of epistemological positions. Some use very traditional "scientifically accepted" methodologies, which are most often quantitative. However, many social scientists use a wide range of qualitative methods to produce knowledge. This project describes how SSGS learn to make a CIHR application, navigate the application process, and negotiate its content, as well as other activities involved. It discusses the double subordination they face from both their supervisors and CIHR as well as the difficulties and challenges they encountered when making the application. By interviewing graduate social scientists, and through a textual analysis of their CIHR applications, I examine how social science graduate students know and describe their experience of developing their social science research project into a CIHR grant application.

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Dedications

For Phill

Epigraph: A Note "On Intellectual Craftsmanship"

-- The abstracted empirical manner, the methodological inhibitions it sustains, the focus of its practicality, the qualities of mind its institutions tend to select and to train - these developments make questions about the social policies of the social sciences all the more urgent… What is at issue seems plain: if social science is not autonomous, it cannot be a publically responsible enterprise. As the means of research become larger and more expensive, they tend to be 'expropriated'; accordingly, only as social scientists, in some collective way, exercise full control over these means of research can social science in this style be truly autonomous. In so far as the individual social scientist is dependent in his work upon bureaucracies, he tends to lose his individual autonomy; in so far as social science consists of bureaucratic work, it tends to lose its social and political autonomy (C.W.Mills, 1959, p. 106-107, my emphasis).

Chapter 1. Introduction

> -- *One of the very worst things that happens to social scientists is that they feel the need to write of their 'plans' on only one occasion: when they are going to ask for money for a specific piece of research or 'a project.' It is as a request for funds that most 'planning' is done, or at least carefully written about. However standard the practice, I think this very bad: It is bound in some degree to be salesmanship, and, given prevailing expectations, very likely to result in painstaking pretensions; the project is likely to be 'presented,' rounded out in some arbitrary manner long before it ought to be; it is often a contrived thing, aimed at getting money for ulterior purposes, however valuable, as well as for the research presented* (C.W.Mills, 1959, p. 197, my emphasis).

The Canadian Institutes of Health Research (CIHR) was established in 2000 and replaced two federal research agencies, the National Health Research and Development Program and the Medical Research Council (Bisby, 2001). It was developed as a model to emphasize excellence and promote interdisciplinary work, partnerships, priority setting and solutions-focused research, and multidisciplinary and collaborative approaches to health research across biomedical, clinical, health systems and services, and the social, cultural, and environmental factors that affect the health of populations (Bisby, 2001; CIHR, 2010). In 2009, Dr. Pierre Chartrand, CIHR's Vice-President, stated that budget reorganization caused "changes to the funding of health research by the Social Science and Humanities Research Council (SSHRC)" causing the agency to "reduce the amount of funding it provides for health-related research that is eligible under the mandate of CIHR" (CIHR, 2009). In response to these changes, he reassured researchers receiving funding from SSHRC that "excellent funding opportunities for their research continue to exist at CIHR," and that CIHR would work closely with SSHRC to coordinate the

transition and to develop guidelines to determine which applications would be suitable for SSHRC or for CIHR (CIHR, 2009). In this 2009 address, he also welcomed applications "from all researchers committed to improved health" (ibid).

This thesis explicates the personal accounts and activities of social science graduate students in the development of CIHR funding applications. In developing my institutional ethnography (IE), I draw on data from five open-ended interviews with graduate students from varying social science disciplines, in which they 'walk me through' their accounts of actually making a CIHR application. IE differs from other research methodologies and processes used in social science disciplines in that it does not presuppose truth or usefulness by beginning with a preconceived research question or framework. Researchers using IE begin with particular experiences, accounts, or standpoints which are then linked to social webs by investigating the notions of 'work' and 'texts.' I begin by locating myself in the picture by describing my own experiences, I follow with an analysis of CIHR and its programming, and then, from the descriptions provided by social science graduate students, I address how it is that CIHR's texts and ideological framework enter into the everyday work processes of these social scientists during their work of making a CIHR application.

1.1 My experience with disciplinary boundaries

My interest in the inclusion of social science research into CIHR was fostered by an experience I had during my undergraduate studies where I pursued majors in both sociology and psychology. These studies put me in a confusing situation: I was expected to learn and produce knowledge in different ways specific to the discipline I was situated

in. I was expected to conduct research in distinct ways, to take up distinct epistemological positions for each discipline, and was taught and expected to read in distinct ways. Each discipline taught me an approach and discourse that would ground me in the discipline's knowledge.

When I initially decided to do a double major, there was skepticism from faculty members who were strongly embedded within their discipline's discourse. Some professors discouraged my interest in multiple disciplines, and believed it would harm me if I decided to pursue post-graduate studies in either discipline. These interactions made it difficult for me to learn and develop as a student, since many of my pursuits did not feel legitimate in one or the other epistemological framework. I had two disciplines presenting me with knowledge and information that they both considered to be the ideal. Granted, each discipline does approach its subject matter with different goals, and does formulate its research questions differently, I still believed that each discipline had characteristics that could be lent to the other. Despite my attempt to do interdisciplinary work, I was taught major distinctions between sociology and psychology, and was expected to keep their discourses and epistemologies separate. For example, in psychology I was encouraged to think of problems from a purely empirical perspective, to develop testable hypotheses, and to study phenomena with a methodology that could disconfirm a hypothesis. In sociology, I was encouraged to research using qualitative inquiry, from a feminist or phenomenological perspective, from a theoretical perspective, or by using an exploratory approach, and considered problems or ideas outside of a cause and effect relationship. By the end of my degree, I was able to see that *both* disciplines had valuable perspectives to contribute to the production of knowledge – but even across

these two social science disciplines, their epistemological perspectives were often incompatible.

Despite my best efforts to 'cross-pollinate'[1] the two social sciences, it was still difficult for me to express my academic views since I was situated within two distinct discourses. I would often present my professors with material I thought would spark interest for them and their studies. For example, I would encourage my sociology professors to read psychologist Lev Vygotsky and his theories such as *the zone of proximal development*, and I would encourage my psychology professors to read social philosopher George Herbert Mead, who argues that the self is developed over time through interactions with significant others, during our discussions on child development to contrast the more categorical teachings of Jean Piaget. My experience of studying within two disciplines allowed me access to a more holistic understanding of phenomena. This holistic approach was problematic, however, since I was often discouraged from presenting information from outside the framework of each discipline. Perhaps it was outside each discipline, but to my mind, it was by no means irrelevant, less valuable, or illegitimate.

In my studies, I was caught in a boundary between two disciplines with each presenting a hegemonic description of its epistemological position as most useful and correct. I was left feeling confused about how to proceed with my work. Each discipline was presenting me with contrasting kinds of knowledge, ways of knowing, and methods of knowing that were distinct and proper. The contrasting frameworks disempowered. I spent most of my time 'figuring out' how to write and what to write that would be

[1] Bowes, K. E. (2008). Cross-pollination: Linking the social sciences through the study of personality. A Directed Study in Psychology at Vancouver Island University.

appropriate for each discipline. To think and write otherwise, as sometimes was the case since I had learned more than one way, was frowned upon. This was exceptionally frustrating as I recognized both the strengths and limitations in each epistemological framework. I saw the need for one when the other fell down, and visa versa. For example, each discipline had one or more ways that its practitioners believed was the correct way to obtain *valid* knowledge. Each could attend to particular questions and not others. In my studies, I was confronted with what it meant to be a sociology student and what it meant to be a psychology student, and from day to day, I had to fit my work and thinking accordingly.

The experience I had during my undergraduate degree led me to consider other situations in which people are placed between two conflicting frameworks. I began asking questions: Why are people expected to fit their work into a certain discourse or framework, and how do they go about doing this? What coordinates and organizes this behaviour, and what implications does it have for them and their research? By listening to my peers and colleagues on campus and at conferences, I began to realize that many social scientists and social science graduate students were having similarly confusing epistemological experiences, especially when applying for funding. Several social scientists I casually spoke with expressed that they were often caught between the epistemological and ideological preferences of their specific discipline, and those of the funding agency. From my undergrad experience, I have come to realize that even across two social science disciplines, psychology and sociology, epistemological perspectives are often incompatible making it difficult for social scientists to see ‘eye to eye’. My supervisor understood my interests and suggested that I look into the Canadian Institutes

of Health Research (CIHR) and its inclusion of social scientists into its research-funding agency as a concrete way to explore this further.

1.2 "Just use our language. It's not that bad"

In 2010, I attended a grants-crafting workshop designed to assist social scientists in making sense of CIHR's application process. The workshop focused on tips for applying to CIHR and strategies for making and submitting a strong application. The workshop was very helpful and insightful. The social scientists sat in a large auditorium and watched an impressive PowerPoint presentation that conveyed information such as, *CIHR encourages team projects over individual projects, applied research projects, and the use of scientific language*. During the 'question and answer period' of the workshop, many social scientists raised a similar concern - the philosophies and traditions of their research did not seem to be appropriate for funding by the CIHR. They were concerned with the practicality of creating an application that would 'match' the CIHR's goals and style while still allowing them to do the research they wanted to do.

The goals and style that these social scientists referred to can be found in many areas of CIHR's organization. For example, CIHR's vision statement outlines the goals and expectations of its funded research:

> CIHR's vision is to position Canada as a world leader in the creation and use of health research knowledge that benefits Canadians and the global community (CIHR, 2010, p. 3).

In itself, this statement does not mandate any specific methodology. However, CIHR's three year implementation plan and progress report for 2010 – 13, can be used to interpret

this vision statement. It outlines CIHR's goals, performance measures, and the action to achieve these goals. From this document, I learned that one of CIHR's goals is to "*train, retain, and sustain outstanding researchers*" by strengthening their peer-review by increasing the "number and type of experts belonging to College of Reviewers" and also review the "scope and excellence of research supported" (CIHR, 2010, p.6). Another goal is to "*improve focus, coherence and impact from CIHR's strategic investments"* by establishing a "comprehensive process for selecting strategic priorities," and by reviewing the impact factor of the research they fund (CIHR, 2010, p. 7-8). Further, CIHR wants to "*reap the socioeconomic benefits from research through KT, [knowledge translation], and partnerships*" (CIHR, 2010, p. 10) through supporting more "evidence-informed policy making to improve health and the health system at the provincial, territorial and federal levels" (CIHR, 2010, p. 10). CIHR's action plan to achieve this goal is to "implement programs to support evidence-informed policy making and increase policy makers' access to high-quality evidence" (ibid).

These goals outline CIHR's objectives and how it hopes to accomplish them. Of particular interest at this time is the focus on and interest in knowledge translation and evidence-informed policy. Evidence-informed policy decisions are very popular in our modern political and social environments. This has created a call for research to focus on "problem solving through mastery of rules of statistical inference that allows translation of computerized results from clinical research into a configuration of systematic observation" (Hatt & Hatt, 2010, p, 4). There is an interest in this form of research because it adheres to international standards of scientific excellence making it universally relevant, and increases the ability for knowledge translation. Knowledge translation is a

process of interactions such as "synthesis, dissemination, exchange, and ethically-sound application of knowledge" between "researchers and knowledge users" (CIHR-IRSC, 2011). For CIHR, the goal is to translate knowledge into action in an attempt to improve the heath and health care services to Canadians. In essence, the belief is that applied research is the most valuable type of research because it is directly translatable to policy and direct action for health initiatives and change.

The concerns raised by social scientists at the grants-crafting workshop were about their ability to submit applications that CIHR would see as valuable and relevant, but still maintain their discipline's specificities. The workshop's speaker had a well-prepared suggestion to deal with this concern. She suggested that they compare it to going to a different country. In summary, she said, *imagine I travelled to foreign country and refused to speak the native language of where I was. How could I ask for help, how could I ask for food, how could I say anything? If I wanted something, I would have to learn the language, I would have to follow their rules, I would have to accommodate them.* This was her advice for the social scientist. Pretend you are in a different country. It would be absurd for you to not use the native language to communicate what you wanted. She proposed that social scientists do the same if they want to submit strong applications to CIHR. Use general scientific language. She shrugged off the validity of their concerns and basically said, *just use our language, it's not that bad.*

This workshop serves as an example of how social scientists are being organized to be in line with CIHR. While CIHR opens major funding opportunities to many social scientists, it also stands as an organization "founded on specific relations of power" (Diamond, 1992, p. 172). In 1992, Diamond studied the social or work organization of

nursing homes. He stated, "in the context of [nursing homes] being made into a business, caregiving becomes something that is bought and sold. This process involves both ownership and the construction of goods and services that can be measured and priced so that a bottom line can be brought into being. It entails the *enforcement of certain power relations*…" (ibid, p. 172, emphasis not original). From his description of the economic driven transformation of nursing homes, I see the same trend occurring in CIHR. It is transforming into a business in which health research is a commodity that is bought and sold. CIHR's interest in commercial research and knowledge translation signals a process of ownership and a transformation of research into intellectual property. This thesis traces the process of making the application and in doing so, emphasizes how social science graduate students actually fit their projects into and accommodate them to CIHR's framework and ideology. By exploring this process, we can begin to see how CIHR's relations of power are taken up by the social scientist and translated into a textual application.

Chapter 2. Understanding CIHR's organization

Before I begin to describe how social science graduate students actually designed their research into a CIHR application, and before we can begin to see how CIHR's relations of power are taken up by the social scientist and translated into a textual application, we must first understand some elements of CIHR's organization and programming.

2.1 Who is eligible for CIHR? And how are they eligible?

Until 2009, social scientists conducting research related to health would have applied to SSHRC; now they must apply to CIHR. The general guidelines for the eligibility of *subject matter* to SSHRC request that applications must come primarily from within the social sciences and humanities, and that the intended outcome of the research must "add to our understanding and knowledge of individuals, groups, and societies - what we think, how we live and how we interact with each other and the world around us" (GOVCANADA, 2010). For applications to CIHR, the general guidelines for the eligibility of *subject matter* request that research must "improve or have an impact on health and/or produce more effective health services and products and/or strengthen the Canadian health care system" (GOVCANADA, 2010). CIHR's broad criterion provides 'room' for applications from many disciplines in both the natural and social sciences, but perhaps, does not anticipate or make 'room' for the diversity found across the social science disciplines. My undergraduate experience demonstrated the difficulty of addressing the differences across social science disciplines. It is likely to be equally, if not more difficult to address the epistemological perspectives across the boundaries of

natural and social science.

Social scientists conducting research related to health must work within CIHR's eligibility criteria. The government of Canada's website (GOVCANADA, 2010) articulates these guidelines:

> The following guidelines should be considered in the decision to apply to a federal granting agency if the proposed research is in the field of health.
>
> **CIHR:**
>
> CIHR considers applications across the full spectrum of health research. CIHR categorizes health research in four broad themes: bio-medical research; clinical research; research respecting health systems and services; and research into the health of populations, societal and cultural dimensions of health, and environmental influences on health.
>
> **Social, Cultural, Environmental and Population Health:**
>
> Research with the goal of improving the health of the Canadian population, or of defined sub-populations, through a better understanding of the ways in which social, cultural, environmental, occupational and economic factors determine health status.
>
> **SSHRC:**
>
> Research that is primarily intended to improve health, produce more effective health services and products and/or strengthen the health care system in Canada or internationally (e.g., research concerning the treatment, prevention or diagnosis of a condition, the evaluation of the effectiveness of health programs, the development of health management systems, etc.) **is not eligible** for consideration at SSHRC.
>
> Research that is eligible under the mandate of CIHR will not be considered by SSHRC.

These guidelines to Canadian science funding policy mean that social science researchers studying issues related to medicine or health must apply to the CIHR for funding, rather than to SSHRC. Where SSHRC specifies that they support and encourage

research for *understanding* and development of more *knowledge* in an area, CIHR indicates that they support research that improves, produces, and impacts the health of Canadians and health care system in Canada . There are differences between CIHR and SSHRC's overall frameworks that determine each funding agency's foundation and research interests. CIHR's interest is in basic, physical, and applied research that can articulate CIHR's support for research that can generate "the important knowledge needed to inform better health policies and practices" (CIHRb, 2009). At a workshop titled, Integrating the Physical and Applied Sciences into Biomedical Research Workshop III,

> Invited presentations by Pierre Chartrand (Vice-President, Research, CIHR) and Suzanne Fortier (President, NSERC) provided a clear indication that both funding councils view as a priority the funding of research that integrates the biological, physical and applied sciences to solve pressing societal problems, as well as the establishment of better communication and joint initiatives to secure funding and drive research at these core discipline interfaces (CIHR-IRSCb, 2011).

Contrastively, SSHRC's acceptance of research that contributes to understanding and knowledge makes their eligibility criteria more holistic, less applied, and more open to alternative epistemologies and methods that can produce fine research and contribute to knowledge and thinking in the various disciplines involved.

2.2 CIHR's 13 Institutes and Defining Health

As the primary funder of health research in Canada, CIHR developed 13 institutes to accommodate the disciplinary differences of its applicants, as well as to share the responsibility of achieving their fundamental objective for "scientific excellence in the

creation of new knowledge and its translation into improved health for Canadians, more effective health services and products and a strengthened Canadian health care system" (CIHR, 2010). The 13 institutes are open to all applicants. No institute is specifically designated for social science research. While the creation of institutes appropriate for social science research is promising, "mandating change is not sufficient for effecting change" (Albert, Laberge, Hodges, Regehr, & Lingard, 2008, p. 2521). In a study focusing on CIHR, Bernier (2005), De Villiers (2005), and Morse (2006) investigated social scientists who conduct health research and suggested that the "current attempts to integrate the social sciences into this domain are encountering significant difficulties and resistance" likely in part "because social sciences must integrate themselves into a domain where the dominant research paradigm is experimental" (in Albert *et al.,* 2008, p. 2521). Further, of CIHR's 13 institutes, only one is concerned with 'population health', indicating an uneven preference for biomedical research and biomedical conceptions of health and health issues. Of the 13 available institutes, it is likely that a majority of social science applicants will be directed to the institute concerned with population health. However, as Raphael (2011) observes, "even this institute, [population health], provides most of its funding to traditional epidemiologically oriented, rather than critical social science analysis of health issues" (p. 5).

This tendency to favor funding research that is traditionally scientific in its orientation led me to observe that there are variations in the definitions of 'health' across biomedical and social science. Albert *et al*. (2008) comment that the differences in definitions may produce an "epistemological and cultural 'clash' between the biomedical sciences (mostly experimental and favoring a biological view of health) and the social

sciences (mostly non-experimental and favoring a more holistic view of health)" (p. 2521). For medical science, health is conceived as a "physiological and individual phenomenon, with social factors given only secondary considerations" (ibid, p. 2521). While SSHRC is equipped to deal with the diversity of research problems and methodologies in the social sciences, CIHR's preference for applied research and its much narrower conception of "good science" is at odds with much social science knowledge production and research.

2.3 The Composition of CIHR's Peer-Review Committees

CIHR's peer-review committees present a form of social organization. Peer-review committees are a commonly used form of evaluation not only in the natural sciences, but also across many disciplines of academia. At this time, I do not suggest a change in the process of evaluation. Rather, with CIHR's inclusion of social scientists, I draw attention to the concept of a *peer* and who CIHR has included on their committees. The scientific composition of CIHR's Peer-Review Committees (PRCs),[2] and CIHR's preference towards biomedical definitions and approaches to health, demonstrate CIHR's ideological framework and its tendency to support research adhering to the hegemonic paradigm of experimental science. CIHR describes the peer-review system on its website (CIHR-IRSC, 2011):

> Peer review is a process used by CIHR to review applications submitted for funding. Applications are evaluated by reviewers who are *experts in the same field* (*i.e., peers of the applicants*),[3] and their recommendations are used by CIHR

[2] For more information of CIHR's PRCs, or to map the peer-review process from start to finish, please visit http://www.cihr-irsc.gc.ca/e/37790.html
[3] Emphasis not original

> to make funding decisions. Peer review is the internationally accepted benchmark for ensuring quality and excellence in scientific research. In accordance with best practices employed by major international funding agencies, PRCs:
>
> - Evaluate applications submitted for a particular funding opportunity
> - Rate them on their merit using a defined set of evaluation criteria so they can be ranked by CIHR in order of priority for funding
> - Recommend the funds needed to support the research
>
> PRCs make recommendations for funding to the Chief Scientific Officer and Chief Financial Officer, which [sic] in turn make recommendations to Scientific Council (SC); SC provides final approval… [The SC] governs all aspects of research-related decision making. SC provides scientific leadership and advice to Governing Council (GC) on health research and knowledge translation (KT) priorities and strategies, and recommends investment strategies in accordance with CIHR's 5-year Strategic Plan.
>
> The integrity of the peer review process relies on well established principles and policies that:
>
> - Ensure fair and effective evaluation
> - Support CIHR objectives and strategic funding targets.

In its description of peer-review, CIHR assures applicants that PRCs are comprised of peers. To determine who comprises the PRCs, I obtained the 2009/2010 committees for Aboriginal research and for population health. Many members of the Aboriginal health PRCs *do* work in Aboriginal research of some sort. For example, Laura Arbour, UBC, a member of the Aboriginal health PRC, works for the department of medical genetics. She works in Aboriginal health research and her expertise is in "Clinical Genetics, Clinical Medicine, Ethics, Genetic Disorders among Aboriginal populations, Medicine, Northern Aboriginal Health Issues as they pertain to genetics, Population Health" (FNEHIN, 2011). While her membership on this Aboriginal health research peer-

review committee is appropriate, as she is an in Aboriginal health research, her background and epistemological training is significantly different from a social science applicant's training and research. Technically, she is a peer to social scientists who do Aboriginal-health research, in that they both do Aboriginal-health research. However, this 'peer' status does not extend to the many of the research approaches characterizing the social sciences.

The membership information of the PRCs is available on CIHR's website.

Table 1. Fall 2009 – Aboriginal Health Research PRC

Member's Name	**Member's discipline/expertise**
Arbour, Laura	Department of Medical Genetics[4]
Clearsky, Lorne	Clinical Assistant Professor Department of Medicine/ Community Health Sciences[5]
Dion-Stout, Madeleine	School of Nursing[6]
Gregory, David	Faculty of Health Sciences [7] Bsc, MA Nursing, PhD Nursing & Medical Anthropology
Reimer-Kirkham, Sheryl	Department of Nursing[8]
Tait, Caroline	Department of Women's and Gender Studies[9]
Toth, Ellen	Division of Endocrinology, Department of Medicine[10]

[4]http://www.fnehin.ca/site.php/researchers/detail/laura_arbour/
[5]http://www.ucalgary.ca/cgibin/medicine/deans/detail.pl?title=Dr.&first=Lorne&last=Clearsky&area=403&phone=&phone2=&fax=&email=lornec@fnepicentre.org&addr1=2%20Wolf%20Crescent&addr2=Redwood%20Meadows,%20AB%20%20%20T3Z%201A3&addr3=&addr4=%20&rank=Clinical%20Assistant%20Professor&dept1=Medicine&dept2=Community%20Health%20Sciences&dept3=&dept4=&listtitle=
[6]http://www.nursing.ubc.ca/Faculty/biopage.aspx?c=75.7429864739964
[7]http://www.uleth.ca/healthsciences/gregory
[8]http://twu.ca/academics/faculty/profiles/sheryl-reimer-kirkham.html
[9]http://www.mcgill.ca/resilience/people/tait/
[10]http://www.adi.med.ualberta.ca/Home/Research/PrincipalInvestigators/Bio/toth.cfm

Varcoe, Colleen	School of Nursing[11]

Table 2. Fall 2009 - Public, Community, and Population health PRC

Member's Name	**Member's discipline/expertise**
Alter, David	Department of Medicine[12]
Pourbohloul, Babak	Division of Mathematical Modeling[13] – PhD in theoretical physics
Ross, Nancy	Department of Geography[14]
Yasui, Ykata	Canada Research Chair (Tier II) in Biostatistics and Epidemiologic Methods [15]
Anand, Sonia	Department of Medicine[16]
Bird, Chloe	Senior Social Scientist[17]
Colman, Ian	School of Public Health: Focus on epidemiology of common mental illnesses in the general population[18]
Dendukuri, Nandini	Department of Medicine at McGill University. Assistant Professor in the Department of Epidemiology and Biostatistics[19]
Godwin, Marshall	Faculty of Medicine[20]

[11]http://www.nursing.ubc.ca/faculty/biopage.aspx?c=15.3297097167559
[12]http://www.hpme.utoronto.ca/about/faculty/list/alter.htm
[13]http://www.mathmodeling.cdc.ubc.ca/members_babak.htm
[14]http://www.geog.mcgill.ca/faculty/ross/
[15]http://www.ualberta.ca/~yyasui/homepage.html
[16]http://fhs.mcmaster.ca/ceb/faculty_member_anand.htm
[17]http://www.rand.org/about/people/b/bird_chloe_e.html
[18]http://www.publichealth.ualberta.ca/en/research/researchers_supersivors/faculty/colman.aspx
[19]http://www.mcgill.ca/tau/staff/nandini/
[20]http://www.med.mun.ca/Medicine/Faculty/Godwin,-Marshall.aspx

Punthakee, Zubin	Department of Medicine and Department of Pediatrics - Division of Endocrinology and Metabolism[21]
Wood, Evan	Clinical Associate Professor of Medicine,[22]

NB[23]- I accessed the footnoted websites to gain information on these members on March 25, 2011.

2.4 Biomedical and Clinician Scientists' Perceptions of Social Scientists: What this means for their inclusion

As noted in the PRCs tables above, the majority of members on CIHR's PRCs for Aboriginal-health research, and population-health research are from outside the disciplines of social science. Research by Albert, Laberge, and Hodges (2009) investigated biomedical and clinician scientists' perception of social sciences in health research in Canada, and stated, "understanding the perceptions of biomedical and clinician scientists as they relate to the social sciences is critical because of the high status these groups typically hold in the health research field, and consequently the symbolic power they wield over it. As a result, their perceptions… are endowed with the power to influence the entry and status of social scientists within this field" (p. 193). Albert *et al.* (2008) found that respondents had mixed perceptions of social science research. Those with positive perceptions said "the legitimacy of a method depends on its capacity to adequately respond to a research question and not on its conformity to the experimental canon" (p. 2521). Those with negative reception to social science in Canadian health research "maintained that social sciences cannot generate valid and reliable results because they are not conducive to the experimental design as a methodological approach" (p. 2521). For example, one of his respondents in his 2009

[21]http://fhs.mcmaster.ca/medicine/endocrinology/faculty_member_punthakee.htm
[22]http://www.icsdp.org/network/scientific_board/evan_wood.aspx
[23] http://www.icsdp.org/network/scientific_board/evan_wood.aspx

study argued,

> I'm absolutely against the idea of giving more money to the social sciences, because what you're going to do is take money from superior science and put it into inferior science. And I don't think you breed a culture of excellence by demanding mediocrity. You don't get a good scientific culture by saying: 'Oh, you guys don't have to be as good' (p. 187).

Another informant from his 2008 study stated,

> I think that qualitative research primarily serves as a preliminary phase to quantitative research. I think that when we have a finding from a qualitative study, we must try to verify it as much as possible in a quantitative manner. We say that numbers talk; so it's better when we can quantify results (p. 2526).

In CIHR, the idea of "good health research" and the biomedical definition of "heath" dominate its agency's vision, mandate, and the PRCs. CIHR's mandate states that it wishes to "excel according to internationally accepted standards of scientific excellence" (CIHR, 2010, p. 3). While CIHR is inclusive of many forms of social science research, certain forms cannot, and do not, match CIHR's goals, visions, and guidelines. As such, one might ask whether CIHR is "willing to redraw the boundaries of legitimate health research to allow the entry of social scientists in a territory they have occupied for decades? More specifically, are they willing to redefine "good" science in a way that would allow the inclusion of non-experimental and non-clinical research?" (Albert *et al.*, 2009, p. 173). Graham, Adelson, Fortin, Bibeau, Lock, Hyde, Macdonald, Olazabal, Stephenson, and Waldram (2011) share concern with CIHR's inclusion of social science. They note,

> While CIHR has supported some medical anthropology, our researchers have had

> less success with CIHR for critically engaged, qualitative research, particularly in international settings… Many anthropologists are concerned. Even though some have had success with CIHR, this has often been accomplished by downplaying the anthropological aspects of their work. There remain considerable impediments to supporting social sciences and humanities health research at CIHR. We note, in particular, fundamental epistemological and practical challenges with CIHR's targeted funding priorities favouring commercial research with industry partnerships and research that addresses the needs of decision makers…We are deeply concerned that what is currently understood as 'qualitative health research' at CIHR does not include the critical social sciences; rather, it is evaluative and positivist in orientation… Even as CIHR is mandated to fund social sciences health research, we face a decade-long history of inattention by CIHR to the fundamental epistemological research modalities, objectives and outcomes common in the social sciences. To date, no CIHR peer-review committee is composed substantially of social scientists…Researchers must second-guess whether they're expected to design their research as short-term, hypothesis-driven evaluative studies, eligible for funding only if relevant to policymakers and, ultimately, to the health of Canadians, as the CIHR mandate suggests (p. 1).

The concerns raised by Graham *et al.* (2011), Albert *et al.* (2008, 2009), and Raphael (2011) are also described by the graduate student social scientists I spoke with, which will be described later in this thesis. The concerns raised also suggest that while CIHR's methodological and ideological preferences may be enabling and inclusive for many social scientists' research, they are also constraining and exclusive for social scientists who use a wide range of qualitative methods to produce knowledge. Many health based social science research projects can fit within CIHR's eligibility criteria, scientific mandate, and application form; problematically however, others cannot fit and accommodate these methodological preferences. The federal granting agencies state "the

use of social science or humanities theories, methodologies and hypotheses is, in and of itself, not sufficient to make the proposal eligible at SSHRC" (GOVCANADA, 2010). These stipulations make it unclear where researchers whose projects do not fit the "typical" CIHR medical-model criteria can, or should go for funding. This situation places many social scientists in a confusing situation.

2.5 Reflexive Entry

During the course of this research, many people inquired about my research topic with interest. Most people were excited and commented that 'it was about time someone researched this'. I also had people say to me, 'you must really hate quantitative methods hey!?' When I heard this, I was taken aback as it was never my intention to contribute to the divide and debate between qualitative and quantitative methodologies. The nature of my research does, however, draw attention to CIHR's underrepresentation of research methods that do not adhere to Traditional Scientific[24] modes of inquiry. At this time, only certain forms of social science knowledge appear to be accepted by CIHR, which legitimizes those methods that accommodate or match its mandate, and delegitimizes and excludes those that do not. I believe that we need many kinds of research inquiry since each kind can ask different questions, can start in different places, and can represent various people in different ways. Accordingly, I argue that each methodology contributes a unique perspective and understanding to health care and the health care system. Again, it is not my intention to place a moral value on certain methodologies over others.

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[24] In this thesis, I use the words"traditional science", and I often compare the style of research done by social scientists to science. In doing so, I do not suggest that qualitative and social science research cannot be recognized as scientific. I believe that qualitative and social science research is in no way less superior or rigorous than research done by natural scientists. The problem is in the evaluation of social science. In this thesis, I aim to highlight a paradigm of science that is associated with the traditions and methods of positivist philosophy when I use the words science, and traditional science.

However, it is my intention to support the inclusion of all forms of social science and epistemologies, especially those that do not easily or appropriately fit within CIHR's methodological preference for traditional scientific inquiry. It is these alternative epistemologies that challenge our 'taken-for-granted' methodological, political, and social assumptions, and can approach and develop problematics that are not approachable or even knowable from a traditional scientific discourse.

A paper written by Canadian sociologists Mykhalovskiy, Armstrong, Armstrong, Bourgeault, Choiniere, Lexchin, Peters, & White (2008) demonstrates the strengths of qualitative social science research. These authors respond to a "to a recent call to move beyond the micro-politics of the qualitative research encounter to consider the overall political effects of qualitative research" (p. 195). This call to reconsider the role of qualitative research is in line with CIHR's agenda for evidence-based decision making and demonstrates its social and political position regarding the usefulness of qualitative research. Mykhalovskiy *et al.* (2008) "argue that the political effects of [qualitative] research are partly enabled by [the] mundane practices internal to the research process" (p. 195). This argument suggests that qualitative research must maintain its micro focus if we are to contribute political effects. This goes against a push for social scientists to adopt a more traditional scientific method in their research and against the desire for traditional evidence-based research practices. This paper considers a qualitative research practice, an immanent critique, which was used to study "the introduction of continuous quality improvements in Ontario hospitals" (p. 195).

Mykhalovskiy *et al.* (2008) describe their research and the usefulness of an immanent critique:

> Describing our research as a form of immanent critique locates our work within the trajectory of Marxist critique of ideology. Within the Marxist tradition, immanent critique is polysemous, referencing a heterogeneous critical practice (Forst, 1996; Lohmann, 1986). As we orient to it, immanent critique foregrounds an interest in exploring tensions and/or contradictions within authoritative forms of knowledge. It recommends an exploration of how claims that are internal to or *immanent* in a particular authoritative discourse are experienced by those who have been excluded from their formulation. Our effort to 'operationalize' immanent critique by developing a practice of empirical research informed by it, took place over the course of investigations focused on the introduction of neo-liberal reforms to hospital care in Canada. The project of inquiry we developed draws centrally on qualitative methods. It moves from claims that are internal to specific managerial initiatives and explores them against the experiences that health care workers have of those same initiative claims. It aims to complicate managerial claims about private sector reform and its evidentiary base while intervening in relations of applied research that support managerial ways of knowing health care (Mykhalovskiy *et al*., 2008, p. 195 - 196).

This research project contributes to much debate about research that does not accommodate positivist research conventions and its ability to provide useful knowledge about the health care system. This research also contributes to the "pubic discourse about managerial reform initiatives" (ibid). Mykhalovskiy *et al.* (2008), and the informants I spoke with, anticipated the dismissal of their research and stated that one response would be to "enlist more established forms of qualitative social research" (p. 201). They further explain their views:

> Some of us have indeed experimented with that approach. But in our collective view, the democratizing potential of the narrative is thus lost, as is the full analytic potential of an inquiry that, beginning from workers' experiences, locates

> the effects of managerial initiatives in a broad political economy. So we have stuck to our guns so to speak, exploring in an ongoing way the disruptive potential of the anecdote (p. 201).

This paper by Mykhalovskiy *et al.* (2008) might be read as a resource for an immanent critique of CIHR's own priorities. It suggests that if we are to truly provide "more effective health services and products and a strengthened Canadian health-care system" (CIHR, 2010) alternative epistemologies and knowledges must be included within CIHR.

Chapter 3. Institutional Ethnography

3.1 Understanding Institutional Ethnography

Smith's (1987, 1990a, 1990b, 1999, 2005, 2006a) institutional ethnography (IE) was used in this thesis to research the inclusion of social scientists within CIHR. IE is a method of inquiry that "converts Dorothy E. Smith's (2005) theory of the social organization of knowledge into a research practice" (Hussey, 2007, p. 8). Using IE, a researcher can describe, "how people's activities are socially organized in a particular way as they go about the routine activities of their daily lives" (McGibbon, Peter, & Gallop, 2010, p. 1356). Institutional ethnographers look at the taken-for-granted forms of social organization that people engage in:

> mundane activities as buying groceries, borrowing a library book, eating in a restaurant. We also encounter social organization when we engage with the state or large bureaucracies in requesting services or reporting information about ourselves—submitting details of our income to the tax department, for example, or our motor vehicle for insurance purposes. The point to understand about socially-organized activities is that we all play a part in generating the phenomena that seem to occur independently (Campbell and Gregor, 2008, p. 28).

The grounding for institutional ethnographies can be attributed to Karl Marx's materialist work in *The German Ideology* in which he and Engels committed themselves to begin not from concepts or principles, but from actual individuals, their work or labour and the material conditions thereof. Smith has transposed that in developing institutional ethnography as a social science beginning with the "the actual *activities* of actual individuals and the material conditions of those activities" (Smith, 1990a, p. 6, emphasis

added). Institutional ethnographers situate their inquiry in the same place, the actual experiences and the actual doings of real people in the material world. Using this as an entrance for guiding my research allows me to explore and discover the properties of particular social organizations within CIHR (Smith, 1990a). Marx's materialism is also central to this inquiry; it figures in several ways during an institutional ethnographic inquiry and can be established by studying actual people and their actual, material existence. Not only is there interest in what they do, but there is also interest in *how they do it, their knowledge of doing it, and what guides and/or inhibits them in their doings.* These specifics are called the *actualities* and concentrate on the particulars of people's doings and the "taken-for-granted" activities or *work* (Smith, 1990a).

Smith's generous concept of work helps the institutional ethnographer "understand what people *do* in the course of their everyday lives… everything that people know how to do and that their daily lives require them to do" whether they view what they do as work or not, and regardless of whether they name what they do as work or not (Campbell and Gregor, 2008, p. 72). During personal communication with Dorothy Smith in a graduate seminar course at the University of Victoria in 2009, she provided examples of her concept of work to help the class learn to think about work differently. She explained that activities such as waiting for the bus, or waiting for the doctor, or taking medication are considered as work from an IE analytic. Using this concept of work brings the everyday into focus, regardless of how the informant views and understands her work. Beginning from this concept of work, I look to discover how social science graduate students actually make CIHR applications. Using a narrative account of their experiences and focusing on their work, the questions I address in this thesis are about "how things

are socially organized, or put together so that they happen as they do" (Campbell and Gregor, 2008, p. 29). In other words, how are CIHR and its application process organized and put together, so that the social scientist creates a proposal as she does. This account will illustrate the "knowledge, skills, and experience involved" in the process (Campbell and Gregor, 2008, p. 72).

3.2 Social Organization, Coordination and Organization

Starting with real people and their actual doings is just the beginning of an institutional ethnography. In an IE, the researcher is also interested in how the everyday happens "as it does" (Smith, 2006a) and what relations are involved in 'coordinating and organizing' the actual lives and experiences of people. For institutional ethnographers, the concept of *social relations* is used as a technical term (Campbell and Gregor, 2008). In IE,

> social relations are not done to people, nor do they just happen to people. Rather, people actively constitute social relations. People participate in social relations, often unknowingly, as they act competently and knowledgeably to concert and coordinate their own actions with professional standards or family expectations or organizational rules… The social relations of this series of actions are invisible, and being part of them does not require the exercise of much, if any, conscious thought. It is only when something goes unaccountably wrong that we stop and notice the organized complexity of our lives that we otherwise navigate so easily (ibid, p. 31).

In this research, I am interested in how the creation of the CIHR application happens as it does. I look into the social relations that constitute social science graduate students' reality. By using the words 'coordinate' and 'organize' I am not treating the

"social as existing over and above individuals and determining their behaviour" (Smith, 2005, p. 223); rather, I am taking the social "as a focus on how *actual* people are coordinating their [own] activities" (Smith, 2005, p. 223). By using the terms coordinating and organizing, I can avoid "using concepts that hide the active thought, concepts, [and] ideas" that people have (Smith, 2005, p. 223). Using IE, my research concentrates on the actual doings of social science graduate students who make CIHR applications, rather than treating them in abstraction, as is done when social phenomena are represented through variables and correlations.

3.3 Texts and the Ruling Relations

> -- *Objects become what they are to us by virtue of what we do with them and where, when and with whom they are used. Objects organize our activities in terms of what it is possible to do with them* (Campbell and Gregor, 2008, p. 28, my emphasis).

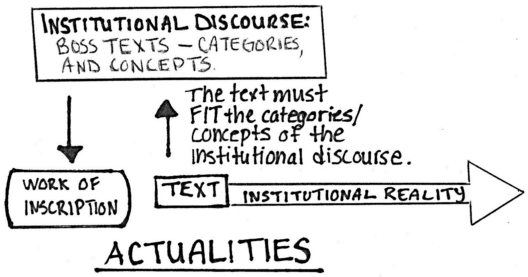
In some instances objects have very specific functions, and in other instances the function of an object is flexible. For example, "at some times of the day your coffee table becomes a footstool as you watch TV or a desk as you prepare your term paper. But it would never work as a bed on which you could stretch out for a nap" (Campbell and Gregor, 2008, p. 28). Following a "belief in the objectivity of things", the social ontology of objects is established during use and conversation about it (ibid, p. 29). According to Campbell and Gregor (2008), "objects may be accepted as "having" a particular form, but in institutional ethnography, we make the assumption that people constitute them as such" (p. 28). Texts can be seen as object and generally have specific functions. In our case, CIHR and its ruling relations have the authority to correctly define how and when

an application text is properly used, which organizes how people interact with and use the text.

Investigating texts is a useful strategy of inquiry in opening up investigation to the "aspects of power operating in social life that otherwise lie hidden and mysterious" (Campbell and Gregor, 2008, p. 32). When investigating social relations, the process of analyzing texts allows institutional ethnographers to discover how people are related in pre-determined ways, and how their actions and work are similarly coordinated by their engagement with texts (Campbell and Gregor, 2008). The power of texts lies in their ability "to hold [and shape] people to act in a particular way" (ibid, p. 32). In this thesis, I am interested in CIHR's texts, the application forms and CIHR's website specifically, that shape the social science graduate students' application in particular ways. This textual power is a form of ruling. For Smith, *ruling* is the name of the socially organized exercise of power that shapes peoples lives. Further, she stresses that in contemporary societies, texts are caught up in ruling and are the "determinations of many of our actions" (ibid). When social scientists interact with CIHR by developing an application text, they are participating in a textually mediated relation. How, why, where, and with whom social science graduate students develop the text into an application is part of the application process. This process is subject to CIHR's written and un-written rules about eligibility and so on. As such, the social scientist carries a ruling relation into the development of her application.

3.3.1 Boss texts and filling shells[25]

Figure 1. How Boss Texts Work



Focusing on the *development* of the text is crucial for we are looking at texts in motion; we are looking at how texts *inscribe* actualities and pass them on into sites of institutional action - how they coordinate institutional action and how they create the actualities of institutions" (Smith, personal communication, October 2nd 2009). An example of text in motion is the process of filling out a form, or in our case, an application.

Applications, CIHR's website, its concepts and ideologies, and forms can be seen as 'boss texts' that are meant to organize people and other texts. They can be seen as part of ruling relations and are usually written textually and define an institutional discourse and supply categories and concepts for people's activities to follow. People's "actualities have to be fitted to the categories and concepts of the institutional discourse" (Smith, personal communication, October 2nd 2009). Boss texts work through the concept of

[25] This section on boss texts and filling shells has been based on notes from a graduate seminar course, Institutional Ethnography, which I took with Dorothy Smith in fall 2009 at the University of Victoria. The image provided above has been taken from a PowerPoint slide during that class on Oct 2, 2009.

shells, which are meant to be filled, then transmit the institutional reality forward. This process defines, redefines, solidifies, and maintains the power and presence of the initial institutional discourse.

According to Smith, "linguists have drawn attention to how some words don't seem to refer to anything. [It] seems like they're waiting for something to make their sense. Linguists call these shells" (Smith, 2009). This thesis discovers how social science graduate students' actualities are worked into language and an application text that can fill a boss text's shell. For CIHR's grant application (boss text), filling the shell can be accomplished by meeting standards of performance, excellence, and science, which will produce a specific outcome; in other words, a specific type, and style of application. As such, this thesis aims to discover how boss texts, the CIHR application, organize outcomes, social science grant applications. However, as Campbell and Gregor (2008) point out "ruling relations [and boss texts] are more than an imposition of rules. They rely on people knowing how to take them up and act in the appropriate manner. [The social scientist's] competence is needed in order for this particular ruling relation to work" (p. 33).

Talking with social science graduate students about how the application process actually happens, how the development of an application is regulated through the use of a text "can be observed, described, and researched further" (ibid, p. 33). In this thesis, I explore the ruling relations (and their textual constituents) that organize the actual operations, doings, and work of social scientists in the development of their application.

With a focus on texts, there must be a recognition that texts "are not independent things and do not stand alone. In essence, they must be considered intertextual" (Smith,

2005, p. 226). As Smith (2005) writes, intertextuality recognizes "the interdependence of institutional texts… to refer to the interdependence of texts in hierarchy: higher-level texts establish the frames and concepts that control and shape lower-level texts" (p. 226). The higher-level texts and the boss texts, to be considered in this thesis are texts such as the application form itself, the CIHR website, and other areas of the CIHR's local and extra-local discursive fields.[26] Sequentially, through enabling particular discourses inherent in the higher-level texts, such as the scientific discourse, a lower-level text is created, i.e. the final research proposal (application). This occurs through a text-act-text sequence or an act-text-act sequence in which the social scientist interacts with the application guidelines (text), interprets and works on and with that text (acts) which makes an application (text). This process continues (text-act-text-act…) when the graduate student social scientists sends her text to other readers (committee members, other students). The reader interprets and acts/responds to that text and decides if the application is complete or incomplete etc… From there, the sequence continues and the text is sent to another reader, or to CIHR who then engages with the text again, and so on. The texts are active and activated by the social science graduate student and its other readers, but the whole sequence is mediated or organized by a "central regulating text" (the initial application form itself) (Wagner, 2008, p. 28).

In this case, the higher-level texts contribute to the coordination of the social scientist's doings and therefore, the production of her application, the lower-level text.

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[26] When talking about CIHR's local and extra-local discursive fields I am referring to the embeddedness of CIHR in other ruling relations. Locally, CIHR has its own mandate and eligibility guidelines. Extra-locally, the CIHR's discursive field can be found within supervisors, the scientific discourse, discourse around evidence-based decision-making, and the scientific composition of the PRCs. These extra-local relations create a complex web of the presence of CIHR when creating an application. Essentially, CIHR's discourse is embedded in and hooked up to the extra-local discourse that is reinforced by ruling relations such as supervisors.

Throughout this thesis, the reader must remember that the higher-level texts are not independent things; discourses, other texts, ruling relations coordinate the social scientist and organize her work. They are shells which are meant to be filled. Remembering this allows us to see how the creation of the lower-level text is informed by the intertextuals of the high level texts. Later in this thesis, the actual doings of this text-act-text sequence will be described to show the 'work' involved in developing the lower-level application text. Using the interview data, I map out the application process.

3.4 Discourse

A focus in this research is around the concept of discourse. For institutional ethnographers, the concept of a discourse refers to "distinctive forms of social relations that organize activities among people in language" (Smith, D., personal communication, October, 2009). Studying discourse also provides access to exploring the ruling relations. In this research, I look at the discourses social scientists participate in as a way for me to appreciate how it is that their actions are coordinated and organized. As they participate in a discourse, social scientists are constrained in what they can "say or write, and what they can say or write reproduces and modifies" the discourse itself (Smith, 2005, p. 224). The discourses that constitute ruling relations are explored and discovered by starting with real people and their real doings and how they are coordinated by these discourses. In my interviews with social scientists, discourses such as the scientific discourse were identified as active relations in organizing the social scientists' application process. These discourses were powerful in coordinating how the style and content of the application came into being.

3.5 Current Formulations of Research Funding: A call for context

Current formulations and approaches to studying funding agencies treat governmentally funded research above and beyond the actual people creating it. My research differs in that it contextualizes its starting point and focuses on the actual research applicants, providing a new and unique starting point to the study of academic funding. To understand where IE begins and what it can accomplish, I will contrast my research with some current formulations and approaches to studying funding and funding agencies.

Changes in funding policy, along with the "rising cost of conducting science, the financial pressures on government budgets…, and shrinking university budgets" has impacted the funding of science and social science research (Laudel, 2006, p. 489). These political, financial, and academic changes have been gradual over time and have influenced research for many years. Consequently, funding agencies and the university system and have been examined by researchers from many different perspectives. Research by Laudel (2006) on "the art of getting funded" outlines three common approaches for researching the changes to funding conditions.

The first approach for studying funding conditions is demonstrated by research presented at a workshop held by the US National Science Foundation that "investigated the links between funding and the growth of scientific fields… [which attempted] to explore the relationships between funding and knowledge production of fields" (Laudel, 2006, p. 489-490). The research presented at the workshop used a macro lens, and treated knowledge growth in quantitative measures "rather than in terms of knowledge and

content" (p. 490). Consequently, none of the findings presented at the workshop could outline how funding conditions affect the content of the research, because inquiry did not start with the contextualized practices of the applicants themselves. My research does not look at cause and effect relationships; it contextualizes the informant, the researcher, and the creation of her application which provides a unique 'starting point' for inquiry. Doing this highlights how the changes in funding conditions are 'taken up' by the researcher and how they coordinate and organize how/what she does when developing an application. By shifting the entrance point of inquiry, to focus on important contextual aspects of developing an application, it is possible for me to adequately address how funding conditions organize and shape the content of the research application.

A second research formulation used to approach the changes in funding conditions focuses its inquiry on the "fairness and reliability of peer-reviewed grant distribution" (Laudel, 2006, p. 490). For example, research by Chubin and Hackett (1990) claims that "between a third and a half of the scientists whose proposals were initially denied stopped a particular line of research, and that 60% of the respondents to one survey believe that reviewers are reluctant to support unorthodox or high-risk research" (in Laudel, 2006, p. 490). As informative as this research is to some questions, it investigates its participant's feelings or opinions on the change, rather than how they got into this situation in the first place. Studies such as these are valuable but do not investigate "whether and how the supposed changes in the production of knowledge are brought about" (ibid, p. 490).

My research goes one step further back and investigates how the social science graduate student is coordinated and organized, and *how* her final application comes to be what it is. In doing so, I can see how the production of her application, and her

knowledge, is 'hooked up' to multiple sites of ruling relations. This investigation can directly open the door to discussions on the fairness of grant distribution with a focus on specific ruling relations that coordinate and organize grant applications. While this second research approach is informative, and we have learned much from its findings, it lacks context. Researching without context does not investigate "whether and how the supposed changes in the production of knowledge are brought about" (ibid, p. 490). My research addresses this void by starting inquiry 'further back' in the process of funding, with the actual development of an application. Through my investigation, I shed light on the social and textual organization of the production of knowledge.

A third formulation can be surmised by several studies that argue there has been a change in funding conditions of universities. These studies demonstrate that funding changes "affect research by changing academic values (Etzkowitz, 1998) and the behaviour of researchers (Morris, 2000; 2003)" (ibid, p. 490). These projects often use concepts such as "academic capitalism" or "commercialisation of higher education" in their work (ibid, 2006). This work is very helpful and relevant. However, it does not always consider the researcher's role as participating in and (re)creating the discourse and texts that enable this "academic capitalism" and these changes in academic values. As helpful as this research is, it cannot in itself support the conclusion that the changes in the funding applications "actually led to a changed research project" (ibid, p. 490). Researching from this approach does not contextualize the application process to fully capture the funding process. The starting place of my research provides a unique entrance to this topic. At this time, my research does not consider the outcomes of university research, but it can be expanded into other projects that could address that. By starting

with the actual applicants and their experiences of applying to CIHR, this research looks at the actual "doings" of applying to a funding agency. As such, this research has access to what guides and inhibits the content and style of the application. The information presented in my research can also fuel conversations on topics such as "academic capitalism" and can provide practical and pragmatic insight into the origins of changes of the organization of social science knowledge, and how to deal with them. Using IE to study funding conditions begins with people and allows us to see how they are "hooked up" and interconnected to larger institutions and relations. The research approaches described above remove the actual person, the work she is doing, and the actions she does to create the application. These research approaches to studying funding jump straight to the 'front-of-house' implications of changes to funding conditions and forget the 'behind-the-scenes' work that went into developing the style, content, and intentions of the application itself.

3.6 Knowledgeable Informants and Their Accounts

The knowledgeable informants for this thesis research were social science graduate students. Informants were found through public notice posters, which were approved by an ethics committee at the University of Victoria. The public notices were posted on campus and sought social science graduate students who had applied to CIHR in the past four year as either a Master's or PhD student. Each interested informant contacted me through email at which time I responded by email with four screening questions, asking if he or she a) was a social science graduate student, b) was enrolled at the University, c) had applied to CIHR in the past four years for a masters or PhD level research grant in

CIHR's categorized theme of social, cultural, environmental and population health, or aboriginal health, and d) was interested in participating. If the interested informant matched those screening criteria, an interview time was scheduled. Before the interview began, informants read and signed a consent form and were also given a copy of the form to take with them.

Interviews were open ended and did not follow a pre-determined or structured interview guide. They took place in a location convenient for each specific informant. Wherever the interviews were held however, it was important that the room was quiet and private to ensure the anonymity of the participant. Interviews lasted approximately 90 minutes and were recorded with a digital voice recorder. Interviews were then transcribed into a Word document. At this time, names were changed as well as any information that could link the informant to the transcription. Final drafts of the transcriptions were emailed to the informants to ensure that they were confident that their voice and experience had been represented in light of any changes. This also gave the informants the opportunity to voice any concerns with their degree of anonymity and confidentiality. Information from the interviews was categorized in folders to organize the experiences. For example, one folder was titled 'work' and any information relating to a 'work process' was entered then organized again further. My intent was not to analyze the data or to code any of the data, but rather, to organize the experiences so I could begin to write on the basis of what I learned from reading each little collection. Dorothy Smith recommended this approach to me.

The informants ranged in their specific social science discipline and in their methodological approach to research. There was no preference given to those applicants

who were successful in receiving funding and those who were not. In this thesis, no mention will be made of whether an informant was successful or not in receiving funding.

3.7 Research Problematic[27]

In the descriptions of research related to funding and funding agencies provided above, the interpretations of the impact of funding agencies tend to miss the concrete conditions of social science graduate students' material lives. The research also tends to "conceal the social and political practices on which such experience depends" (Jung, 2000, p. 31). Using IE allows me to focus on the local and particular setting of the individual students, but also to view their local setting as part of the larger everyday world. Through this, I focus on the 'embodied experience' of social science graduate students and the "systemic inequities [that CIHR is] seen to produce" (ibid, p. 31). Using interviews of aspiring social scientists, and through a textual analysis of their CIHR applications, I examine social science graduate students' knowledge of their experience of developing their social science research project into a CIHR grant application, and the viability of CIHR's ideal to fund health research from a spectrum of disciplines. Through this process, I document how social science graduate students' "ordinary everyday experience [of making an application], and what they know or say about their experience, are entwined with institutional processes - as organizational policies and procedures that exist beyond and prior to the individual's experience, but which are also part of the

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[27] I would like to thank Karen Jung for her writing on 'developing a problematic' and other sections of her thesis. Her thesis, and her various explanations, helped me develop my own understand of this project and its content.

individual local setting… and how these institutional processes actually 'produce' particular kinds of outcomes and experiences" (ibid, p. 31).

Developing the problematic for this thesis required me consider "the disjuncture between the ideological knowledge of a particular phenomenon and the local and particular experience of it" (ibid, p. 33). In other words, to see the disconnect, or fault line, between the local experience of graduate students trying to develop their social science research projects into CIHR applications, and the application process as specified and outlined by CIHR. The disconnect proved to be confusing and isolating for many of the social science students I spoke with. For most of them, their original intent and ideas were changed in the process of applying for funding.

The following excerpts from the interviews with social science graduate students provide a glimpse into the confusing, and often unsuccessful, process of developing a strong and suitable CIHR grant application. They describe the difficulty, opposition, and confusion that many of them experience when changing or fitting their research to match CIHR's application guidelines.

> Helen: Yeah, it's hard because [when] someone is applying to CIHR that is from a natural science, they can take for granted that the people reading it are going to have an idea of what they are saying, they can use their language. But I can't use my language, I can try, but [my proposed project] will come across as unclear, and that is bad.

> Sally: So it would be nice if CIHR had sort of like an um, mini, or different avenue for applications and funding for people who are doing Aboriginal or community based research cause it's different. I don't fit into [CIHR's] box and I've tried to for the purpose of this [application] and I was [successful in fitting my work to the application]. But I could have given a lot more information if

[CIHR] would have been open to hearing about it… but for you to get the funding you have to be on the top of the stack and for that, for it to be good. One of the things that they would want to see is that it is very clear, what you are going to do, and it is very easy for them to conceptualize that you are going to do. If I was to write 'I'm going to first find my partner, then we are going to talk about building a relationship, then we are going to talk about program evaluation and see if they are interested in this program evaluation, and the we are going to talk about the program' that doesn't sound… very "sciency". I mean, that is how community based research happens… Aboriginal research happens in that way I just described, but I feel like CIHR doesn't get that, and they want to see the science at work, the informed academic science at work.

Joyce: [I] realiz[ed] that there was hardly any chance that I could get funding because I [was interested in international research]… and I realized I couldn't apply to SSHRC because [the research I was doing] had a health focus and even [I couldn't] pretend that my research didn't. So in learning about how funding worked [with] SSHRC and CIHR, and all the official rules and the unofficial rules I was told by faculty and fellow students, I [decided I] had no hope in getting funding if I pursued [my interests in international health research]… [And then], doing community-based research questions, you don't know what you will ask, or who it will be with, but with the way the application is structured, you need to. You have to present [your application] as if you do know.

Leah: [I was told to take out the feminist theory and praxis in my work], that it was not part of CIHR. Don't use it. I was pretty taken aback by that but I realize… like, feminism is still not accepted in academic circles. It's just, it's like one of those things that like… I wanted to get the funding so I played the game. But it's also unfortunate that if I had chosen to keep [the feminist theory and praxis] in, that I don't know how that would have affected their decision or not, I mean…

Through the process of writing social science applications for CIHR, these social science graduate students became very aware of the disconnect between their research projects/ideas and CIHR's expectations and programmings. There was a sense of bifurcation wherein the social scientists and their research projects were coming up against institutional discourses that guided and inhibited the creation of their applications which altered their initial research interests.

For CIHR, the application process occurs by developing a research proposal that meets its mandate, and by addressing its five criteria:[28] 1) research approach, 2) originality of the proposal, 3) applicant's qualifications, training, and experience, 4) environment for research, and 5) the impact of the research. These criteria exist to ensure that applicants understand CIHR's evaluation standards and research goals. CIHR's mandate and criteria organize its response to, and evaluation of incoming research applications. From CIHR's perspective, these guidelines provide clear expectations and guidance for the development of applications. From the social science graduate student's perspective, the process of developing an application is much more complex. It entails drastically changing entire research questions, altering methodologies and epistemologies, and it involves feelings of confusion and dread. Social science graduate students may want to include their specific disciplinary methodologies or praxis, language, or theories but do not. They realize that accommodating CIHR's scientific framework is required for a stronger application so they leave out their social science backgrounds, foundations, and languages. Consideration of the social science applicants' needs and desires is not reflected in CIHR's eligibility criteria, evaluation criteria,

[28] For detailed information on these five evaluation criteria, please visit CIHR's website at http://www.cihr-irsc.gc.ca/e/39913.html. Retrieved March 31, 2011.

mandate, and in the composition of their peer-review committees. There is an incompatibility between CIHR's goals and mandate, and social science graduate students' research and work. My inquiry aims to discover how the application process actually happens as it does for social science graduate students.

Chapter 4.

The intent of this chapter is to describe my informants and their unique situation as both social scientists, and as students. In this chapter I have included a short narrative developed from Cora's account, section 4.2, of how she went about creating, designing, and redesigning a research application. This provides a micro-description of one student's account as a way to begin thinking about the development of a project to fit the requirements of a CIHR application, how she negotiated her research project and initial research interests, and how she made the application. I have changed most of the details of Cora's research project to protect her identity. From there, as we move into sections 4.3 on, I provide more general descriptions of the work processes involved in the development of an application. I describe the students' experiences with learning how to make an application, the work of actually making the application, editing, re-editing, how much time it took, who was consulted and at what times etc… I begin by describing the more general work process of developing an application, which involves orientation, preparation,etc... Then I move into a dialogue of making the application which describes the work processes done when making the application. The function of these descriptions is to transition into a discussion of the ruling authorities that coordinate, organize, and (re)-orient a student's research and CIHR application. By uncovering the work processes, we see how social science graduate students organize their activities to match the relevancies provided by CIHR. By describing the *work* they do to make the application, negotiate the application, and fit their application to accommodate CIHR, we can begin to see it as a process that is developed and takes time. Through these descriptions and explications, we can see what relations and 'shells,' such as the application guidelines,

the strategic plans and mandates, the supervisors, and the political agendas, shape the experiences and the applications of social science graduate students.

4.1 The Research Informants - Social Science Graduate Students

Five social science graduate students were interviewed for this thesis research and were eligible for this thesis research if they had applied to CIHR in the past four years. They were selected as knowledgeable informants who could "walk me through" their experiences as social science applicants to CIHR. All the informants applied for general Graduate awards either as Masters or PhD students. The objective of this award states "the Government of Canada Graduate Scholarship program is to help ensure a reliable supply of highly qualified personnel to meet the needs of Canada's knowledge economy". There was no preference to whether they were successful in receiving funding. For Masters students, the description[29] of the award reads,

> The Canada Graduate Scholarships Master's Awards administered by CIHR are intended to provide special recognition and support to students who are pursuing a Master's degree in a health related field in Canada. These candidates are expected to have an exceptionally high potential for future research achievement and productivity… Funds are also available for this competition to support Master's Award applications in specific research areas.

These "specific research areas" are priority research announcements. For 2011, the priority research announcements[30] were in the areas of child cancer, dental hygiene, disability prevention for motor vehicle collisions, fanconi anemia, nutrition and dietetic

[29] CIHR. Retrieved April 25, 2011 from https://www.researchnet-recherchenet.ca/rnr16/viewOpportunityDetails.do?prog=1051&view=currentOpps&org=CIHR&type=AND&resultCount=25&sort=program&all=1&masterList=true.
[30] CIHR. Retrieved April 25, 2011 from https://www.researchnet-recherchenet.ca/rnr16/viewOpportunityDetails.do?progCd=10083&org=CIHR.

research, osteoporosis, regional partnership program, respiratory health, and thalassemia. Applicants were also encouraged to visit CIHR's "Partner Participation" page to identify possible stakeholders (CIHR-IRSC, 2001).

> CIHR is dedicated to identifying and developing collaborations with other funding organizations and stakeholders to enhance the availability of funding for this strategic initiative, and to create, where appropriate, opportunities for knowledge exchange and translation related to the scope of this particular initiative. Applicants are invited to visit the Partner Description section to find a list of partners/collaborators and their respective mandates and/or strategic interests. This list will continue to evolve as new partners/collaborators join in this initiative. The specific research foci and requirements for each partner/collaborator are outlined in the "Objectives" section.

On the application web page, CIHR makes no *direct* reference to the research style it encourages. It does, however, specifically encourage applications using randomized controlled trials (CIHR-IRSC, 2011).

> Applications involving Randomized Controlled Trials (RCTs) are accepted and encouraged where appropriate based on scientific and methodological grounds.

To get more of a sense of what information the applicants were presented with, please visit CIHR's website and refer to its page on "Funding Opportunity Details".[31]

My interest is in the *work* that these aspiring social scientists did, and their description of the specific activities they did in order to develop a CIHR application. The interviews were structured around the social science graduate student's *Project Summary*, the one page research proposal submitted to CIHR. The informants spoke openly about

[31] Funding Opportunity Details. Retrieved April 25, 2011, from https://www.researchnet-recherchenet.ca/rnr16/viewOpportunityDetails.do?prog=1051&view=currentOpps&org=CIHR&type=AND&resultCount=25&sort=program&all=1&masterList=true.

their experience with learning how to make the application, the activities involved in making the application, and the difficulties they encountered when making the application. They reflected on their development of the application with some describing the strategic development of an application. Others outlined the lack of autonomy in the process, how this lack of autonomy came about, and how it organized the student's activities while making the application.

The differences between informants' descriptions of the process of making an application were minimal and exemplified a few strategies used by social science graduate students, and their supervisors, to fit their applications into CIHR's framework. Each informant also had his or her own understanding of CIHR's goals, ideology, and structure, which contributed to how the proposal was organized. However, these different understandings of CIHR's goals and structure significantly overlapped among students. For example, when they each described their knowledge of who comprised CIHR's peer-review committees, the students were unsure if anyone in "their area" would be on the Peer Review Committees. Many of the applicants commented that the scientific composition of the PRC contributed to how they organized the style, content, and presentation of the final research proposal.

Despite some differences in the application process, there were similar sentiments and themes expressed by the informants when I spoke with them about their experience with developing an application. A common expression across informants was with their struggle to fit their social science research projects into CIHR's "box", as they would describe it. They struggled to keep and/or include their discipline's theoretical perspective; they struggled to convey their chosen methodologies while using traditional

scientific language; they struggled to present a research project that could be respectful to their research participants while accommodating the model of *scientific research established as paradigmatic by CIHR criteria*; they struggled to convey their project's initial goals, significance, and uniqueness without using their disciplines language or theories; they experienced feelings of academic inadequacy, a lack of autonomy, felt ethically conflicted, and were often angry. Some students, across various disciplines, had the 'advantage' of developing a grant application as an assignment for graduate level methods classes. This opportunity provided them with a structured environment to design an application.

My informants are in a unique situation because they are both social scientists and students. As social science researchers, their experience of making research applications is organized by CIHR's extralocal structures, textual guidelines, and interest in traditional scientific inquiry; as students, their experience of making applications is organized by their supervisors, the academic institution they attend, and their financial situation (all of which are also indirectly connected to CIHR). Consequently, the activity of making a CIHR application was described to me as having multiple work processes. It involves work such as learning how to turn a social science research project into an application that is suitable for CIHR and then actually fitting it to be appropriate for CIHR; it involves negotiating the project with supervisors, many of whom have worked in relation to CIHR before; it involves learning to understand the academic merit attached to national funding. These work processes are not linear as I have presented them here. Rather, they often occur simultaneously, often interacting with each other. These interactions further organize how work is done and how the social science graduate

student takes up this work. The complex process of writing, re-writing, developing, and re-developing a social science research project is not straightforward and clear cut.

4.2 Cora's Work Processes

Sitting down with each social science graduate student was like sitting down with a friend. I felt comfortable with them because I felt like I shared something with them. Like them, I am a social science graduate student, have developed applications for funding, scholarships, and programs. Cora was especially fun to interview because she brought in each draft of her application, all the way from draft one to the final application. However, before we looked at each individual draft in detail, we began talking about her initial research interests prior to her even thinking about CIHR or developing an application. I was interested in learning who my informants were, who Cora was as a student, and what her research interests were. I thought that in order to understand how she came to create the application she did, and how she designed her research for a CIHR application, I would need to start at the beginning, before she even thought about developing the application. Despite my similar status as a graduate student, I positioned myself as an ignorant listener who sought to understand the work that was done to make a CIHR application. By *work* I am not referring to work in the sense of paid employment. Using IE's understanding of work, I consider it to be "anything that people do that takes time, effort, and intent. It orients [me, as the researcher,] to what people are actually doing as they participate, in whatever way, in institutional processes" (Smith, 2005, p. 229). In my case, I am interested in the actual doings that the students participate in during the institutional process of developing a CIHR application. This process begins

well before the students actually write the first draft of the application itself and continues all the way to the actual submission.

To discover the work and the process of developing a CIHR application as something that took time and energy from real people involved in the institutional process of designing and conducting research, I asked Cora about her research interests;

> Katelin: so right off the bat, before we even talk about the research project that you created in the end, could you tell me a little about what you initially had hoped to do for research even before you created the application or anything like that?

She responded,

> Cora: before I knew I was going to even do CIHR?

I replied yes and she continued,

> Cora: well, I originally was going to do SSHRC because when I came here my plan was to look specifically look at [the representation of Aboriginal peoples in education]. I think that's a huge problem and I keep finding that people were really misinformed about Aboriginal issues or Aboriginal history. So I wanted to research that.

Cora's background had been in Aboriginal studies and she found interest in Aboriginal research methodologies and conducting research that she viewed was ethically just and that could truly work with, and represent Aboriginal people.

Listening to Cora, I came to realize that the research project she developed for CIHR moved away from her initial research interests. I was curious how her initial research interests were re-oriented, coordinated, and organized, and how these changes came about. This meant we had to look at the *work process* she engaged in during the

development of her research. I was interested in the time, the effort, and the intent of her work during the experience of developing a CIHR application. I am not interested in what factors caused her to change, but rather, what the process of change looked like, and how her actions and work came to develop the final CIHR application.

Starting early in her experience of graduate school, Cora explained,

> Cora: my supervisor came to me with a project that was health related. [My supervisor] said that it would be beneficial for me and I could still *kind of* do my topic and use their data set but that I would have to apply to CIHR because it would be health focus and I wouldn't be able to apply to SSHRC anymore.

Early in the graduate student's time in school, preliminary meetings with supervisors were fundamental in organizing the student's research project. The process of meeting with the supervisor, discussing research ideas, and getting to know the supervisor are all work processes that began to orient the student and her research application to be in line with CIHR.

Cora's interests in Aboriginal issues and the representation of Aboriginal people forefronted her research interests upon her arrival to graduate school. As an ignorant listener, I asked her to break down her interactions with her supervisor. How they met, where they met, how they began to discuss research etc… She continued,

> Cora: I got assigned to [my supervisor by my department]. I think she was my second or third pick [on my graduate school admissions application]… We informally met at a coffee shop because I had never met her because she was not teaching [the first term]. I wanted to touch base with her [about my research].

Acting as someone who is trying to map out and learn how a grant application came into

being, it appeared to me that this first meeting was part of the student's work process of developing a research project and application. In Cora's case, she initiated a short, informal, and necessary meeting. Cora continued,

> Cora: [my supervisor] briefly asked me what I was interested in and I told her. Nothing really concrete [was discussed]. Then, after the meeting, she emailed me right away and was like 'Hey! I have this research idea for you that is really up your ally'.

With that post-meeting email, Cora's research interests in Aboriginal people began to change direction as she was now faced with the 'opportunity' to join an established and successful team project that was supported by CIHR. The process of developing a research application now required Cora to make sense of what she wanted to do as a student. With that, she had more meetings to plan and attend which involved consultations with well-established teams members.

Cora explained to me that pursuing her supervisor's research idea meant joining a team project. Her description of the process of joining a team provides an account of how she went about designing and re-designing a research project and an application. The decision to join a team project had also been described to me by other social science graduate students as well. In most cases, joining team projects was encouraged or proposed by supervisors and usually changed and/or re-oriented the student's initial research interests. These changes significantly organized the research applications to CIHR.

When describing what is involved in becoming part of an already developed team project, Cora said,

> Cora: it is a project that [my supervisor] is working on with John and Ted[32]. They have been doing this project for years. They have always looked at things like the gender aspects, and things like that, but they have never looked at the same aspects from an Aboriginal perspective. One of the things that [my supervisor] 'hooked me' with was that there was [a high percentage of] Aboriginal respondents in the study. She said, 'you know, it is really high numbers and you could do with it what you wanted'. I found that there was really only about half of the percentage of Aboriginal respondents that she said there was. I also looked at a couple of the questionnaires they were using and there are no Aboriginal questions.

Cora's description outlines the work process of navigating her way into a well-established team project. This process took a lot of effort of Cora's end. First, she had to decide if she wanted to join the project, which meant planning and attending meetings, reading their literature, consulting other people, and reviewing their data and data collection methods, negotiating roles, philosophies, and epistemologies etc… Second, she had to discover how to create her own niche within this larger project. She hoped her research would begin to tackle the Aboriginal research side in the team project. This process required a lot of navigation by Cora as she also had to learn the existing project and attempt to coordinate her own initial research interests with it. Describing her work as navigation activates her doings and brings intention to Cora's work since navigation describes "*the process* or activity of accurately ascertaining one's position and planning and following a route" (Oxford Online Dictionaries, 2011, my emphasis).

The work of navigating a team project was time consuming for Cora. When describing the process to me, she said,

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[32] These names have been changed to protect the identity of my informant.

> Cora: I did some preparation when I was considering joining the group. I went to a little seminar with the two people that were heading the project and two other people were in attendance.

At this seminar, Cora learned about the project but she also came prepared with some knowledge about the research.

> Cora: I was sent the questionnaires in advance and asked to look over them. At the seminar we discussed how the interviews would/should be conducted. They addressed why certain questions were being asked, what they were trying to get at and some difficulties that could arise. They had also given me two articles to read, which I believe were about similar studies they conducted in the past. Articles which would illustrate to me what could be done with their findings.

Unfortunately, there was limited time to learn the project and make the application which was due in October; about one month after enrollment. Cora and the other graduate students I spoke with all felt a 'time crunch' and expressed that they did not fully understand or comprehend the team projects they were joining at the time that they were developing their projects. They lamented that there just was not enough time to learn the projects and the fields they were joining, especially since many of them had not worked in health research before. Consequently, many of the research project proposals were developed for them, which coordinated and organized their own projects for them. This will be discussed in more detail later.

For several of the students I spoke with, joining a team project was part of the process of developing a CIHR application. But joining the project was just the first step. Cora had to determine what research she could conduct that would be possible with the existing data and what research would be acceptable for the team members, many of

whom were already embedded in CIHR as funded researchers. Cora explains the process of re-orienting herself and making sense of what her research would and could entail.

> Cora: I said to [my supervisor and the team leaders], 'how am I supposed to do research on Aboriginal issues when there are no questions specific to this population?' They were like, 'oh, you don't need specific questions'. I was stunned. I said to them a few times, 'these are the issues I would like to be focusing on, will I be able to do that in this study? Will I be able to do that?' While going through this process of joining the team project, they assured me I could focus on the aspects I wanted to. But, it has totally changed and I am not able to apparently do what I wanted to do.

In describing the process of how she designed her project, Cora had to negotiate research philosophies and approaches, read literature, and in the end she joined a project that she was not confident or comfortable with. The process of joining and learning a team project was for Cora – and for others - the first stage of making a CIHR application. It involved a lot of work on the student's part: negotiation, navigation, meeting, reading, asking, learning etc. Discovering this process makes observable where the student is and what she is doing in regards to the application before she actually begins writing it. For Cora, these actions were necessary and they organized her research focus to bring it into line with health research as it is specified by CIHR. These actions, and work processes, also organized her application to CIHR.

> Cora: So, in the end, while I did do some academic work, [like reading articles and attending seminars], and spent some time researching the project, I have to admit that I did some soul searching to come to my conclusion. While that may not be the most academic approach, it seemed suitable for what I was coming up against. It

pertained to my morals and ethics and how I want to be perceived in the academic and non-academic community.

Initially, Cora was interested in applying to SSHRC. Her intentions were not directed at CIHR but were re-directed to it once she joined the team. In this thesis, I consider the process of developing an application to be an institutional process. By institutional, I mean an organization of some consistent patterned relations that are tied in with a system of authority: ruling relations.[33] These ruling relations vary but in the case of CIHR and the university, these may be authorities such as traditional science or positivism, political agendas, academic expectations etc… Students must participate in the institutional framework of CIHR as well as the institutional framework of the university they attend while they develop the application. They must work within both institutional frameworks which are, in my view, mutually constitutive. As such, what the students do during the process of making the application is organized by ruling relations such as their supervisors and CIHR. During the process of making an application, they must 'play along' with the ruling relations if they wish to be successful. Hence, the work process of application is organized by the authorities of the institutions the students are working with(in) and uphold the institution's power and discourse, despite any reservations they express during the process. Though many students express their frustration over the process, in this thesis, I talked only to students who 'went through' with the application and submitted a complete application to CIHR and in this way upheld the institutions, through their accommodation of the application and the 'fitting' of their research. I did not include any who resisted or were marginalized by the

[33] I would like to thank Dr. Chantelle Marlor at this time. She helped me organize my thoughts during this thesis.

institution Talking with those who resisted would produce a different thesis and would likely include students who did not apply for funding to CIHR, or other granting institutions. Problematically, however, many students lacked autonomy in the decision to apply for funding in the first place.

During our conversation, I asked Cora to 'step back' a bit and to explain to me why she decided to apply for funding in the first place. Without hesitation she responded,

> Cora: I was basically told that I have to by my supervisor.

In this situation, the supervisor takes up a ruling role for CIHR, within the institutional framework of the University, by enforcing the expectation that students must apply for external funding. She continued,

> Cora: I actually point blank asked her if she thought it would be beneficial and worth my while to apply because the changes of getting it are so slim and the process of applying is so huge. I told her that I was so overwhelmed with school enough as it is. She basically said that it is expected that you do apply and it is a bad reflection within the department if you don't.

From there, Cora said she was instructed to get a draft of her proposal to her supervisor as quickly as she could. To go about designing an application, Cora first consulted CIHR's website and read CIHR's expectations to learn how to orient her research to what CIHR was looking for. She said that she needed to find out what CIHR was, and what it does. Specifically, she looked at CIHR's research net website, the definitions of the CV, the training expectations, the research proposal, and the lay abstract, she investigated what they key priority research areas were that year so she

could include them in her proposal to make it 'hot topic' research. She also met with and spoke with other students who had won a CIHR grant the previous year as well as fellow students who were applying that year. They discussed what each other was including in their drafts, how it was formatted etc… One student described the process of designing the application as "basically plagiarism" which organized how their research was presented to CIHR. Previous successful applications and current drafts from other students and faculty stood as models or templates of how the research should be worded and presented. All this work was very intentional by Cora, and the other students as well. It was part of the process of developing an application and was done to understand what a good CIHR application should look like. For example, during meetings with her supervisor, Cora expressed that she wanted her research to be more qualitative but her supervisor insisted that she say it would be both qualitative and quantitative because it looks better. The process of navigating what CIHR 'likes' and sees as 'better' research took time and effort on behalf of the applicant and required consultation with people who were also applying, or who had applied before. In a sense, these people acted as ruling relations who guide the applicant how to 'play along' with CIHR's expectations, despite what they actually want to do in their research.

When designing and actually writing the first application, Cora had to work at negotiating her research philosophies and ethics, her new role as a health research, the team project's goals, and CIHR research perspectives. This was all part of the initial writing process but was perhaps more obvious during the re-writes of the application. As mentioned, Cora consulted CIHR's website and other applications to learn how to orient her work. However, the re-write work process looked different. During the re-write of her

application, her work processes shifted into a more passive role. Her work of developing an application was to now fight to keep her voice in her application while at the same time, accepting changes to her application that were made for her. Looking at her everyday struggle between fighting and accepting, the work process was not enjoyable for Cora. When she received the first draft back from her supervisor, her job was to re-organize and re-structure the application. She was told how to do this by her supervisor. Cora explained that her supervisor wanted her to change how she introduced herself as a researcher, and change how she introduced the other researchers in the parent project. Most importantly, she wanted her to jump straight into explaining the project. For Cora, this was difficult because she did not know must about their study. She said,

> Cora: I didn't have much time to read all the papers they had written, and no time to look at the 100 page questionnaires they have. So, it was really hard for me to even know what I was supposed to be saying about the project.

Responding to this, she followed her supervisor's comments and suggestion to use more jargon, more empirical research, and to talk about how the research would be benefitting policy changes and academia. Through this process, Cora pulled bits of information about health research from the team's literature without spending too much time reading. As the edits went on, she found that most of this work was done for her by her supervisor and the other team members. A lot of the major changes did not occur until the third draft because it was this draft, and onwards, that were heavily edited for her. For Cora, the work process during this time was to try to quickly make sense of what she was actually researching, and to agree to the changes being made for her.

Between drafts, however, Cora noticed that her voice and background in

Aboriginal research was being lost. Part of the work in making the final draft was negotiating with her supervisors what would be included and how it would be articulated to CIHR. Cora said,

> Cora: I knew writing it that it was problematic and that I was compromising what I felt but I knew that I basically had to put [information and jargon] in to appease what my supervisors wanted to do.

Despite her attempts to keep her voice, a process that was took great courage and effort, her supervisors removed her writing and oriented her research towards CIHR for her. She said that the changes were initially subtle, but over time they became more serious. It was not until the application was finished and submitted that she noticed how different her research was and how different her presentation of self as a researcher was. In order for her to participate in CIHR's institutional discourse, she had to let her supervisors make the changes and write an application they felt was strong. After the first use of CIHR's website during the creation of the first draft, Cora did not consult anyone else or any other resource to learn what CIHR wanted since her supervisors took over for her. She did consult friends to lament about how terrible the experience was for her however. At this point, the work process entailed passive acceptance - a process that took effort and restraint. She worked to be accommodating and accepting, a mandatory process, which led to the submission of the application. Without her passive work, she would have developed a different application; likely one that was less in line with her team and CIHR's interests and frameworks. The final development of her application required her to work at being subverted. Even with her few attempts to keep her voice, she generally accepted the changes her team made for her. Through this process, Cora was tied up with

ruling relations and systems of authority.

4.3 The Work of Fitting - Organizing

The previous section provides an account of how Cora went about designing her project. There were many similarities between her experience and the other students' experiences, and there were also some differences. Some students' applications were almost entirely organized by their supervisors. The students' reactions to their supervisor's involvement differed; some were thrilled and others felt trapped and immobilized by their supervisor's strong presence. They described a confusing situation in which they were learning what it meant to be a social science graduate student, learning and comprehending their discipline and research style/interests, but also learning to downplay the specifics of their discipline when making the application.

For most informants, the process of making an application *required them to seek advice from their supervisors and other students*. With their supervisors, meetings were initially organized through email and held in person. Students usually submitted their application drafts via email as well. With their peers and friends, meetings were less formal and usually occurred spontaneously in pubs or social gatherings where the topic of making the application came up. In these situations, students negotiated the possibility of using a fellow student's application to act as a template for them. These applications were usually sent via email. Sometimes, students also knew fellow students in their department or on their team who had applied in the past and asked him/her to use their application as well.

During the process of developing an application, students also had to *negotiate their own representation self and their research.* The interview excerpts below outline

some of the work processes actually described by students when sorting out how to make an application as both a social scientist, and a social science graduate student. The process of determining how to apply for funding, why, and with what research project, is an intensive work process for the social science graduate students. The excerpts illustrate the some of their work that was usually done before the social science graduate student actually wrote the first draft of the application.

> Joyce: Initially, there was a [team]-project that I felt like could be interested in and then, I started to think about whether I could spend years working on that, a project that wasn't even funded. And at this point, my application to CIHR would say that I would be working on [this team project], but it was not funded so I didn't know what that meant for the application process, whether [CIHR's peer review committees] care whether you're working on something that is already funded, or whether it is already established.

Like Cora, Joyce was also encouraged to join a team project which meant starting to work in an area she had never worked in before. The decision to join a team project and to design a project under this team meant that she would have to abandon her current research interests and change her focus. Also, she had to learn to interpret CIHR's institutional framework. How she interpreted its programming would organize how she constructed her research project. In the process of learning CIHR's programming she said,

> Joyce: I sat down [at my computer] and started to go through the stages of the CIHR process to think about what drop down menu I would use and all that kind of stuff. I also looked at my background to see how I could seem qualified [to be a part of the team project] I was proposing… (sighs). I just didn't feel like I could in the end…

The process of looking at her background meant reflecting on the research she had done in the past, and the areas she had worked in to see if her previous knowledge could lend itself to the area her team was working in. Joining the team project meant that she would have to enter into a completely new discipline and learn it well enough to write a grant application within one month. In the end, she did not feel able or comfortable, 'faking it' as it was described.

Making an application also required Joyce, like Cora, to consult others who had applied for funding. When developing a research project, she turned to various faculty members who were not necessarily her appointed supervisors.

> Joyce: It is also interesting, the different faculty advice that you get. Certain people say, 'just write a good proposal and do your best', and others say, 'be strategic, you know you don't have to do what you propose you are going to do.' So, I found it all a bit confusing, just trying to learn the system and understand it, [and] integrate all the different perspectives of people who have applied to CIHR and what feedback and comments they got.

For Joyce, consulting with faculty was necessary for making sense of how to make the application. Problematically, however, she also felt confused by the differing advice they gave her. Consequently, part of the process of developing an application is sorting through the varying advice. Joyce consulted faculty while still in the early stages of writing the application. In desperate need for external funding, she felt pressures to 'fit' her research to CIHR, but she also felt pressure to remain true to herself and her own research morals. For Joyce, the application process was morally and ethically very difficult. During the interview, Joyce actually had to take a few moments to calm herself

because she was overwhelmed with anxiety about the whole process as well as with the content of her submitted research application. With my position as an ignorant listener, I asked,

> Katelin: What do you mean by strategic?
> Joyce: Ahh, I guess there are just so many factors. [Receiving funding can depend] on who your supervisor is and what projects they have ongoing and if they have funding for [their students]. If they don't, and if your supervisor has a good enough publication record to have a chance to get funding in the next few years, then and they can write you into their proposals. If you don't have those supervisors, [you wonder], is my application strong enough to handle the minus points that will come from having a [less-known] supervisor? I mean all those things. I just never factored them into my understanding of my [graduate] studies because it all takes you so far away from genuine research interests and passions and commitment.

Joyce needed to be strategic in her application because she depended on the funding. To be strategic, she needed to know what CIHR valued and if she could develop a project that would work for CIHR. She had to work to learn CIHR's system so she could organize her research project accordingly. For Leah and Sally, the processes were very similar.

> Leah: When school started we, [my supervisor and I], started looking at department resources together. It got to a point where SSHRC was coming up and I had never heard of these things before but it sounded like a great opportunity so I went along with the wave of our department and decided to apply [for funding].

> Sally: I didn't have a specific project in mind. You know, you get to grad school and everything is all new and everyone is applying for funding. So, I guess I should apply for funding. Well, I guess I should do that. How do I do that? I guess

> I should come up with a project. How do I do that? And I remember really stressing about how was I going to come up with a project. I mean I know there are things I am interested in but, you know, I want [my project] to be good 'cause I want the funders to like it. So, my supervisor is really great, we just sat down and batted around some ideas.

Cora began with an early meeting with her supervisor to help organize her research. Sally depended on her supervisor to help her make sense of how to even begin the process of developing an application.

The social science graduate students I spoke with had all applied to CIHR in the first year of their MA, or their PhD. When they arrived to their programs, they were immediately confronted with the decision of external funding. All of the students applied because their departments expected it of them, but several also applied out of financial necessity. However, after they had submitted their application, several of them, despite their financial need, were so unhappy with the projects that they had proposed that they secretly hoped they did not receive the funding.

Thinking of where the students began in relation to a CIHR application, only two of the five informants were initially interested in pursuing health research during their graduate studies. Both of these students had worked in the area of health research during their previous degree and brought an interest in health research with them into their graduate studies. Both students, however, were also encouraged to join team projects by their supervisors and one of them did so. The other three were initially planning to apply to SSHRC because their research interests were suitable for SSHRC's criteria. However, they applied to CIHR because: 1) their supervisors worked out a project with them that

turned out to have a focus on health, and/or 2) their supervisors encouraged them to join a team project that was focused on health.

4.4 The Work of Fitting - The Project

> *-- But finally, there is the question of those who are to hear the voice- thinking about that also leads to characteristics of style. It is very important for any writer to have in mind just what kinds of people he is trying to speak to - and also what he really thinks of them. These are not easy questions: to answer them well requires decisions about oneself as well as knowledge of reading publics. To write is to raise a claim to be read, but by whom?* (C. W. Mills, 1959, p. 221, my emphasis).

Upon applying to CIHR, only two of the five informants had proposed research projects to CIHR that were in an area of their initial research interests. For the other three informants, the change in research focus was often coordinated by the student's desire to present a research project and topic that they thought CIHR would be interested in funding. Knowing how to do this means that each student had to learn what CIHR was interested in; another work process that was important for all five informants. Sally described her experience with choosing an area to research.

> Sally: There are things I am interested in but… I want [my application] to be good 'cause I want the funders to like it.

To discover what CIHR would be interested in, the social science graduate students used the computer to research CIHR's website. Several used the Internet and searched CIHR's *key priority areas*. They also listened to their colleagues and supervisors to determine what would be a 'hot topic' to study. Earlier, I discussed the mutual relationship of the institutions CIHR and universities. CIHR has defined what they consider to be *key priority areas*; faculty and researchers also have their perceptions of

what research topics and areas are in vogue as well.

> Joyce: I looked at the CIHR website, [at the] priority areas, and made the decision that I probably wouldn't get funded if I applied for research [that wasn't in a priority area]... It was very strategic. And then I just constructed a project. I used everything on line when creating the application. I [also] got... like it's a bit hard to find, but a fellow student sent me the actual criteria [CIHR uses] to assess [the application] and [how] it's weighted and the characteristics used for reference letters, all those sorts of things… so I did use that.

For Joyce, the process of designing an application meant seeking out information regarding CIHR's research preferences and assessment criteria. She consulted the Internet and past applicants to gather this information. Cora and Helen also used the Internet to seek out and learn CIHR's programming to help them make sense of the application. In describing the process she went through to do this, she said,

> Cora: I just went on the website and read their expectations and who they are and what they do, and I also spoke to other students who won last year, so one girl in specific was really helpful. There are a lot of people in my department who applied for CIHR last year. So I talked to those people about the process as well, and what we had to do and stuff, but mostly from the website trying to figure out who CIHR is, what it wanted, and what I had to do [in relation to what CIHR wanted]…the website lists 'key words' that they focus on, like 'community based health' or something like that. So I looked for those key words and I was told to use them in my proposal because I was told that that was what they were specifically looking for this year.

> Leah: I found a lot through CIHR's website, all their different organizations and all their different subgroups. Like the institute of gender and health, institute of population of public health, institute of policy and health research. [I looked at] all the words that they used. I made sure to incorporate that into here, [into my

> *Project Summary*]… I made sure I used their language and the terms that they use.

Other changes in topics were coordinated by the supervisor's recommendation to join a team project, often at the expense of the student's initial research interests and ideas. Cora describes this process,

> Cora: My supervisor came to me with a project that was health related, and said that it would be beneficial [to join this project]. [She said] I could still kind of do my topic and use their data set, but that I would have to apply to CIHR because it would be health focus and I wouldn't be able to apply to SSHRC anymore. [When I joined the team], I said to them a few times, 'these are the issues I would like to be focusing on, will I be able to do that in this study, will I be able to do that?' And they were like, 'oh yeah, for sure.' And while going through this process, it has totally changed, and I am not able to apparently, do what I wanted to do…

Through the process of fitting their overall project ideas, the social science graduate students often became estranged from their own authority to develop their proposals. What they 'chose' to research was often externally defined for them by their supervisors, and by CIHR's *key priority areas*. These forces shaped the experiences the students had with developing an application for CIHR, and also organized the content and style of the application itself. The 2011 key priorities areas were listed above. However, in the past, CIHR's priorities have included research topics related to areas such as drug policy, cancer research, HIV/AIDS, and Aboriginal research (CIHR, 2010). Many informants said that if they hoped to get funding, they had to be strategic, and nothing else. Being strategic meant learning what CIHR wants and is considered a work process that the students had to engage in. How they went about designing their projects was a process that required them to align themselves with CIHR. Part of the process of making an

application was negotiating and re-orienting their research. This process is strategic and very intentional.

Learning about CIHR and what they want is a necessary part of making an application. Without considering this, the application would not be considered 'strong' and worth funding. However, what CIHR wants is not always obviously available. Rather, its values and frameworks are often implied in many textual forms. For example, in the winter of 2010, I received an email from Health Canada. The email invited graduates to join a team of "professionals working to help increase the availability of a wide range of therapeutic products such as pharmaceutical drugs, vaccines and medical devices which, in turn, help Canadians maintain and improve their health" (Health Canada, 2011). The job would require successful applicants to "analyze policy options, consider legislative changes, the applicability of regulations, and to assist in briefing senior officials on the difficult issues facing a health based department" (Health Canada, 2011).

This email demonstrates Health Canada's interest in and reliance on research that can provide evidence for policy options and legislative changes. Further, it also exemplifies its definition of "therapy", and what acceptable forms of "therapy" are: "pharmaceutical drugs, vaccines and medical devices." These definitions of health and therapy are two examples that social scientists may draw on to develop their understanding and definition of 'health research' and how they organize their applications. Cora described how she went to CIHR's website and talked to other people about "who CIHR is, what it wanted, and what [she] had to do" to make an application. This email I received was a general email sent out as a call for applicants. I am sure that

most social science students at my school received this email and it can stand as a textual framework epitomizing CIHR's framework and values.

The social science graduate students I spoke with described how they faithfully accommodated CIHR's language and interests. All the students said that they used CIHR's website as a frame of reference, with many often 'cutting-and-pasting' words directly from CIHR. As such, the email message quoted above can act as a simile for how CIHR enforces certain understanding of health and health research. For example, I am not sure how interested CIHR would be in research related to alternative medicines, or complementary alternative medicines. These medicines are not in line with what Health Canada has listed as therapy: "pharmaceutical drugs, vaccines and medical devices." Deciding what is worth researching by using CIHR's website and talking to other people is part of the work process that my informants describe they when they write the application. Further, if the students did not demonstrate their accommodation of CIHR in their first draft, their supervisors usually adjusted the language, or recommended language or content changes, for them.

4.5 Anonymity and Confidentiality - Protecting my knowledgeable informants

In her institutional ethnography of students with disabilities, Jung, (2000) noticed that her informants were concerned about their anonymity and confidentiality, but that her informants were more similar than different in their experience with disabilities, making their description less unique than they thought. The sentiments of her informants and her observation are the same as mine. The social science graduate students that spoke with me in this research did so voluntarily. They were all informed prior to the interview

that I would take all necessary steps to ensure their confidentiality and anonymity, and that specific details of their projects would not be identified. I told them that I would give them all pseudonyms and that I would create pseudo-projects to describe their research. Despite these assurances, all the informants were greatly concerned that they would be unintentionally identified in the final write-up of this thesis. One informant was so concerned that she wished to withdraw from the study. Understandably, I told her that I support her decision and asked if she would be willing to allow me to use specific parts of her transcript that contained no details of her described project, but rather, the work that she did to make the application. With her involvement and consent, only specific parts of her transcript are cited in this thesis. To her, and all my informants, I am thankful for their trust in my dedication to protect them. Interestingly, however, and an observation also made by Jung, (2000), "the same incidents that the research informants, alone and individually, believe to be unique to themselves and their own experience are shared, albeit in a variety of different ways and configurations, with each of the other informants" (p. 82-83). All my informants were initially hesitant to disclose the details of their research projects and the specifics of how they changed wording and methods in their projects to fit the CIHR application. They were concerned that their experience was unique and that by sharing this information, they would be identified by their supervisors, and by CIHR, and would potentially "burn bridges". Despite major differences in their research projects, and differences in their specific social science discipline, the informants described similar ways of 'fitting' their application to CIHR. They also expressed similar difficulties with their supervisors, and similar frustrations with the entire process. In sections to come, I further describe how the social science graduate

students actually fit/made the application itself, who they interacted with to do it, and what challenges they encountered along the way.

4.6 The Work of Fitting - Making the Application

> -- *Good work in social science today is not, and usually cannot be, made up of one clear-cut empirical 'research'* (C.W. Mills, 1959, p. 201, my emphasis).

Earlier, I noted that the social science graduate students I spoke with used CIHR's website to learn about the application. They referenced drop down menus, expectations, evaluation criteria etc. Now, when actually making the application, the social science graduate students describe a process that involves decision making: what should I include!? What follows is a description of the application process provided on CIHR's website, under *Training Module for a Master's Awards Application - Guidelines for Completion,* and the work process my informants actually engaged in when they begin to make the application itself. CIHR applications entail several forms but interviews for this study were structured around the *Research Project Summary* and how my informants composed it. I will briefly describe some of the application requirements.

CV Module

The CV module is for CIHR only and is not used during evaluation. The information on the CV module is mostly demographic. The first page of this form requires the applicant to specify her name, if she has applied to CIHR before, title, address etc… Page two of the CV module asks the applicant to specify key words that identify her expertise and the discipline that best corresponds to her research interests. Drawing on reports from several of my informants, the students had to carefully choose

the language used in this part of the application. This section of the CV module included words such as qualitative research, Aboriginal research, data analysis, transcribing, community-based research, research methods, coding. Where the applicants had to specify and rank the discipline that corresponds to their research interests, the answers varied. For example, I would have written Sociology and I would write that my research falls under the theme of *social, cultural, environmental and population health*. In the remaining pages of the CV module, applicants are asked to describe their academic background, work experience, any awards they have received, and any publications or presentations: Degree Type, Degree Name and Specialty, Institution/organization and Country, Supervisors Name etc… They are also asked to list any research training experience. The final page asks the applicants to specify the amount of financial support that is being requested. On a note regarding the supervisors, CIHR has said the following on its website:

> **Primary Supervisor and Co-Supervisor**[34]
> For candidates already enrolled in a research-based Master's program, their supervisor(s)' name(s) and their CIHR Personal Identification Number (PIN) **must** be included.
>
> Awards for research training are tenable under the supervision of an independent investigator holding an academic appointment, and in areas of investigation where it is clear that the research has direct relevance to health. A maximum of two supervisors may be proposed on a single training application. The training program must include actual involvement in research, and not only courses in research methods. Students enrolled in programs oriented primarily toward professional specialty training are usually ineligible for these awards.

[34] CIHR. Retrieved April 5, 2011 from http://www.cihr-irsc.gc.ca/e/25260.html.

> CIHR is willing to consider applications from students wishing to train with an investigator who does not hold an academic appointment. The proposed supervisor should first write to CIHR giving a brief outline of the training program, indicating the research facilities available and naming the institution through which the funds would be administered. Questions of eligibility must be resolved two weeks before the competition deadline date.

In all the interviews, the social science graduate students described their knowledge of CIHR's valuation of supervisors. Many noted that the reputation of their supervisors was a large factor during CIHR's evaluation of their application and discovering the value of their specific supervisor was part of the navigation process of applying to CIHR. Some had well known supervisors, and others were concerned with the credibility of their supervisors. When making the application, they described the work of choosing a supervisor, and of telling CIHR about their supervisor's credentials. This decision making is part of the work process of making an application; a necessary step in formulating a final application.

> Joyce: Depending on who your supervisor is and what projects they have ongoing and if they have funding… and if they don't and if your supervisor has a good enough publication record to have a chance to get funding in a next few years, they can write you into their proposal. If you don't have those supervisors… is [your] application strong enough to handle the minus points that will come from having a [less-known] supervisor.

> Leah - [My supervisor] is important, and I do think that is a big part of why I [will be successful].

The reputation of the supervisor was very important to the applicants. In their *Research*

Project Summary, my informants, and their supervisors, organized their proposals to include a section dedicated to their supervisors and their accomplishments. The role of the supervisor and will be described in more detail shortly.

Training Expectations

Training Expectations is a document that usually describes the applicant's research activities, both current and completed, intended future courses such as in research methods, lab work, the research environment the research will be done in, and the proposed project. Applicants talk about their supervisors and their labs, and how certain people and places will greatly facilitate successful research. My informants describe this part of the application as a document to prove to CIHR that research project is feasible and will be completed. However, many of my applicants expressed that they had a difficult time knowing what to include in this versus in the *Research Project Summary.* The excerpt that follows describes what Helen included in her *Training Expectations* and why.

> Helen: So this [describes] what the University can provide for me and what it can do. It goes beyond what [skills] I have because I don't have a lot at this point [as a graduate student]. [My supervisor] stressed, a lot, that CIHR is looking for a team, or like a network, like how the institution you are working in can help you do this.

Again, navigation is a work process done when developing the application. This navigation work is in ascertaining where the student sits in relation to other applicants and in relation to what type of researchers CIHR is looking for. Because Helen felt like she did not have many credentials early in her career, she emphasized the team projects she was joining as a way to present herself more favorably to CIHR. This work of negotiating who you are as a student and as a research is part of the work process when making a CIHR application. Many times, however, the students felt that they didn't have a clear guide and they were just 'winging it' and consequently, their work was changed

and written for them by their supervisors.

> Helen: Because, if I was in the department of criminology, they might not be able to support me, but if I have resources, [they might]. I think resources are key… I can tell you what didn't help [me make the application]. The distinction between training expectations and stuff. I felt like I had to write these big things, and I didn't know how to structure them. They got changed a lot. I feel I could have used a better guide. There was a lot where I was like 'should I be saying this or should I be saying something else.'

Navigating yourself, your work, CIHR, your supervisor's requests and expectations are all work process done in the effort to make a final application.

The *Research Project Summary*

So far, I have described some of the work process involved in making an application before the application is actually written. The decision-making and the use of the website are all work processes that social science graduate students engage in when making a CIHR application. The *Research Project Summary* is the main form that was focused on during my interviews with them since it is the document that tells CIHR about the researchers' project. CIHR describes this part of the application to graduate students:

> This section has a limit of one page and should be completed in conjunction with their supervisor(s). Include the specific hypothesis of the research and describe the candidate's role on the project. This summary should be written in general scientific language.

When it came time to write this part of the application, most informants wrote the one-page *Research Project Summary* quickly so that a draft could be sent off to their supervisors. As several of my informants describe, the first draft of the *Research Project*

Summary had a lot of information that the students felt was important to the research project. In the excerpts below, I show some of the work of actually writing the first draft of the *Research Project Summary* as described by my informants. The excerpts illustrate what the social science graduate students wanted to include in their summary and why. By describing what the social science graduate students want to include in their project summary and what work they did to make the application, we can find, in their work processes of writing the application, their struggles to make their projects fit CIHR's regulating texts and framework.

> Katelin: So this was your first draft, did you make it on your own?
> Cora: Yeah, and I did it very quickly. [My supervisor] wanted to get going and said, 'just type something up really quick'. But there are a lot of things that I really wanted to be included in here.
> Katelin: Could you tell me specifically what those things are?
> Cora: Ok. So, [because I was focusing on Aboriginal studies, I felt it was important to talk about] colonization. I think is a really important aspect. I used that [topic] as a beginning point [for the project summary] to understand why things are the way they are now, instead of just taking the data and being like 'oh! Aboriginal people have higher chances of being alcoholics'. I think we need to start way further back. Yeah, and the residential school characteristics, obviously. Like those characteristics passed down, the grandkids whose grandparents were in schools and the things they learned and were taught. It gets passed down and I thought that was something central.

For Cora, negotiating what background information and literature should be included was a point of contention and was a process that took time and energy. With her education in Aboriginal perspectives and studies, she wanted to submit an application and a research project that she felt was ethically and morally sound. Problematically, her supervisor and

team was so embedded in the traditions of health research, and in a style of research appropriate for CIHR, they felt the content of her application needed to be different. She continued,

> Cora: One of the things I felt was problematic when I was meeting with [the research team I would be joining], was comparing [Aboriginal people with non-Aboriginal people]. I just think that it is almost essentializing by saying Aboriginal people are doing this and non-Aboriginal people are doing that, you know… There are also cultural sensitivities, that was really important to me. Having an Aboriginal perspective or pedagogy, like I think it's very different than like a Western research focus. I know that this was a rough draft, but I know that there were some key things that I wanted to be kept in there. I am sure we will get to this as we go through the drafts like you will see that little by little these sentences are taken out and the final draft has nothing to do with that… so it is interesting.

Cora had ideas about how she wanted her research designed but so did her supervisor. In another discipline, Sally also struggled with the decisions around how to make her research style work for a CIHR application.

> Sally: So this is a really interesting point. For someone doing community-based research, developing a community partnership takes a long time. Even if I had tried and was like, 'oh! I'm going to start grad school in September and I am probably going to apply for funding', even if I would have had that initiative, it takes so long to build and there would have been little chance that I would have had that partnership at that time. So it's challenging because I haven't [developed that partnership], but there is a concrete CIHR deadline and it's hard to have your partners in place by the time you have to submit your application.

Making a community-based research project by CIHR's deadline is challenging for

researchers. As such, there is a lot of work involved in making it possible. Sally continued,

> Sally: Therefore we created this application in a way that left things very open and very broad and even as we are talking here, I am realizing that things are still very open ended and broad at this moment because we wanted to have this consultation with our partners. So [my supervisor and I] did our best and wrote down what we thought we were going to do.

Leaving the description of the project open was a tactic used to accommodate CIHR while at the same time attempting to maintain the community-based research aspects. The process of designing this application was done with the help of a supervisor. Sally met with her supervisor, and together they designed the application. Notably, Sally's supervisor had applied to CIHR many times before and is very familiar with what work needed to be done to the application. By creating the application with the help of her supervisor, Sally learned how to make the application as such. Therein, part of the work process of making the application as a social science graduate student is learning how to make your research fit CIHR's framework from those who are more experienced with the process.

> Sally: So, for people doing community-based research that is one hurdle to jump. But then also doing Aboriginal research, that's a whole different pool. It brings up so many other things that I need to consider, and that makes me have to work in a different way just because I am doing Aboriginal research, and because I am doing community-based research. And you know, grant applications really challenge someone in my world because, like I said, there are lots of time restraints that you need to work with. But in the real world, things don't actually line up.

However, the process of learning how to do the process can be confusing as well.

> Joyce: [When writing the application], it is interesting like the different faculty advice that you get. Certain people say, 'just write a good proposal and do your best' and others are say, 'be strategic, you know you don't have to do what you propose you are going to do'. So, I found it all a bit confusing, just trying to learn the system and understand, integrate all the different perspectives of people who have applied to CIHR and what feedback and comments they got…I trusted [the faculty who had been successful in their CIHR applications] over the ones that were just saying, 'oh, it's just an application, write whatever you think you're going to do'. I started not being able to trust that because I felt like I didn't stand a chance [at getting funding if I did that].

From the social science graduate student's description of beginning to make the application, it is apparent that part of the work of making the application, is learning how to do the work. This means learning what the content should be, how to fit community-based research into the application, or Aboriginal research into the application; as a student, the process of making an application involves learning the process of re-orienting one's research. Four of the five students described making the first draft of the application without the direct help of their supervisors. Once the first draft was completed, they submitted it to their supervisors for feedback who returned the drafts heavily edited. When asking the social science graduate students about the work of making the application, they all described how it was their supervisors who actually 'fit' their projects into CIHR application.

> Sally: [My supervisor] helped me with my editing a lot, a lot, and I feel extremely fortunate for that 'cause I have one page to explain my program which means that every sentence has a huge difference. And you know, he's done these a million

> times. He knows what to put on here. I'm a grad student. I'm smart. I'm a good writer but… so we really did a lot of back and forth with editing. [For specific sentences], I can't tell you if that was him or me.

In order to understand how the social science graduate students actually made their applications for the CIHR, we must not only understand how their applications were organized through CIHR's expectations, but also through their supervisor's expectations. When developing the application and their research idea, they can face double subordination from both CIHR and their supervisors. This subordination from their supervisors is characteristic of the mentor (dominant) - student (subordinate) dynamic commonly found in the natural science model where the supervisor's idea or agenda is dominant over the students. The social science students' accommodation of their research for CIHR demonstrates CIHR's employment of the natural science model as well: CIHR (dominant) - social science graduate students' research (subordinate) where CIHR's ideas and agendas are a ruling relation to the social scientist.

4.7 Supervisors and their Ruling Role

The social science graduate students I spoke with described their interactions with supervisors who established and demonstrated the importance of accommodating their research in order to gain access to a particular arena; in this case, funding from CIHR. The role of the supervisor is instrumental since they teach the students the process of making an appropriate application for CIHR. From the descriptions provided by the social science graduate students above, I soon realized that supervisors play a ruling role on the boundary of CIHR since their work processes organize and coordinate the

student's work with CIHR's standards and organization rules.

Supervisors are in a key position to influence the definition, evaluation and development of CIHR applications. Campbell and Gregor (2008) write, "[r]uling is the concept that Smith uses to name the socially-organized exercise of power that shapes people's actions and their lives" (p. 32). Usually through email exchange, students received drafts of their applications back with changes made for them. The changes to the application seem almost effortless and automatic, in the student's eyes, but the supervisors are operating from distinct forms of social organization[35] implicit in CIHR. Supervisors work to coordinate the student's application with supervisor's knowledge of what is deemed appropriate and of value in an application to CIHR.This may involve fine-grained editing as well as acceptance or rejection of the social science graduate student's CIHR application. With the supervisor's acceptance or rejection of the graduate student's work comes a degree of control to promote CIHR's interests. Through this process, supervisors, and their students, "participate in social relations, often unknowingly" (Campbell and Gregor, 2008, p. 31).

The ruling role of the supervisor is particularly important as it affects the "mobility of individual scientists [and social scientists]" (Merton, 1973, p. 523). As supervisors steer their students' application processes, editing out ideas and approaches that seem unlikely to meet with CHIR approval, they participate in a practice of ruling that is text-mediated and extra-local. This ruling organizes the application, "thus affecting the differential development and direction of academic fields, for example, favoring some

[35] It would be very illuminating to talk with supervisors about their work processes during the application process. This would offer greater understanding of the social organization of the application process to CIHR. I also believe that not all supervisors have the same experience and understanding of the application process. It is likely that some find the process challenging, confusing, and frustrating.

research questions and fields and disfavoring some others" (Husu, 2004, p. 71).

In my interviews, I asked social scientists to start at the beginning of their graduate research and explain to me how they came to create the application that they did. Responding to this, most of them explained to me that they wrote the first draft of the application without the help of their supervisor, but then drafts following were heavily dominated and strongly influenced by their supervisors. Supervisors strongly recommended what to say on the application and how to say it. When the informants described how their supervisors directed them, it seemed as if supervisors were coordinating the student's application to be in line with CIHR's conception of legitimate scientific research. Doing this, it seemed that they were demoting the use of other research methods that do not meet the standards of "scientific excellence" as a way to create a strategic application. In this light, supervisors act as a (partially) external agent for the promotion of CIHR's mandate and research practices while also legitimizing CIHR's interest in traditional scientific research practices. They are in a "key position to influence what kind of research is supported and encouraged, or marginalized or discouraged, and what kind of eligibility criteria and measurements of excellence are introduced and how these are applied in practice" (Husu, 2004, p. 71). From the experiences my informants described to me, I came to realize that supervisors activate their ruling role by promoting and expecting the use of particular discourses in the application itself. As such, the supervisor's ruling played a large coordinating role in the organization and creation of a CIHR-appropriate application. Further, these ruling relations impose a discourse which "constrains what [social scientists] can say or write, and what they say or write reproduces and modifies [the] discourse" (Smith, 2004, p.

224).

By even developing an application, social science graduate students contribute to the dominant discourse perpetuated by the application process. Just as with the application forms that my informants referenced for the development of their applications, their final applications also serve as exemplars, incorporating the ruling relations, for future social scientists who apply to CIHR.

The social science graduate students I spoke with recognized their supervisor's ruling role when they were creating the application. They also felt a lack of autonomy when working with their supervisors. Some informants were very happy and glad to have their supervisors 'take the lead' in developing their project. One informant said,

> Leah: I was thrilled! (laughing) I couldn't have been happier… I was kind of told what my role was going to be in the project, which again I was so happy with. I never really made that decision. I agreed. [My supervisor] didn't coerce me into it, she asked me if I wanted to be a part of it, and I was more than happy… she kind of told me, 'well, this is what would kind of be beneficial for the project' and I thought 'great this would be qualitative interviews with people who are engaged with [my research topic]'. She kind of told me what my role would be in this project. Then I wrote the 'Research Project Summary', [the CIHR application], and then I sent it to her and then she sent it back asking me to edit, so I edited it and send it back to her one more time, and then it was done after that, and she *definitely* heavily edited it.

Other informants were less enthusiastic about the dominating role of their supervisors,

> Cora: You know, the analogy of boiling the frog? If you throw a frog into boiling water they will just jump out because they are like 'whoa, my surroundings have changed'. But if you put a frog into cold water and it boils slowly, they will

> adjust… I feel like I was a frog that adjusted (laughs). Yeah, it happened so slowly, I didn't realize that it was happening and by the end, by the final draft I now feel boiled (laughs). It was really disheartening. I was surprised how, how emotional I was getting about it. Um… how much it was just eating at me. For years, I have been going down this path, you know, this is what I want to do and this is how I feel, and other people are doing research that I see isn't right, you know? I don't want to perpetuate all these things [in my research]. I have come this far to be a graduate student and think that I am going to be doing something really good on my own, and then have this happen, that's a horrible feeling. I feel like I am getting really emotional about it now… like it was… it's a horrible feeling. I feel like my plan has been co-opted.

The social science graduate students I spoke with felt helpless when it came to standing up to their supervisors. Some informants felt stripped of their academic freedom and autonomy regarding their research question and what/who they were studying. They felt helpless to do the work they wanted. One informant described the same problems of autonomy and academic integrity when joining a team project. She said,

> Cora: I also didn't feel like I was in a position to go against [the proposed team-project I was joining] because it was not like it was "oh you should work on this project"… it was like "come work with *our* project". So, I didn't want to criticize it or point to things that were not right, because it is not just me identifying something, you know outside their realm, it is very close and personal to them. It's *their* project, you know? Especially because they have been doing it for *years* I have no ability to say, 'I don't want to do this', or 'this is problematic'. [These problems] are then carried forward into my work. I think a couple times, I got the courage to actually meet with [my team] and I kind of raised some of these concerns, but they were very quickly dismissed. I think their responses are just grounded in so much; they have been doing it for so long so what I say obviously

gets overruled.

The excerpts provided above illustrate the powerful role that supervisors have on organizing aspiring social scientists in their applications. In these examples, the supervisors organized the content of the research question and brought with this an indisputably invested history and background. Supervisors act as mediators to the world of 'good' CIHR applications and many of my informants believe that they do not have the ability or 'right' to go against what their supervisors suggestions.

With the involvement of their supervisors, the social science graduate students describe how parts of their applications were changed, removed, and altered to accommodate CIHR's request for *general scientific language*. From their descriptions, it seems that by changing the language used in the application, the overall presentation of the proposal was changed. For example, they would change the language to remove a feminist praxis, or a theoretical emphasis, a specific methodological approach, or a qualitative data collection technique such as 'snowball sampling'. When making these changes, the applicants adopted traditional scientific language to present their research.

> Katelin: Ok, so in your summary you list your background and how you are qualified to do the interviews and the research. Then you say 'I am legitimately capable of doing this'. It is interesting like the language you use here. You have listed three things here that you have skills in [effective interview techniques, and critical analysis, and qualitative research].
> Leah: Yeah, and I feel I might have pulled those, they might be off like my sponsors report or the application guidelines… like this terminology I definitely pulled from elsewhere you know. Definitely.
> Katelin: So where did your knowledge come from that you had to be able to write that? It sounds like you went to the website and looked at other people's

applications.
Leah: Yep, exactly.
Katelin: It was almost like you were cutting and pasting.
Leah: Exactly.

Helen: [My supervisor] switched [some sections of the proposal]. It got changed a lot, but going into… there was a lot where I was like 'should I be saying this or should I be saying something else'
Katelin: Could you give me an example?
Helen: Yeah, um… yeah, I mean, I guess I kind of kept things a lot broader than I could have, rather than on the specifics of what type of research I was doing. Like I didn't talk about [the main body of research that will be used in my] research. I don't know, [I didn't mention] phenomenological research or anything like that, because I felt [CIHR] wouldn't know what I was talking about. At least that is what I thought… My supervisor also stressed [that I use the word] utility. I remember I had some ambiguous word and she was like, 'No, use utility'.

In the process of designing a research project, Helen was told what to include, and what not to include. For Helen, the process was confusing and she relied on her supervisors experience with making applications to guide her. At this stage of developing the application, the process involved learning what to say and include in the application. Our conversation continued,

Katelin: So there was a sense of confusion about whether to put in these specific words, like phenomenological research or intersectionality?
Helen: Yeah, totally, and you can't even spin it. And that's the thing, you feel like you are, you know, you already have a strike against you because I can't even use the language that I am accustomed to. In a way, I was like, how… like every word I was choosing, I was like 'who is going to read this, are they even going to know what I'm talking about'? (Laughs)

> Katelin: Right. So the final project, it doesn't use much specific language then?
> Helen: Yeah, [it doesn't]. It uses a bit but I feel like I could have benefited from using a lot more. I actually wanted to get into the specifics of what I was doing, and what paradigm I am looking into, but it is just, I didn't do that.
> Katelin: Because?
> Helen: I feel like it wouldn't have been clear to them. Like, I made it more health focused and made [my theoretical project] seem 'applied' (Laughs).

Being clear to CIHR meant diluting the discipline specific language Helen was accustom to using. Making the research project more applied was part of the process of redesigning Helen's initial research project to be appropriate for a CIHR application. This process drastically changed the intent and focus of her research on the final application. In an attempt to explain why she felt she needed to change her application, she said,

> Helen: It feels like you have no chance of getting the grant, that is how I perceived it anyway, that is how I wrote... like me trying to bridge this theory for the sake of knowledge, with how applicable it is going to be but I can't even get into the specific of the theory that much. Like, it is all framed within this bridging like you saw, like how I'm going to look at theory and the empirical research and how helpful it is going to be for policy and social dimensions of health, rather than like, it being, good in and of itself and going in depth about how it is good theoretically, but it can't be pure theory, so I just stayed away from that, which is ok I guess, because I am still interested in this… but it was like, yeah…

These excerpts show how social science graduate students are situating their activities and work within the guidelines and requirements produced by CIHR. For the students, the process of developing an application requires that they learn the process of designing an application from people such as their supervisors.

4.8 The Work of Fitting – Hypothesis and Methods

The goal of this section is to point to examples of the work process of modifying the language and content of applications to accommodate CIHR. Through this, the struggles and conflicts social science graduate students face when making these changes will be exposed.

During the process of writing and negotiating the content of the application, social science graduate students, with the help of their supervisors, had to decide how to present the methods used in their research. Recognizing CIHR's interest in the traditional scientific model, as noted by its request for a specific hypothesis and general scientific language, applicants knew that the legitimacy and validity of their projects was often in question because of their research methodology. Some felt disadvantaged due to their use of qualitative methods and modified their applications accordingly. Joyce and Sally explain their experience with this dilemma and Sally contrasts her work with another discipline whose research approach can accommodate CIHR's guidelines and goals:

> Joyce: It seems too rigid, this whole process. There is little flexibility, very little room for individual agency as a researcher and different types of knowledge and methods. I would have proposed something entirely different, like life histories, or monthly diary interviews, like very engaging with participants, and I didn't. I felt like a lot of my background is very devalued in this process. Had I applied to SSHRC, I would have applied different and highlighted different things…

For Joyce, the process of designing a project meant discovering what CIHR would be interested in and researching that. This required her to abandon her own research agenda and interests in order to increase the odds of receiving funding. In regards to the actual fitting done in her application to accommodate CIHR, our conversation continued,

> Katelin: So right here it says project title and then summary of research project, include your hypothesis.. etc… so how did you accommodate all this in your project?
> Joyce: Ok, so it was confusing because I initially had a specific hypothesis but didn't feel like it was necessary for this type of research. Like I don't think my work boils down to a specific… like it is more about the questions I'm asking and that is the nature of qualitative social science research. Like I kind of recognize that this, [the guidelines], might be more aimed at clinical research and I wondered at what point you have to follow instructions in this application, and at what point it didn't make sense for me to do that.

Sally furthered the conversation on fitting her research to CIHR's application.

> Sally: You know, its funny that they did ask me in one sentence, tell me what your specific hypothesis is.
> Katelin: mhm
> Sally: And the thing about these applications is that you, well *I* really tried to look exactly what they wanted and exactly try to answer the questions so I am surprised that I can't… I can't recall for you [a specific hypothesis].

As articulated earlier, a large part of the work process when developing an application is learning what CIHR wants in the application. To learn this, the students often used CIHR's website and also had the help of past applicants and their supervisors. However, even with these resources, it is not always possible to facilitate CIHR's research style in their research projects. Sally continued,

> Sally: I know that these last two sentences here would be my 'hypothesis'. You know, I really tried to go over it with a microscope um… Like I'm just thinking more about other people who would do these applications that would uh, might have a specific hypothesis. Like, [if someone was] studying dolphins… it would be like 'I'm going to look at the dolphins, if they metabolize this much food, that

> will tell me if they are getting enough food in the ocean' you know… [they could say] something really specific like that. Like I said earlier, I am developing an assessment tool for [marginalized communities]. But [with that]… its just, like it's really loaded and there is a lot of 'whys' behind that… I think there is some 'why' up here when talking about um… um… you know, it's hard for me to just pick one or two sentences because there is a whole world of things that are important to this project. So, it's hard because I feel like each of these sentences is leaving something out about the why. I am talking about the health gap, but I don't have room here to go into the health gap, the [health of the specific marginalized communities], mental health, like all this stuff to establish the 'why' behind it.

Articulating a hypothesis was problematic for all my informants, even for those employing a more traditionally scientific research project. Rather, many felt their entire application stood as a 'hypothesis' and that stating a hypothesis itself was not as important or appropriate for their overall study and methodological approach. Sally's desire to express 'whys' was a major part of her interview. She described that stating a hypothesis would not capture the essence of her work. For her, the question of 'why' was more important to her work. Not only why her research is needed, like at a policy level, but 'why' this work mattered politically, historically, and spiritually for the marginalized communities themselves. This 'why' is not part of the traditional scientific model, and to her dismay, was not a significant part of her application.

Methodologically speaking, several of the informants modified the approach used in their research projects, continuing the work process involved in designing an application. They described that part of the process of making the application as just telling CIHR what they wanted to hear.

> Sally: So I don't know if this is important to you, but this whole section here on how I am going to develop the outcomes, that I am first going to do this, get the core part [of the assessment tool] developed first, then go to the community partners… um, that's totally different. That's not what I am doing at all now. So um, yeah, I think a lot people doing community-based research are… you have to put something down on the paper. Then when you get into [your research], it is probably going to change…

Putting something down on paper is part of the process involved in designing and re-designing research applications. Most of my informants confessed that they anticipate that their research would actually be carried out in a completely different way than they told CIHR on their application. Our conversation continued,

> Katelin: Ok, so why do you think, perhaps you just didn't know this before hand, but why don't you think you presented your methods that way?
> Sally:… that's a good question, I think that what [I have] written on the paper sound really nice. If I would have written what I just said to you, ['I'm going to first find my partner, then we are going to talk about building a relationship, then we are going to talk about program evaluation and see if they are interested in this program evaluation, and then we are going to talk about the program']. That doesn't sound… um… very "sciencey"… it doesn't sound very concrete, it sounds like I am going to be taking my sweet ass time, and really could come up with anything… *this,* [what I did include], sounds like I am going to use literature that's already out there. I am going to use those outcomes measures in my assessment. It is going to be very academically informed, and then I'll go to the community partners… But you know, when I wrote this, that was just the best thing that I could come up with and now that I've spent a year getting immersed in health research, I realize that, um.. that [what I've proposed] wouldn't be as workable as the way I'm going about it now. However, [what I've proposed] would be a more efficient way. I have kind of come to terms with the fact that my

> thesis is going to take a long time, it's not going to be a quick and easy thesis. But yeah, I wonder uh… you know, my supervisor being so informed as he is, why did he support me putting that there? Maybe he knew that that would be a good selling point.
>
> Katelin: You mentioned that this is an efficient way to do it, and you know it is a selling point. Do you feel like this was what CIHR would want to see? An efficient way by going in with this tool that you've developed, do it and get out?
>
> Sally: Now I do… I know that CIHR is very competitive and they get so many applications and you have to be, you know, it has to be good to be on the top of the pile for you to get the funding… so umm…
>
> Katelin: What do you mean by it has to be good?
>
> Sally: (laughs a little) um… yeah.. for you to get the funding you have to be on the top of the stack and for that, for it to be good um, I think one of the things that they would want to see is that it is very clear, what you are going to do, and it is very easy for them to conceptualize what you are going to do. If I was to write [how my work will really unfold]…it sounds, I mean, that is how community-based research happens, that is how Aboriginal research happens in that way I just described. But I feel like CIHR doesn't get that. They want to see the science at work, the informed academic science at work.

In the process of actually assembling a final application, Joyce pulled all that she had learned about making the application together.

> Joyce: My thought process was trying to, it was like trying to fit all the pieces that I felt that I had learned in the month of learning about this application, that mattered (laughs slightly). [I was] trying to make something that felt like it fit, that it was cohesive, that I was also qualified to do, and to me that involved I guess. [The application] started with my research background… like I had ethical dilemmas too, as to whether. Like how far… like I don't feel comfortable lying on an application. I really don't… but in the end I strayed farther from the truth and I just kind of, like I didn't like, but I… I was more flexible than I would want to be

> with an application. Again, this was written with doubt, in a way, it feels a bit like fiction. And, I'm not sure who, within a month of joining a program, knows exactly [what they will research]… again, going back to people who are doing community-based research questions, you don't know what you will ask, or who it will be with, the way the application is structured, you need to… you have to present it as if you do know.. so, [I structured it that way].

Joyce describes the pressure to fit her methods because of how little details can make the difference in receiving funding. She explains, everything in CIHR's evaluation boils down to small details or 'fractions'. Consequently, it appears that part of the process of making the application is deciding what would make your application the strongest.

> Joyce: You are told that fractions count with CIHR. Everything boils down to fractions because a lot of [projects] get approved for funding and meet the minimum requirement, and you just work top down… and I was conscious about writing this and putting together the whole application and thinking of it like an equation.

For Cora, the process of designing a strong application meant deciding what to include to make her application the strongest.

> Cora: [My supervisory team] point blank told me when I first met with them, that I should say that I will be using both quantitative and qualitative methodologies and to give specific examples [of what I would be using]. One of them was to say that I would be using the [Minnesota Multiphasic Personality Inventory (MMPI)][36] because it is standardized.

This accommodation was highly problematic for Cora. Earlier, I described her desire to

[36] The scale actually referenced by the informant has been changed to the MMPI. Both the MMPI and the actual scale discussed by the social science graduate student are widely used scales because they are thought to be highly scientifically validated.

use Aboriginal research methods and to discuss the history of colonization of Aboriginal people. Now, her research would use quantitative methods and standardized paper and pencil questionnaires; for Cora, this accommodation represented the loss of her initial research ideas, interests, ethics, and morals.

Like Cora, Leah also described how joining a team project determined the methods used in her project. She said that the methodology she articulated in the application actually described the methods used in the larger team project she was joining more so than her own methods. The 'middle paragraph' that she refers to is a section of her application that details the larger team project that she is joining and the mixed methods it uses.

> Leah: I find that qualitative still has a bad rap so I want to show that [my research] is not just qualitative and that I am going to be conducting some hard facts about [my population's] background that is beneficial. I am pretty sure, that if I remember correctly, that this whole middle paragraph was almost primarily written by [my supervisor]. Like I wrote my understanding of the project and sent it back to her, and then the whole middle section was edited by her… [The larger project] wanted to do a quantitative part to measure [how their population] feel[s] about the adequacy of services. [The parent project] is using [an approach] which is primarily used for psychology's purposes but yeah, it is being included in health care purposes. And there's a quantitative assessment tool to see if our approach is working. So they want to do [the quantitative research] as well as qualitative interviews with participants. [So my work] is going to be [part of] a large project.
>
> Katelin: Ok, so when you look at this middle section [of your application] then, three quarters of it is not about your specific project.
>
> Leah: Exactly.
>
> Katelin: It's about the larger project you are part of. And in your application, it says that you are using a mixed methodology and [that the parent project] is using

> semi-structured interviews, focus groups. Then there is this section on you here and it says that your [research] will augment findings from the parent study.
> Leah: Yeah. And I am really looking forward to this program assessment. But yeah, the grander project seems to fit all the different holes that [my research doesn't]. And maybe this is just me, but the research agency wants that… like we will be doing mixed methodologies, some observations, [we're] going to do qualitative, [we're] going to do quantitative. Like [we're] doing it all which they want. They want it to be well-rounded.

This excerpt by Leah recounts her strategy of fitting her qualitative project into a CIHR application. Her research would use qualitative research methods, so instead of changing her research, she legitimized it by nesting it in a larger project that would be using more standardized and traditionally accepted scientifically valid quantitative procedures. As such, the research she presented, of which her supervisor wrote the majority, was developed into a program review, another strategy used to 'fit' and sell social science research to CIHR.

4.9 The Work of Fitting - Usefulness, Program and Policy Reviews

> -- *Do not allow public issues as they are officially formulated, or troubles as they are privately felt, to determine the problems that you take up for study. Above all, do not give up your moral and political autonomy by accepting in somebody else's terms the illiberal practicality of the bureaucratic ethos or the liberal practicality of the moral scatter… Know that the human meaning of public issues must be revealed by relating them to personal troubles – and to the problems of the individual life. Know that the problems of social science, when adequately formulated, must include both troubles and issues, both biography and history, and the range of their intricate relations. Within that range the life of the individual and the making of societies occur; and within that range the sociological imagination*

> *has its chance to make a difference in the quality of human life in our time* (C.W. Mills, 1959, p. 226, my emphasis).

Earlier, I described some of CIHR's goals outlined in its three year implementation plan and progress report for 2010 – 13. In this report, CIHR states that it aims to "*improve focus, coherence and impact from CIHR's strategic investments"* by establishing a "comprehensive process for selecting strategic priorities," and by reviewing the impact factor of the research they fund (CIHR, 2010, p. 7-8). Further, the CIHR wants to "*reap the socioeconomic benefits from research through KT, [knowledge translation], and partnerships*" (CIHR, 2010, p. 10) through supporting more "evidence-informed policy making to improve health and the health system at the provincial, territorial and federal levels" (CIHR, 2010, p. 10). CIHR's action plan to achieve this goal is to "implement programs to support evidence-informed policy making and increase policy makers' access to high-quality evidence" (ibid). These goals describe CIHR's interest in funding research with a large impact factor. Scientific impact is measured through several indicators such as the average of relative citations (ARC)[37] and the average relative impact factor (ARIF). The ARC is defined as "the number of citations received by papers over a three-year period following publication year" (CIHR-IRSC, 2011). The ARIF is defined by CIHR as,

> a proxy for the quality of the journals in which a group or researchers publish. Each journal has an impact factor (IF), which is calculated annually by Thomson Scientific based on the number of citations received by a journal relative to the number of papers it published (CIHR-ARSC, 2011).

[37] Please see http://www.cihr-irsc.gc.ca/e/41601.html#1.2 for more information of Scientific Impact

In its three year implementation plan, CIHR's goal is to review the scientific impact and the socioeconomic benefits of funded research. The social science graduate students I spoke to were encouraged to emphasize the 'usefulness' of their research to CIHR, even if it meant downplaying other parts of their research. For some social science graduate students, their idea of useful research differed from CIHR's. In the excerpt below, Cora describes how her supervisory team encouraged her to discuss policy contributions to emphasize the political usefulness of her research. As such, the process of learning what usefulness entailed meant listening to their supervisor's instruction. Some had taken graduate level courses in methods where they discussed developing grant applications, others just used their own judgment on what our society views as valuable research.

> Katelin: And this part [where you talk about] significant policy contributions… were you told to put that in there?
> Cora: Yeah, (laughs) I was told to put it in and *I* added in 'by linking these [contributions] to health and traditional healing'. I was told to remove that.

When we reviewed the fourth, and heavily edited, draft of her application, Cora referred to a sentence that she said could be seen as her 'hypothesis'.

> Cora:…I tried to fix this sentence, more to a sentence that I wanted, that um… that was, um… similar to this. I think I added stuff [about Aboriginal people's] 'experiences with marginalization' cause that was not in there, and I think I added [words about their] cultural identity and self-conceptions which mitigate vulnerability. I don't know… I tried to fix it…

When Cora received her draft back from her supervisor, it had been heavily edited. Her response was a work process of trying to fix it. This re-writing was often in vain since her supervisor dismissed her changes, but nonetheless, she worked to fix her application.

Katelin: Tried to fix it? What you had represented in earlier drafts?
Cora: Yeah.
Katelin: What were their responses to your fixing. Did they like it… is it in the future drafts?
Cora: No. I think throughout if I tried to throw something in, that uh… that I felt was important it would just kind of be taken out. Kind of like 'you are not doing this in the study' … yeah, and then I think between these two drafts,
Katelin: Between three and four?
Cora: Oh yeah, see… remember how I said I wanted this to be there? 'culturally appropriate resources', that got taken out. So now [draft four] just goes right to the policy and scholarly contributions for the whole middle section.
Katelin: In the third draft you mentioned that it was important for you… that information about Aboriginal history, the colonial context, that is not there at all any more. It immediately goes to policy. There appears to be no more 'why this matters' which we discussed earlier.
Cora: Other than policy.
Katelin: Yeah, other than policy. So there is no more why this matters to Aboriginal philosophy, research, and the history of Aboriginal people.
Cora: Nope. The history is removed. Yeah and this sentence, that I was uncomfortable with, that's kept… And then, I was told to use this, 'the research will be theoretically rooted in the social determinants of health framework'.

Cora's goal was to emphasize how her research would contribute and would be useful to the Aboriginal communities she was researching. She hoped her research would integrate the Aboriginal communities' definition and relationship with the concept of health, but it was discouraged. Rather, her supervisors re-oriented the usefulness of her research; they 'fit' it to be useful at a general level for Canadians, and specifically for Canadian government and policy. It was repositioned within a social determinants of health framework, not an Aboriginal people's health framework as she had hoped it

would be. Sally and Helen understood the pressures and expectation to conform to CIHR's requests as well. For Sally, the work process of fixing her research transformed into a learning process where she learned to write an application that CIHR would like.

> Sally: 'Fake it 'til you make it'. Put something down on that paper that is going to make them happy then you can do what you want.

Helen explained a similar work process of learning to accommodate CIHR.

> Helen: It was hard. I was like, should I stay vague [when proposing my research]? But by doing that, it gets rid of the really specific stuff about what I am actually doing. But I didn't think they, [CIHR's PRCs], would understand. That is the thing that my supervisor said, was to keep it understandable because you are writing for a medical audience. Ok then. If I do that, then what do I have, what am I left with?

Sally's suggestion to 'fake it 'til you make it' requires an understanding of what CIHR is looking for and what CIHR wants its research to look like. CIHR's interest in impact factors and socioeconomic benefits, articulated in its three year implementation plan and progress report, outlines some of its understanding of what useful research is and what it can accomplish. Of the five social science graduate students I spoke with, two proposed program evaluations to CIHR as a way, perhaps unintentional to them, to propose useful research to CIHR. The process may have been unintentional because of the powerful role of the supervisor. However, Sally recognized the limitations of the more traditionally framed scientific methods that she strategically proposed for her program review. She said it would be naïve, unrealistic, and unethical to actually conduct the program evaluation she proposed with its 'sciencey' methods.

> Sally: Like it would be really naïve to assume that I could design a program evaluation and it would work for all Aboriginal communities across B.C. So, we've got to have room for, for the diversities that exist from community to community and from program to program. I mean it's saying that the first part will be applicable to all communities and programs, and just reading that sentence now makes me pretty nervous because that is a pretty tall order.
> Katelin: So a selling point of your application is that it seems to accommodate the need for a program review?
> Sally: Especially to the evaluation science world. It's totally, it's saying all the right words that fit into that little box. I think that this sort of highlights how this research will connect to the academic world of evaluation science, but also for the whole, there is a lot of drive in [my discipline] to um… strength building.

Saying the right words requires the student to learn the right words. Usually, the students had to depend on their supervisors experience to discover what the right words were. Through meetings, and edits done for them, the process of designing and redesigning an application requires the students to discover and implement the right words for CIHR. Sally continued,

> Sally: It's a strength building program and we are going to get everyone strong and have strength. So, I think you know, maybe that's another plug that, 'hey, we are doing that stuff too, we are looking at strength building'. But also, by developing this evaluation, I am also uh… um… you know contributing to that academic knowledge... Um, yeah, reading that now, I sort of feel like that is another tall order for me to do with this project. It would be interesting if my supervisor was sitting here with me too and um, what he would have to say to all this, especially to why we included these sentences because I am realizing now that I think he had a whole lot of processing going on in his head that I wasn't aware of like 'oh we should include this, or oh we should include that, I know they want to hear this' because he is so immersed in that world.

In Sally's excerpt, she describes the usefulness of her program evaluation and the wisdom and experience of her supervisor to know how to orient her research. With the help and guidance of her supervisor, she learned how to, and did, accommodate her research to be in line with the world of evaluation science in its ability to use standardized language demonstrating the validity and excellence of the research (making it valuable research for the world of evidence based medicine, EBM, and evidence based decision making, EBDM), it accommodates the trends in her discipline, and it contributes to the academic knowledge.

Despite her work to change the nature of her research to accommodate CIHR's request for science and to 'fit' her Aboriginal and community-based health research into CIHR's 'shells', the reviewers noted that her research lacked a "detailed hypothesis" and "detailed methods". Sally expressed frustration with the process of fitting and disguising a community based project into a CIHR. She said that the exploratory nature of community based research makes it difficult to articulate clear, detailed methods and a hypothesis, as requested by CIHR's application form. The following passages articulate this problem and recount respondents' reactions to the reviewers' comments.

> Leah: I have my reviewers' comments and that was one of their critiques was that I don't have… it says that I don't have… oh here! I don't have a clear hypothesis, is what they said. And, 'the details on proposal sample population methodology would have helped to clarify the nature of the study'. So I definitely lacked in that area so…I don't know the demographic of [my population] and based on what I have read, [my informants will be] Aboriginal peoples which brings in a whole other dimension but since I haven't done the research yet, I don't know. You know? Because of the ethical restraints I can't contact [my informants] before I

> do all this other stuff 'cause it is not public knowledge who they are or what their background experience is. So I don't really know until I get ethical approval to contact them.

Here, Leah describes the work involved in articulating usefulness. In a sense, it involves faking the research plan since her community-based research project cannot provide CIHR with the methodological information it requests. In another discipline, Sally expressed a process to design a research project focusing on Aboriginal health issues for a CIHR application.

> Sally: Like what we were saying is that this is pretty academic and 'sciencey' but they are saying they want it even more academic and 'sciencey'. So, I think… sometimes I remind myself, like… CIHR, I don't know if the people reviewing my application, like do they know, are they part of the Aboriginal people's health institute? I'm not sure… or are they like, cancer researchers? CIHR encompasses a huge spectrum of health research. And people doing for example, cancer research in their biology lab you know, that's very different research than I am doing, um… so… it's kind of like I'm walking in two worlds. I'm walking in the academic world and I'm walking in the Aboriginal community-based world, and those two worlds are very different and I need to bridge the two of them and make things clear to both parties… and with me and with my supervisor, he has had to walk more in the academic side of the game and he has had to do work and make application that sort of makes the academic world happy… using words that they can understand, you know?

Sally's frustration with 'walking in two worlds' was similarly expressed by Cora, who was one of the informants whose initial research interests were abandoned and were not in the domain of health research. These descriptions outline the process where an applicant must negotiate what to include. They must accommodate CIHR, while at the

same time they must consider their own research interests.

> Cora: Yeah, [the final draft] is the exact opposite [of what I wanted]. [Academically and morally], it goes against what I fundamentally believe and don't believe.

Making the application requires students to change their research. For many students, it meant changing their research into something they do not believe in; for others, it meant modifying the project in a way they were still comfortable with. Cora continued,

> Cora: Like, if I get the funding, it is ridiculous to say, I actually hope I don't get it after all this because I at least then I know not at least tied to doing health research. Like I'm not even sure, like I never considered doing health before. If I do get it though, I'm thinking that, I think health is a central issue in Aboriginal issues, like when I was at Aboriginal health conferences, it is tied into so many things like, like almost any issue you do talk about like land-claims, environmental like, it is very tied into health. So it's not like it is this marginal topic that I can't identify with at all. Like I *could* work within it, but I think that what I wrote on the final draft is not something that interests me.

The research the Cora presented is not a representation of her as a scholar. Rather, it is a product specifically designed for one purpose - to receive funding for CIHR. In that case, the application had to accommodate CIHR's style. Consequently, many of the students had to surrender their research interests, beliefs, morals, and ethics to their supervisor's guide, and further, to CIHR. Also, the research application submitted contained research that the researchers did not feel was worth their effort or time; however, it was considered useful research at a political level. Cora continued,

> Cora: It's not something that I can see myself putting my blood sweat and tears into. Like when I think about what I wrote on the *first* draft, I am passionate about

> it, I care about it, I know about it, and I can see myself spending an entire year dedicating myself to that topic you know? Whereas the *final* draft, like I could not. And I would try very much to get out of doing that research. But I am very… like scared or just, like you know, how do I, how do I say to these people, I don't want to do your study? And I think especially because, maybe some day, hopefully my next step is to be working for [an] Aboriginal consulting, firm or some other organization that I've made connections with. One of my huge concerns is that if I were to do that study, and put my name is on that, I would not be well received in the Aboriginal community. Like I can't publish something like that. Like if I did get published, and that was another *huge* thing if I did join [the team project], I would probably get published, um…

In the process of designing and orienting her application to be useful and methodologically strong for CIHR, Cora became unhappy with the final application. She was also uncomfortable with the possibility of being associated with the future research that might come from her CIHR research project.

> Katelin: Yeah, I was going to ask how Aboriginal audiences would receive this work that you are doing?
> Cora: Not. They would not. Like, I would just be another one of those researchers who wrote about Aboriginal people. I would not be proud to have my name on that work, I would not.

Even those applicants who did not propose an actual program review discussed the strategy of proposing program or policy reviews to CIHR in several of the interviews. The applicants understood that their work had to represent what they believed CIHR saw as useful research. In turn, the goals and outcomes of their researched changed. The informants who presented program reviews were excited and looking forward to

conducing their research because they wanted to do work to help and support the communities they where researching. However, in the application itself, the usefulness of the research was not directed toward these communities as they had hoped and intended it would, but rather, towards policy makers.

Chapter 5. Conclusion

The overall goal of this thesis is to explicate the process of applying to CIHR as a social science graduate student. The work process the students engage in is one that takes time, effort, and a lot of learning. This thesis documents this process to show what work social science graduate students did to fit their research projects into CIHR's framework. By exploring their experiences, we see how CIHR's relations of power are taken up by the social scientist and translated into a textual application. This section summarizes the thesis and then turns to concluding thoughts.

This thesis begins with an account of my personal experience with disciplinary boundaries. Outlining my undergraduate experience demonstrates the difficulty I faced when working from within two social science disciplines, sociology and psychology. It illustrates the challenges of bridging conflicting epistemologies, and led me to consider other situations in which people are placed between two contrary frameworks. As a concrete way to explore this further, I decided to investigate the Canadian Institutes of Health Research (CIHR), historically notable for its funding of natural science health research, and its inclusion of social scientists into its research-funding agency.

After taking a graduate level course, Institutional Ethnography, with Dorothy Smith at the University of Victoria in 2009, I decided institutional ethnography (IE), would offer a unique perspective on funding agencies. Unlike other studies on funding and granting agencies, that treat governmentally-funded research above and beyond the actual people creating them, IE allows me to contextualize the funding process by starting with the development of the application itself. By starting with the actual applicants and their experiences of applying to CIHR, this research looks at the actual "doings" of

applying to the funding agency. As such, this research has access to what guides and inhibits social science graduate students in developing the content and style of the application. Using IE and its focus on texts to guide my inquiry, I examine the application itself as a ruling boss text and a “shell” that social science graduate students seek to 'fit' their research projects into.

My research begins by exploring the structure of CIHR’s programming to understand what social science graduate students are faced with. Using CIHR's website, its plans, and its progress reports I document who is eligible for CIHR and investigate the predominantly scientific composition of its peer-review committees (PRCs). Through this inquiry, my research draws attention to CIHR's foundational interest in research styles adhering to traditional scientific inquiry and to research that can contribute to evidence based decision making, knowledge translation, and to measure socioeconomic benefits. From this inquiry, I assert that certain forms of social science knowledge, those that can accommodate a more traditional scientific approach, appear to be readily accepted by CIHR which legitimizes those methods that accommodate or match its mandate, and delegitimizes and excludes those that do not.

While focusing on the actual application text itself, social science graduate students described their experiences with developing a CIHR application and revealed their unique position of being both students and social scientists. As such, their work processes include navigating, negotiating, designing, subverting, and they are faced with a double subordination from both their supervisors and from CIHR. From their descriptions, ruling occurs during the development of the application when supervisors act to organize their students’ applications with CIHR’s imposed styles of research.

Under their supervisor's guidance and organizing influence, applicants modified their proposals to exclude specific social science methods or theories, such as a feminist praxis or a focus on intersectionality. During meetings with supervisors and research teams, applicants were encouraged to emphasize “mixed methods” approaches and standardized scales and measures, and were told to state clearly and logically how their community-based research or program reviews would proceed while using scientific language. Despite the ethical dilemmas that the social science graduate students felt with the changes to their applications, it was often the case that their research projects were modified and rewritten for them. This process of designing a project, then having it redesigned and reoriented was part of the work process of learning how to make a CIHR application.

By changing the language, methods, epistemologies, content, and the style of the proposed research, social science graduate students, in collaboration with their supervisors, fit their research projects into the "shells" provided by CIHR. My interviews reveal that the process of applying to CIHR for social science graduate students requires them to accommodate, change, and subvert their research, interests, and background.

5.1 Social scientists in CIHR

> *-- In brief, the economics of truth – the cost of research – seem to conflict with the politics of truth – the use of research to clarify significant issues and to bring political controversy closer to realities. The conclusion is that if only social research institutions had [a percent] of the total scientific funds of the nation and if they were free to do with this money as they like, things would be ever so much better* (C. W. Mills, 1959, p. 64, my emphasis).

While my thesis focuses specifically on social science graduate students who apply to CIHR, there are likely many similarities to social scientists that apply to CIHR since it is often the supervisor of the student who organizes the style and content of the application. In future research, it would be interesting to discuss the application process with social scientists (regarding their own CIHR applications) as well as with supervisors of graduate students making proposals to CIHR.

So, what does it look like to be a social science graduate student applying to CIHR with its scientifically dominated PRCs and its interest in 'scientific excellence' and policy relevant research? From the descriptions of the application process provided by social science graduate students, this thesis presents an argument, based on the work processes of the students, of how social science research that seeks funding from CIHR is being standardized, subordinated, and accommodated to fit CIHR's interest in traditional scientific inquiry. This accommodation is maintained through the application process itself, the students' use of CIHR's textual requirements found on the website and in other CIHR supporting documents, and ruling relations subtended by supervisors who impose CIHR's ideology by participating in the application process. From the descriptions provided to me by social science graduate students, the role of the supervisors appears to to be pedagogical. They teach the students how to fit their social science research into a constraining application, what discourses, methods, and ideologies are superior and must be forefront in the application, and whose interests must be met and accomplished with the application; all work process that I am believe would be very time consuming and difficult for the supervisor. For the student, the interests of supervisors and CIHR must be satisfied. Within CIHR, the interested parties are discursively constructed as

stakeholders, politicians, governments, and patients etc... How we define "good," "valuable," and "health research" is determined by CIHR's textual representation of itself, and imposed through institutional pressures to receive funding. Applicants accommodate CIHR by working to develop text that fits CIHR's shells and by submitting a text that is 'worthy' of funding considerations. Through this process, the social science graduate student contributes to and reproduces CIHR's institutional discourse and ideology. What we are left with is a research application, a document that has been organized and coordinated by CIHR and its ruling relations. The final product is devoid of the experiences and accommodations that the social scientists had to make.

I applaud social scientists for their involvement and inclusion in health research, but I fear that social science research will become more standardized and institutionalized further subordinating and marginalizing alternative, valuable, and necessary epistemologies, knowledges, and voices. If we continue to accommodate CIHR's shells and imposed standards of traditional scientific research, we will further dichotomize and alienate social science researchers from themselves, from each other, and from natural science at time when there is a local, national and international movement towards interdisciplinary research. This thesis opens the door to discussions on the inclusion of social science research into CIHR starting with the application itself and CIHR's suggested style of research. However, it must be recognized that CIHR and its texts are not independent. They are embedded in other discourses and expectations such as political interest, EBM and EBDM, abstracted empiricism, and The Scientific Method.

In conclusion, it is evident that this research, on the application process to CIHR by social science graduate students, illuminates one part of a very complex situation. This

thesis describes some of the ruling relations that mediate and organize social science researchers and their applications. Notably, there are of course other powerful relations that are in operation, but the experiences described here require that CIHR reconsider how social science is included in their agency. The interviews with social science graduate students raise procedural questions for CIHR since their research is textually organized and subordinated. In its place, we find social science research projects that accommodate CIHR's interest in inquiry adhering to a more traditional scientific style. This process drastically changes the intent, function, and purpose of social science research. We are left with an agency that now receives applications from the narrow fraction of social science research that accommodates the style of abstracted empiricism and traditional scientific inquiry. The application process itself governs the research that social scientists propose, and shapes the face of Canadian social health research. The ruling relations (application, supervisors, and CIHR), set the terms of what is good, useful, and valuable research and reward those applications that are in accordance with these terms, thereby legitimizing certain forms of social science research. This thesis is important because social science graduate students inherit and carry on the traditions in social science research. With the ruling role of supervisors to impose CIHR's ideologies, and with the student's accommodation to ensure funding, the traditions of social science researching are changing and becoming more in line with traditional scientific empirical inquiry. We must not lose sight of the experiences of social science graduate students since their work processes provide a glimpse into what is currently happening with the application process and the textual presentation of social science research. Their experiences provide insight into how the CIHR application process organizes the style of

contemporary social research to be more inline with normal science rather than in critically engaged scholarship. In the process of developing an application, the function and intent of social research is changed, as are its political ends: what the social research can accomplish and whom it can represent.

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