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## The Strategic Naturalism of Sandra Harding's Feminist Standpoint Epistemology: A Path Toward Epistemic Progress

Dahlia Guzman

*University of South Florida*, [dahlia.guzman@gmail.com](mailto:dahlia.guzman@gmail.com)

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The Strategic Naturalism of Sandra Harding's Feminist Standpoint Epistemology: A Path  
Toward Epistemic Progress

by

Dahlia Guzman

A dissertation submitted in partial fulfillment  
of the requirements for the degree of  
Doctor of Philosophy  
Department of Philosophy  
College of Arts and Sciences  
University of South Florida

Major Professor: Alex Levine, Ph.D.  
Stephen Turner, Ph.D.  
Joanne Waugh, Ph.D.  
Wei Zhang, Ph.D.

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## TABLE OF CONTENTS

Abstract.....	ii
Introduction.....	1
Chapter One: Modern and Quinean Naturalized Epistemologies.....	16
Introduction.....	16
Modern Epistemology and Science: Shared Histories.....	18
Internalism vs. Externalism .....	23
Foundationalism vs. Coherentism.....	35
Quine's Naturalized Epistemology.....	41
Chapter Two: Feminist Epistemologies.....	54
Introduction.....	54
The Emancipatory Promise.....	60
Critical Feminist Responses to Quine.....	68
Chapter Three: Standpoint Epistemologies .....	88
Introduction.....	88
Standpoint Theories .....	93
Feminist Standpoint Epistemologies.....	97
Ideologies and Critical Theory.....	103
Strong Objectivity.....	116
FSE's Controversy and Productivity .....	124
FSE's Naturalistic Epistemology .....	129
Chapter Four: Naturalisms .....	134
Introduction.....	134
Naturalism in a Broad Context .....	138
Harding's Critical View of Naturalism .....	146
Standpoint as a Resource for Epistemology .....	151
References.....	156

## ABSTRACT

This dissertation considers the “strategic naturalism” of Sandra Harding’s standpoint theory in the philosophy of science, and its application to epistemology. Strategic naturalism stipulates that all elements of inquiry are historically and culturally situated, and thereby subject to critical reflection, analysis, and revision. Allegiance to naturalism is *de rigueur*, yet there is no clear agreement on the term’s meaning. Harding’s standpoint theory reads the lack of definition as indicative of its generative possibilities for epistemic progress. The driving question is why Harding’s approach has not been considered a viable candidate for determining progress in epistemology. Beyond the fact that epistemic labor, in its scientific and non-scientific forms, is a social activity, Harding’s approach recognizes that it is situated in and reinforced by a broader network of social institutions, beliefs, and practices. Harding’s strategic naturalism would invigorate epistemology by increasing the awareness, acceptance, and respect for epistemic difference and drive epistemic progress that not only acknowledges pluralistic ways of knowing but also gives a more accurate account of the knowing subject.

Chapter one is a discussion of non-naturalized epistemology and Quinean Naturalized Epistemology (QNE), framed by Harding’s historical account of the related projects of modern epistemology and science. This chapter highlights two important issues. The first issue is that epistemology is more complex than the story Quine offers. The second, and decisive issue is that the shared history of modern epistemology and science demonstrates the influence of social and

cultural values on that history, and the long shadows they cast on naturalism debates in epistemology, science, and philosophy of science.

Chapter two is an exegetical account of the origins of and motivations for critical feminist responses to both the received epistemological theory and QNE discussed in chapter one. The justifications for the feminist critiques and the problematic issues that motivate these critiques provide the backdrop for the initial, positive response to QNE, as well as their disenchantment with Quine's influential proposal. Ultimately, feminist epistemologists and philosophers of science assess QNE as not naturalized enough to address their concerns.

Chapter three considers several feminist standpoint theories to show that they are more naturalistic and better at providing a multi-faceted theory that is based on actual scientific practice, and re-introduces social values and interests as having a positive influence on epistemology and philosophies of science. This chapter shows that given the closely shared histories and assumptions of modern epistemology and science, FSE would be a viable resource for a more naturalistic epistemology.

The final chapter argues that the project of naturalizing epistemology could incorporate FSE insights and make use of FSE's controversiality in continued efforts to naturalize epistemology and philosophies of science. If we are to take seriously the concept of situatedness and what that entails, then naturalism must also be situated, and revisited with a critical and reflective eye. The implications on both our epistemic theories and our accounts of what kinds of knowing subjects we are would foster epistemic progress.

## INTRODUCTION

Epistemology's search for a definitive set of principles by which to justify knowledge claims is a search for an "unmovable" Archimedean point. As a normative discipline, epistemology, understood more broadly, is charged with a variety of issues that include the creation, the evaluation and dissemination of knowledge; ascertaining the necessary and sufficient conditions of knowledge, its sources, and its limits; defining concepts of justification, and the criteria by which to judge them sound. The attempt to find a definitive set of epistemic principles also determines what progress looks like for epistemology. In the introduction to his anthology, *Epistemology Futures* (2006), Stephen Hetherington asserts that, in fact, epistemology's "*telos* is either to be, or to generate, epistemological progress"; and as long as epistemology continues, "it can have no more general a goal than that of making progress."<sup>1</sup> He acknowledges that occasions of epistemological progress may not be recognizable. They cannot be predicted or guaranteed to have occurred, in part, because progress is difficult to define.

What are its distinguishing marks? Are there special kinds of evidence we should have if we are to support claims of [epistemological achievement]? How good must the evidence be? ... On what grounds should we assess an idea as constituting epistemological progress? What would make our assessment true?<sup>2</sup>

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<sup>1</sup> Stephen Hetherington. "Introduction: Epistemological Progress." *Epistemology Futures*. Stephen Hetherington, Editor. Clarendon Press. 2006. ProQuest Ebook Central.  
<http://ebookcentral.proquest.com/lib/usf/detail.action?docID=422899>. pp.1.

<sup>2</sup> *Ibid.*, pp. 1-2.

Hetherington makes room for the possibility that new epistemic standards might be needed in order to correctly understand the points of progress in the discipline. Indeed, this is one of the underlying assumptions of naturalistic, embodied, social, and standpoint epistemologies: new epistemic standards *are* needed. Hetherington's anthology offers candidates for new epistemic standards. Naturalized epistemology is one of these candidates, although it is not new.

Naturalized, embodied, social, and standpoint epistemologies respond to different parts of the project of epistemology even as they agree on its importance. In their distinctive ways, each is a critical response to the standard view that such a singular point of view for justifying knowledge is valuable or possible. What I am driven to understand in this dissertation is why certain naturalistic approaches have not been considered candidates for epistemic progress. Since the 1970s and 80s, feminist standpoint epistemologies have offered strong critiques of definitive elements of epistemology including its central normative task, its general approach, and the knowledge it has produced. Hetherington suggests that "*possibly*, within epistemology ... maybe more should be in flux [and] even some well-entrenched projects need to be re-evaluated."<sup>3</sup> I agree. I enter this discussion of re-evaluating epistemology's project by discussing the continuity between Quine's move to push epistemology forward, and the continued push by feminist scholars. Finally, I offer an exposition and a defense of the theoretical approach of Sandra Harding's Feminist Standpoint Theory (FSE). Sandra Harding's work is in the philosophy of science, but she has been a prolific analyst of the implications of her theoretical stance in disciplines outside of philosophy of science. Harding asserts that the goals and tasks set by and for philosophers of science have never been static. Similarly, criticism of her work and her engagement with those criticisms impels feminist philosophers of science to search for ways to

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<sup>3</sup> Ibid., p. 7, emphasis added.



better understand the relationship between humans and the world. I argue that this search can be extended to epistemology more generally. For this reason, throughout this dissertation, I will talk about Harding's Feminist Standpoint Theory and the naturalistic epistemology it entails as Feminist Standpoint Epistemology (FSE). If Harding is correct in her assessment that epistemology and science are two parts of the same project, then they should be in dialogue with each other, without any attempt to give priority to either.

Facilitating this kind of naturalistic inquiry should be a task epistemology adds to its repertoire. Epistemology that is naturalistic in the manner Harding prescribes most certainly retains its normative aspect. However, it does so by trading in its epistemic absolutes for guiding principles, such as those put forth by Harding, which are based on actual practices, informed by the goal or purpose of the inquiry, and supported by empirical data and the tools and methods of a specific discipline. Guiding principles aid in the formulation of questions about and the study of subject matter that is new, approached from a new perspective, or motivated by a new goal or circumstances, with the view that the ideal of objective knowledge—in the Archimedean sense—or absolute truth is one that will never be attained.<sup>4</sup> The feminist engagement with the issue of values in philosophy of science provides what I will argue is a strong impetus toward an improved naturalistic interpretation of the epistemic relationship between humans and the world.

One claim I make is that traditional epistemology has made little substantive progress in our understanding of knowledge, and especially in our understanding of the kinds of knowing subjects we are. While it's fair to concede that some move towards naturalizing has been made,

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<sup>4</sup> Charles Sanders Peirce, "The Fixation of Belief." In *Pragmatism and Classical American Philosophy: Essential Readings & Interpretive Essays, Second Edition*. John J. Stuhr, Editor. New York: Oxford University Press. 2000. pp.68-69. Peirce argues that reason and experience are essential for knowledge. Importantly, experience that is reexamined and re-verified becomes a guiding principle-- something we already know that is used to find out what we do not know.

the naturalizing has not been satisfactory. The naturalized epistemology formulated by Quine offers some valuable changes but ultimately fails to aid in the progress of epistemology. Further, I claim that feminist critiques are the best place to find the resources for epistemic progress, and more specifically, the naturalism fostered by Harding is the most viable of the feminist critiques and would invigorate the projects of epistemology by increasing the awareness, acceptance, and respect for epistemic difference that would expand our working assumptions about human experience and its influence on rationality. Some valuable insights and methods yielded by Harding's naturalistic approach have been incorporated in the philosophy of sciences as well as by the sciences themselves and have been theoretically productive as well. This productivity supports a claim that the naturalism at work in FSE is a viable path toward epistemological progress, especially since general epistemology has remained resistant to feminist insights.

In light of these ideas about the relation between epistemological progress and naturalism, W.V.O. Quine's analysis is important. Quine determined epistemological progress to have stalled because of the failures and limitations of received epistemology, and offered an alternative: a naturalized epistemology that was an acceptable candidate even to those epistemologists who rejected all or part of his account and critique of epistemology. My discussion of Quine serves as a starting point for talking about the applications of naturalism to epistemic concerns. As I discuss in ensuing chapters, relatively few post-Quinean Anglophone philosophers would deny their commitment to some form of naturalism. These forms of naturalism, however, maintain a broad set of commitments concerning accounts of beliefs, and the nature of human subjects, and their rationality, among other things. Feminist scholars would contend these commitments preclude acknowledgment of epistemic difference that have

important implications for those aforementioned concepts. On the one hand, that Harding is a naturalist is not all that controversial. On the other hand, Harding's brand of naturalism is distinctive in its embrace of epistemic difference that I have named 'strategic naturalism,' which requires recognition and inclusion of alternative methods of knowing, that necessitate periodic self-reflection, and re-visiting definitions, concepts, methods, and theoretical models.

For Harding, naturalism begins with understanding two things: 1) the actual scientific practices and theoretical models being used and 2) the social and cultural values and forces that have shaped these practices, and how they've constituted the objects of study. Social and cultural values do not necessarily lead to bad science, but to science that is more sensitive or responsive to those groups in society who are marginalized. This approach is how her kind of naturalism and the version of objectivity she utilizes contribute to emancipatory values. It is pluralistic in its orientation, and given its emancipatory goals, it is motivated to measure epistemic progress in terms of how accessible it is to marginalized standpoints as well as to how the knowledge produced might improve the lives of marginalized groups.

What Harding argues for is recognition that, beyond the fact that epistemic labor in its scientific and non-scientific forms is a social activity, epistemic labor is situated in and reinforced by a broader network of social institutions, beliefs, and practices. This approach has several implications. From a scientific standpoint, the underdetermination thesis looms large. Evidence can be explained by any number of seemingly conflicting theories or models. Any claim might be true, any belief may be revised. If this is true in the sciences, it might be of service in epistemology as well. This approach was what Quine was attempting with his naturalized epistemology. One of the reasons why epistemology, both the non-naturalized and Quinean naturalized varieties, has been resistant to feminist insights is that critical feminist

responses put interests and values back into the process of inquiry. The worry is that such insights will inevitably lead to relativism. This response is characteristic of epistemology informed by the Archimedean point of view noted at the outset. Relatedly, the notion that the relation between epistemology and science is or must be hierarchical should be abandoned. I interpret Harding's position to be that epistemology and science are not and have never been isolated pursuits and fighting for primacy is unproductive. Harding's response to the charge of pernicious relativism levelled against FSE is that the problematic relativism is not necessarily entailed in FSE since it is simply not the case that we are caught between no epistemological standards or "a crowd of incommensurable heterogeneous" standards. First, there are local, practical standards that allow for scientific inquiry to happen. In a similar way, I claim that such standards are possible in epistemological debates.<sup>5</sup> The second part of her response is "strong objectivity." This idea replaces the kind of objectivity and value-neutrality that have been taken as essential aims of both epistemology and scientific inquiry. Harding links strong objectivity to the emancipatory aspect of FSE. In this approach, different knowledge cultures have independent claims to epistemic warrant. Harding describes this arrangement as a distinction between historical (sociological or cultural) relativism and judgmental (epistemic) relativism. Furthermore, she claims that historical relativism does not necessarily entail judgmental relativism. From an epistemic standpoint, feminist scholars' deliberate use of plural terms "knowers" or "scientists" problematizes epistemology's use of the singular, not only in terms of which method best justifies epistemic claims, but also which claims are given primacy. Ásta Sveinstóttir has interpreted the focus on clarity in analytic philosophy and its attitude that "no claim and no argument is too holy to touch, none too offensive" as

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<sup>5</sup> Sandra Harding. "How Many Epistemologies Should Guide the Production of Scientific Knowledge? A response to Maffie, Mendieta and Wylie." *Hypatia*. 23(4) (Oct-Dec 2008), pp. 213.

“radical egalitarian potential.”<sup>6</sup> This claim is like the claim in epistemology concerning the value of objectivity and value neutrality; namely, that all claims would be evaluated evenhandedly. But this, I would submit, is just not the case. The supposed egalitarianism in epistemology is missing, just as it had been missing in science. In this context, egalitarianism would mean that epistemic subjects would enjoy the same fundamental status as it relates to epistemic claims and justificatory assertions. As I discuss in detail in chapter two, women and marginalized peoples have *not* enjoyed the same fundamental status as White, Western men. I think the resistance to feminist insights has as much to do with protecting deeply held metaphysical commitments to things that are difficult, if not impossible, for human subjects to achieve -- including the ideal, Archimedean point-- as it does with avoiding epistemic relativism. This ideal requires separating oneself from the object of study in order to see it in relation to all other things, while remaining independent of both. Harding’s goal is to recognize the necessity for standpoints from every culture to have access to evidence, claims to rationality, and the grounds for arguing alternative ways to create objects and interpret events. This ideal is especially relevant when the objects of study are human beings, as well as their cultures and behaviors. As noted previously, pursuing the Archimedean point results in the persistent view that science and epistemology are distinctive or special projects because they can claim objectivity in the strongest sense, but also that the kinds of subjects doing this work are paradigmatically rational and objective. Harding’s position is therefore taken as a move toward a pernicious relativism that is further vitiated by the circularity of the grounding of FSE. Harding’s response, however, is that epistemology and science are based on the study of and reflection on nature and humans who respond to, impinge on, and change nature, and on the

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<sup>6</sup> Ásta Sveinstóttir. “To Do Metaphysics as a Feminist: Reflections on Feminist Methodology in Light of the *Hypatia* Affair.” *APA Newsletter: Feminism and Philosophy*. Vol 17 (1): Fall 2017. p. 2.

recursive transformations that ensue. She takes as given the fundamental circularity of human subjects studying nature, of which we are a part. We study it and attempt some amount of separation but can never entirely achieve it. This kind of circularity is important because it takes seriously what ‘situated’ means. As I note at the outset of chapter one, Harding places great importance on the shared historical development of science and epistemology, and their commitments to knowledge claims about the world and humanity made by fungible subjects. Harding’s assertion is that we constantly leave ourselves out of the equation, and that this omission is untenable. Consequently, we should restructure our approaches and the epistemic goals of our pursuit of knowledge to include human experience. And if we do so, the chance of a more accurate and trustworthy model or explanation of the world is improved, and knowledge of the world and ourselves as well.

The main topic of this dissertation is feminist naturalistic epistemologies. I make a claim that feminist standpoint epistemology (FSE) provides a more authentic naturalistic method for inquiry in its broadest sense, and further, that it should be a resource for epistemology. The problems I ponder throughout include: What is non-naturalized epistemology, and how is Quine’s proposal an improvement? In what ways are feminist epistemologies naturalistic and how do they improve on Quinean Naturalized Epistemology? I take as given the position that a naturalistic epistemology is a viable and desirable goal, and that it can contribute to epistemic progress. To achieve this however, I argue that this requires a markedly different conception of naturalism from Quine’s. Sandra Harding’s feminist standpoint epistemology is the most efficacious approach to a naturalistic epistemology that contributes to the progress of knowledge production as it is studied in epistemology and practiced in scientific inquiry.

This dissertation is also partially a consideration of the issue of naturalism in epistemology as a distinguishing mark of epistemic progress, or the attempt at it. Naturalism, in its manifold definitions, is often touted as a path toward epistemic progress, and I argue that it can be. Reality as many non-feminist epistemologies have conceived it is a somewhat static conglomeration of objects and humans whereby humans maintain their epistemic integrity in a variety of ways: experiencing, deliberating, and acting within the confines of formal or mechanistic rules. This view leaves little conceptual space for the notion that humans and nature are co-constituted or for exploring how social and cultural beliefs shape what we believe reality is like. On the other hand, feminist standpoint epistemologies advocate a naturalism that recognizes and values the role of social and cultural beliefs that express epistemic difference and its influence on epistemic labor and claims it as epistemic progress.

## **Chapter Outline**

Chapter 1 is motivated by two purposes. The first is to give an account of both non-naturalized epistemology and Quinean Naturalized Epistemology (QNE) to show their similarities. Secondly, details of their similarities provide the ground for my claim that QNE fails as naturalized epistemology. I explain what non-naturalized epistemology is and describe just two particular debates in the discipline. I then focus on Quine's naturalized epistemology with the goal of showing how it fails to improve on non-naturalized epistemology. QNE is useful to me in that it serves as a pivotal point of feminist commendation and critique. I frame this discussion in the opening section of the chapter by laying out Harding's historical account of the related projects of modern epistemology and science. I use this discussion to highlight two important issues. The first issue is that epistemology, as a philosophical endeavor, is more

complex than the story of epistemology Quine offers in “Epistemology Naturalized” (1968). The second and more important issue is that the shared histories and development of modern epistemology and science bring to the fore the vast influence of social and cultural values on that history, and the long shadows they cast on naturalism debates in epistemology and philosophy of science. The second section of the chapter begins with non-naturalized epistemology as comprised of two interrelated debates of modern epistemology, before turning to Quine’s view to determine whether QNE is in fact a viable and sufficiently naturalistic alternative to modern epistemology. I will argue that it is not, since it shares at least two problematic assumptions with modern epistemology. First, they both center on reductionistic accounts of the epistemic process and the characteristics of the epistemic subjects these accounts entail. Quine’s naturalized epistemology calls for a reliance on the sensory stimuli of individuals as the basis of justification for knowledge claims, though admittedly, these raw perceptions must go through another process in order to become claims. This idea was Quine’s response to modern epistemology’s working acceptance that there is a set of beliefs that serve as foundational for the justification of knowledge claims. The complexity of epistemological and cognitive processes is reduced to sensory data in Quine’s theory, and as a foundational set of beliefs in epistemology. The second is the shared problem of “blind spots” that arise from what can be described as a lack of appreciation for the situatedness of the epistemic subject, as well as a limitations cast upon the overall epistemological project. The section on modern epistemology is neither historically or conceptually exhaustive but limited to two debates in the field that help provide some context for Quine’s proposal. The first debate concerns the structure of the grounds for knowledge claims and the role access and reliability play in justification: Internalism vs. Externalism. The second debate deals with the relationship between evidence and knowledge claims, and the metaphors



used to express them: Foundationalism vs. Coherentism. This section has two functions. I want to show that the complexities of just two of the many conceptual issues give us good reasons to assume that epistemology is a complex, multi-faceted project with many conceptual issues that are far from resolved. In virtue of this function, the second purpose is to shed light on Quine's naturalized epistemology and how it rests on an incomplete picture of epistemology—reducing it to a few issues that are but a small part of the larger project. The shared history and assumptions of modern epistemology and modern science outlined by Harding support the claim that Quine's naturalized epistemology is not an efficacious successor to modern epistemology. In the last part of the chapter, I set out the ways Quine's naturalized epistemology is still ensconced in the same problems that plague modern epistemology. Like modern epistemology, QNE maintains assumptions regarding knowers, whether they be individuals or communities, that makes no allowances for the influence and role of social values and interests, nor the gender relations that inform them.

With a clear view of how QNE falls short of its promise of naturalizing epistemology, the issue of the feminist responses to Quine, both negative and positive, is taken up in chapter two. The first part of the chapter is devoted to the earliest critical feminist responses to modern, non-feminist epistemology, and to Quine's naturalized epistemology. These various feminist critiques of QNE highlight the relevance of the historical epistemological project on the critical feminist response. These feminist scholars situate themselves as laying the foundations of successor projects that provide worthwhile, more naturalistic, and less scientific options for the practice of epistemology and philosophies of science. The justifications for the feminist critiques and the problematic issues that motivate these critiques provide the backdrop for the initial, positive response to QNE, as well as for the feminists' disenchantment with Quine's proposal.

Ultimately, feminist epistemologists and philosophers of science assess Quine's naturalized epistemology as not naturalized enough to address their concerns.

In large part, chapter two is an exegetical account of the origins of and motivations for critical feminist responses to various aspects of epistemological theory discussed in chapter one, both non-naturalized and naturalized. I lay out the common elements that tie the various feminist critiques together. This discussion is followed by an account of the reception of QNE in feminist scholarship. QNE was initially understood as a promising possibility for movement away from distorted, androcentric theories and approaches that have dominated, and continue to dominate, epistemology and philosophies of science. The discussion then focuses on three particular feminist responses: feminist empiricism, the consilience model of justification, and local epistemology. All three are categorized as social and naturalistic epistemologies since all three assert a) that epistemic labor and the production of knowledge take place at the community level rather than at the individual level, b) that epistemic labor and knowledge production are social and gendered projects, in which social value and interests can contribute in a positive way to 'good science', and finally, c) that knowledge, justification, and objectivity must be reconceived to include these communal and social elements as important and productive elements of epistemologies and philosophies of science that are construed to be naturalistic. This naturalizing is therefore an improvement upon historical, non-feminist epistemologies and philosophies of science. QNE and the feminist responses share some features but ultimately, QNE is determined to be too similar to non-naturalized epistemologies and philosophies of science since it shares shortcomings that lead to distorted and sometimes, false knowledge: a narrow and reductive conception of a human subject, its rationality, its place in the natural world, and its relation to other human subjects.

Chapter three is a discussion of a fourth critical feminist response to historical epistemology and philosophy of science—that of feminist standpoint epistemologies. Specifically, my objective here is to provide some support for the claim that feminist standpoint epistemologies are far more naturalistic and therefore better at providing a multi-faceted theory that 1) is based on actual scientific practice, 2) is validated by outside scientific/epistemic communities, and 3) re-introduces social values and interests as a possible positive influence on epistemology and philosophies of science. These are the result of critical and reflective analyses that are deemed necessary characteristics of scientific practices, the epistemologies that underlie them, and the philosophies of science that study them. The section begins with a definition of standpoint epistemology and an outline of the common elements shared by the various sorts of standpoint epistemology. This is followed by a justification for my reliance on Sandra Harding’s FSE as the canonical version of standpoint theory with which to contrast the other critical feminist responses discussed in the previous chapter. I discuss the definitive elements of standpoint theories, including the role of a post-modern position, as exemplified by Donna Haraway and others that work as foils to Harding’s FSE. Harding claims first, that FSE is a successor to both modern, and feminist empiricist philosophies of science and, given the closely shared histories and assumptions of modern epistemology and science, FSE also serves as a resource for a more naturalistic epistemology.

The fourth and final chapter focuses on varieties of naturalism, with some historical background on how the meaning of the term changed, even as it remained in use. This partly explains why there is a general commitment to naturalism, despite there being no clear agreement on what it is. Harding reads this lack of clarity not as a weakness, but as an indication of the generative possibilities for her emancipatory goal, and for epistemic progress. The

naturalism she finds problematic is one that attempts the closest approximation of the God's-eye view, which has resulted in an epistemology that is too rigid to recognize epistemic difference, and blind to the positive contribution epistemic difference can make to our epistemological understanding and practice. Harding's brand of strategic naturalism is a pluralistic and naturalistic approach that would make a meaningful contribution to the project of naturalizing epistemology and advancing epistemic progress.

Strategic naturalism would do this by problematizing relevant elements of inquiry. These elements are historically and culturally situated, and the determination of the efficacy and applicability of analytic categories, key concepts, and assumptions at work in inquiries requires they be subject to critical reflection, analysis, and revision. This reflection and analysis includes considering the position of the inquirers and the goals of the inquiry. Harding's theory has motivated critical reflection and discussion that has contributed positively to philosophy of science. Evidence of this is found in the debate and discussion, from different marginalized standpoints, that have helped in the production of less distorted accounts of phenomena being studied in science. I argue that Harding's strategic naturalism can be applied to the epistemological project with the hope of the recognition of the value of epistemic difference in our pursuit of knowledge. Harding's strategic naturalism measures epistemic progress in terms of how accessible it is to marginalized standpoints as well as to how the knowledge produced might improve the lives of marginalized peoples. Applied to epistemology, it would more effectively naturalize epistemology by revisiting its well-established assumptions and tasks, and arrive at less distorted accounts of knowing subjects.

After the naturalism discussion I focus on two issues. One issue is how FSE fares when weighed against the definition of naturalism discussed at the outset of the chapter. The second

issue is to discuss the controversiality of FSE and the positive role that controversiality plays in Harding's theory, which supports my own claim of its usefulness. At issue are the various responses to epistemology and philosophies of science—some of which count themselves as successor projects to the historical one. That a successful epistemology should be naturalistic is uncontroversial; there are few scholars who would reject the thesis. The issue is more specifically: What does it mean to say an epistemology is naturalistic; and which of these many theories proffered fit the bill? That feminist epistemologies are naturalistic seems fairly straightforward. The question of whether they are sufficiently naturalistic is, I maintain, the wrong question to ask. If we are to take seriously the concept of situatedness and what that entails, then naturalism must also be situated, and revisited with a critical and reflective eye. I look specifically at Sandra Harding's FSE as an exemplar of a productive, naturalistic theory. FSE meets all the conditions of a critical theory that encompasses both the epistemological issues and the broader philosophical issue of naturalism and its role in epistemology and philosophies of science.

## CHAPTER 1:

### Modern and Quinean Naturalized Epistemologies

#### **Introduction**

My claim is that Sandra Harding's Feminist Standpoint Epistemology is an improved naturalistic approach that would be a productive resource for epistemology. This requires an account of what feminist epistemologists and philosophers of science are critical of, and where they fall in the range of epistemological positions as it pertains to naturalistic theories. My discussion of both non-naturalized epistemology and Quine's naturalized epistemology serves two purposes. One is to illustrate a small part of the complexity of epistemological debates as a counterpoint to Quine's analysis of epistemology in "Two Dogmas of Empiricism" (1951) and "Epistemology Naturalized" (1969). Second, giving a detailed account of Quinean Naturalized Epistemology (QNE) is useful to me in that it serves as a pivotal point of feminist commendation and critique. Ultimately, QNE functions as a vehicle for the main focus of this dissertation, the specific naturalism at work in Harding's FSE and its usefulness to epistemology. My working assumptions are first, that naturalistic epistemologies are valuable; second, that historicity and situatedness are essential components of any truly naturalistic epistemology. Further, the shared failures of modern epistemology and QNE to acknowledge these two features lead me to the conclusion that neither of them is naturalistic in a way that recognizes and includes gender in its theoretical explanations, nor is there any attempt in either to critically review explanatory concepts, classes or kinds (of which gender is an example). This is because both projects are

attempting to find some singular method by which to arrive at justified beliefs and knowledge. I do not mean to say that the philosophical questions taken up in received epistemology are to be discarded but that these questions and the answers we attempt could be less distorted than those derived from narrow conceptions of human subjects and their rationality. I consider the prospect that the resistance to feminist insights has to do with metaphysical commitments to things that are difficult if not impossible for human subjects to achieve. Those under discussion here include first, the notion that epistemology and science are, or should be, activities insulated from societal interests and values; and second, that the products of the epistemic labor in epistemology and science are objective and neutral because of this insulation.

I begin with Sandra Harding's historical account of the rise of both modern epistemological issues and modern scientific method that provides the backdrop for the next two sections. This historical background and justification for the claim that historicity is an important component of naturalism is necessary to my overall aim of showing Harding's FSE is a viable naturalism. In the following section, I describe two debates that are examples of those parts of modern epistemology that have been determined to be non-naturalistic. Internalism and foundationalism are deemed non-naturalistic since these positions begin with the assumption that knowledge is grounded in some manner of self-evident and *a priori* beliefs. The assumption amounts to a claim that a knowing subject has access to and relies on these self-evident and *a priori* beliefs in order to properly justify knowledge claims. By contrast, externalism and coherentism are defended by those who reject the internalist and foundationalist ideas and claim a knower's surroundings have some causal effect on beliefs, including those labelled knowledge and those beliefs used to justify knowledge. However, those types of causal effects are still tied to processes or methodologies internal to the individual. Nevertheless, there is a continued

commitment to the notion of access and the self-evident quality of access that justifies a knower's rational knowledge claims. Quine's argument grounds his proposal for naturalized epistemology on his admittedly limited take on modern epistemology and its shortcomings, as he characterizes them. In the final section, I consider the problematic aspects of Quine's naturalized epistemology and importantly, the commonalities QNE shares with modern, non-naturalized epistemology that prevent his version of naturalized epistemology from being a truly viable alternative to it. One of my aims is to show that Quine's account glosses over many of the debates that make modern epistemology a far more complex field of inquiry than the one Quine critiques in his texts. Relatedly, he does not acknowledge naturalistic elements already present in modern epistemology. Secondly, Quine's naturalized epistemology continues to maintain commitments that fail to distance QNE enough to deem it a successor to modern epistemology. Thirdly, given the nature of his thesis regarding the relationship between scientific practice and epistemology, QNE's assumption is that scientific practice is (and remains in his proposed successor epistemology) a specialized activity that is insulated from society, and relies on the continued work and attitudes of objective, value neutral scholars. For feminist epistemologists and philosophers of science, this means QNE fails at being a naturalistic epistemological theory because it fails to acknowledge or correct the androcentrism of modern (non-naturalized, non-feminist) epistemology, and the distorted knowledge it has produced.

### **Modern Epistemology and Science: Shared Histories**

In *The Science Question in Feminism* (1986), Harding's discussion of gender and science begins with a review of dogmas (those delineated by Quine, as well as other dogmas), their effects, and the resulting resistance to feminist critiques. She suggests clearing away these



dogmas provides a couple of beneficial insights. One insight is that it is easier to see the connection between science and epistemology in their common pursuits. The other insight reveals their shared unwillingness to recognize the influence history has on science and epistemology, and the questions they ask. A review of the history that is shared by modern science and modern epistemology provides some explanation for why science and epistemology have resisted feminist critiques. Additionally, the shared histories would explain the failure of epistemologies, naturalized and non-naturalized alike, to respond constructively to the feminist critique. The shared roots of modern science and epistemology become apparent by looking at the historical beginnings of science and their implications for what it means to know. Harding asserts that many modern epistemological questions were initiated “as “meditations” on the implications of the emergence of modern science itself.”<sup>1</sup> Investigations of nature demonstrated by those early scientists—Copernicus, Galileo, and Newton—became the focus of philosophers, including Descartes, Hume and Kant, who were trying to make sense of this new way of knowing. The creators of modern epistemologies were meditating on what they understood to be a science created by what Harding calls individual “craft-laborers.”<sup>2</sup> From the perspective of modern epistemologists, the intellectual activities of someone like Copernicus were taken to be the result of an “individual, “disembodied” but human mind, behold[en] to no social commitments but the willful search for clear and certain truth.”<sup>3</sup> This view, according to Harding, “remains the foundation from which the questions we recognize as epistemological arise.”<sup>4</sup> A key implication for Harding is that “modern science, unlike medieval inquiry, seeks knowledge that is free of moral, political and social values...truly scientific justification is

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<sup>1</sup> Sandra Harding. *The Science Question in Feminism*. Ithaca, NY: Cornell University Press. 1986. p. 140.

<sup>2</sup> Ibid.

<sup>3</sup> Ibid.

<sup>4</sup> Ibid., pp. 140-141.

concerned to establish claims about the regularities of nature and their underlying causal determinants to which all relevantly situated observers, regardless of their personal, social, or political commitments, can agree.”<sup>5</sup>

The shared unwillingness to recognize the pronounced influence history has on science and epistemology is explained by considering other dogmas Harding discusses that move beyond the familiar Quinean dogmas—the analytic/synthetic distinction and radical reductionism. The first dogma Harding discusses is the notion that “science is a fundamentally unique kind of social activity [that] removes scientists from the realm of the completely human... [and] sets the limits on human rationality for what are best thought of as religious or mystical reasons.”<sup>6</sup> Another dogma is the notion that science is a distinct type of social activity that enjoys autonomy from other social activities. This becomes “a conceptual obstacle to our ability to analyze science...as a fully social activity.”<sup>7</sup> The result is what Harding calls the view of science as “Sacred Science.”<sup>8</sup> Science’s sacredness makes it taboo 1) to see natural science as a social activity with a “historically varying set of social practices;” and 2) to examine and describe “the regularities and underlying causal tendencies of science’s own social practices and beliefs.”<sup>9</sup>

In her book *Is Science Multicultural?* (1998), Harding refers to these dogmas as part of the “internalist epistemology” of scientific inquiry. She suggests that this continues to be the prevailing view of science held by the public and disseminated in science texts.<sup>10</sup> Science and society are analytically separate, since social values would be detrimental to the determination of

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<sup>5</sup> Ibid., pp. 205-206.

<sup>6</sup> Harding, *Science Question*. p. 38.

<sup>7</sup> Ibid., p. 37.

<sup>8</sup> Ibid. p. 38.

<sup>9</sup> Ibid., p. 39.

<sup>10</sup> Sandra Harding. *Is Science Multicultural? Post-Feminisms, Feminisms and Epistemologies*. Bloomington IN: Indiana University Press. 1998. p. 2.

facts.<sup>11</sup> Nevertheless, science is seen as necessary for the progress of humanity generally, and objective knowledge more specifically. Harding says that historians of science did not recognize the importance of the social environment of the Early Modern period that made these new ways of conceiving “nature and inquiry ...more ‘natural’ and therefore, morally attractive.”<sup>12</sup>

Harding’s point is that these dogmas have important implications for the openness of science and epistemology to feminist critiques. These dogmas set science and epistemology in a special sphere of inquiry immune to social values and interests. This implication shaped the definition of naturalism: science and epistemology were naturalistic since they undercut theological explanations for natural phenomena and the justificatory processes of knowing subjects. The Enlightenment era in which this becomes morally “acceptable” begins with the rise of science in the 17<sup>th</sup> and 18<sup>th</sup> centuries. Human reason becomes an important part of science’s narrative, and contributes to assumptions about science and its role in society. These assumptions make the influence of one on the other a one-way street: science can and must make a difference in society by alleviating suffering and solving human problems. Science, however, must remain beyond the grasp and influence of society, and its cultural and social interests.

To support her claim that these ideas had not waned in their acceptance in contemporary times, Harding refers to a quote from Carnap’s “Autobiographical Statement” (1963) that exemplifies these assumptions. In this statement, Carnap refers to three assumptions he and his associates take as given:

The first is the view that man has no supernatural protectors or enemies and that therefore whatever can be done to improve life is the task of man himself. Second, we had the conviction that mankind is able to change the conditions of life in such a way that many of the sufferings of today may be avoided and that the external and internal situation of life for the individual, the community, and finally for humanity will be essentially improved. The third is the view that all deliberate action presupposes knowledge of the

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<sup>11</sup> Ibid., pp. 39-40.

<sup>12</sup> Ibid., p. 209.

world, and that the scientific method is the best method of acquiring knowledge, and that therefore science must be regarded as one of the most valuable instruments for the improvement of life.<sup>13</sup>

What is also problematic is that the interaction between science and society only goes one way. Science as a method of acquiring knowledge is what propels progress and improves life for everyone. The idea that historical changes in social values, cultural and economic structures, and practices might have some effect on science is not seriously considered. To the contrary, Harding argues, we must take “modern Western epistemologies” and science as “culturally-specific modes of constructing and exploring cultural meanings in support of the new kinds of knowledge claims,” rather than “a set of philosophical givens.”<sup>14</sup>

This background frames the discussion about how Quine understood the modern epistemological project. In this brief account of the historical project of non-naturalized, and importantly, non-feminist, epistemologies and philosophies of science, the focus will be on just three principle issues particular to epistemology—accounts of what kinds of things count as justification for knowledge claims, what a proper knower is, and finally, where that process actually happens. Under consideration in this section is whether Quinean Naturalized Epistemology (QNE) is in fact a viable and sufficiently naturalistic alternative to modern epistemology. I will argue that QNE is not a viable alternative since it shares problematic assumptions of modern epistemology. The epistemic issues described above, and the “blind spots” all non-feminist epistemological projects share make the historical background a necessary preliminary. The section on traditional epistemology is neither historically or conceptually exhaustive, and limited to two debates in the field: Internalism vs. Externalism;

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<sup>13</sup> Harding, pp. 206-207; quoting Rudolf Carnap, “Autobiographical Statement” in *The Philosophy of Rudolf Carnap*, P.A. Schilpp, Editor. Open Court Press: 1963; p. 83.

<sup>14</sup> *Ibid.*, p. 209.

and 2) Foundationalism vs. Coherentism. This section has two functions. The first is that—by virtue of what is left out of the discussion, I want to show that the complexities of just two of the many conceptual issues give us good reasons to assume that epistemology is a complex, multi-faceted project with many conceptual issues that are far from resolved. In virtue of the first function, the second function will be to shed light on Quine’s naturalized epistemology and how it rests on an incomplete picture of epistemology itself, reducing it to a few issues that are but a small part of the larger project. QNE is not naturalized sufficiently because it shares commitments to epistemic individualism and scientism that also characterize his account of received modern epistemology. By failing to distinguish itself from modern epistemology in these ways, QNE cannot be a viable alternative. The weaknesses of QNE will be the motivation for the following chapter, in which I discuss various feminist critiques of QNE, and in important ways, the broader, historical epistemological project. The feminist scholars to be discussed situate themselves as the proper starting place for successor projects that provide worthwhile, more naturalistic, and less scientific options. The focus of the next section is the discussion of the two specific debates that center on internalism and externalism, and foundationalism and coherentism.

### **Internalism and Externalism**

Epistemic Internalism is a thesis about the basis of knowledge that supposes an epistemic subject can or does indeed have privileged access to basic beliefs that are the foundation of knowledge (Pappas (2014); BonJour and Sosa (2007)). Traditional analysis of knowledge is the search for what is required beyond true belief, namely, true belief plus either good reasons or good evidence. Pappas (2014) states that the “first form” of internalism holds that a knowing

subject can or does have access to good reasons or good evidence. “The key idea is that the person either is or can be aware of this basis.”<sup>15</sup> Laurence BonJour (2002) states access is a requirement of “cognitive availability,” and a “credential” for a person’s justification for a belief.<sup>16</sup> This means that the foremost principle of internalism is not merely the presence of good reasons or good evidence, but the possibility of a subject that can or is aware of those good reasons or evidence. Awareness of the access to such reasons or evidence provides a reliable and irrefutable foundation for knowledge. So, as Pappas (2014) notes, this first form of internalism claims that justification must result from either knowing that one knows, or reflecting on the situation at hand and, without making any further inferences, directly knowing. Pappas also describes two other internalist positions that are distinct from knowledge internalism. One is mentalism, and it is concerned not with access to belief but with the basis for justification, holding that “what ultimately justifies a belief is some [internal] mental state of an epistemic subject holding that belief.”<sup>17</sup> The second is voluntarism, a deontological concept of justification that understands justification in terms of one’s intellectual duties or responsibilities.

Some forms of internalism hold that access to the source of knowledge, or justified true belief, is what is internal to a subject’s mind. The more directly one has access to the source, the less one can be mistaken. These beliefs, mental states, and inferences are known directly through reflection because access means that one is aware of one’s state of knowing: “You know that you know.”<sup>18</sup> Arguments offered for access internalism are varied but do seem to reduce to mentalism. The first argument Pappas presents is that “one is justified in believing *p* only if one

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<sup>15</sup> George Pappas “Internalism vs. Externalism in Epistemic Justification.” *Stanford Encyclopedia of Philosophy*. Edward N. Zalta, Ed., 2014. p. 1.

<sup>16</sup> Laurence BonJour, *Epistemology: Classic Problems and Contemporary Responses*. Lanham, MD: Rowman & Littlefield Publishers, Inc., 2002. pp. 222-223.

<sup>17</sup> Pappas, p.1.

<sup>18</sup> *Ibid.*, pp 2-3.

has justified the belief that  $p$ .” Being justified here implies having justified a belief that results from being actively engaged in the activity of giving reasons or evidence to support one’s belief. Justification is defined as being aware of the justifiers of one’s beliefs. A second argument, closely aligned to the first, says, “that one is justified in believing  $p$  only if one can justify the belief that  $p$ .” If one actively attempted to justify belief that  $p$ , at that point in time, one would become aware of the justifiers. So, if one can justify the belief that  $p$ , then one can be reflectively aware of the justifiers for  $p$ .<sup>19</sup>

Steup (2005) provides a brief explanation of another form of internalism, evidentialism. Evidentialism makes two claims: “1) One justifies believing in  $p$  by one’s evidence regarding  $p$ ; and 2) evidence consists of one’s mental states.”<sup>20</sup> Evidentialism becomes of form of access internalism given two further claims about a subject’s psychology. The first one is “luminosity,” which refers to one’s reliance on introspection to recognize what mental state one is in, and the second is the interdependent claim of “necessity,” which means there are necessary, *a priori* principles by which one can recognize, through luminosity, “whether one’s mental states are evidence for  $p$ .”<sup>21</sup>

Some scholars make an internalist claim that the rational work of justifying a belief is internal to the subject. Feldman (2005), and Conee (2000) both argue that, at the end of the day, what ultimately justifies a belief are the internal, mental states of a subject. Feldman specifically asserts that the argument for internalism is strong because inferences and reasons are things that “determine or settle epistemic facts,”<sup>22</sup> and they are themselves internal. A subject’s reasons,

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<sup>19</sup> Pappas, pp. 3-5.

<sup>20</sup> Mattias Steup. “Epistemology.” *Stanford Encyclopedia of Philosophy*. Edward N. Zalta, Ed., 2005. pp. 10-11.

<sup>21</sup> *Ibid.*, p.11.

<sup>22</sup> Richard Feldman. “Justification is Internal.” Mattias Steup and Ernest Sosa, Editors, *Contemporary Debates in Epistemology*. Malden, MA: Blackwell Publishing, 2005. pp.270-271.

memories, and other beliefs, Feldman argues, are all “mental things”<sup>23</sup> and these all aid in a subject’s determination. Feldman also emphasizes the relation between these mental things and epistemic facts such that when believers are compared, they will be “mentally alike” in ways that bear on justification: “if two things are alike with respect to internal factors, then they must also be alike in the relevant epistemic ways.”<sup>24</sup> This, Feldman says, reveals true belief alone is not enough to be called knowledge, but requires “good reasons” or adequate evidence to support it. Thus, either they are both justified in a belief or they are not...[and] “if they differ with respect to justification, then there must be an internal or mental difference.”<sup>25</sup>

Earlier, I asserted that the internalist arguments seem to reduce internalism to mentalism. To recall Pappas’ definition mentalism holds that what justifies a belief is an internal mental state of a subject holding that belief. This definition of mentalism underwrites an internalist account of a subject who justifies her beliefs either by her cognitive awareness, or her active engagement in giving support for a belief by inference, whether or not the evidence for a belief can be recognized through luminosity and necessity. There are, however, arguments to defeat mentalism that begin with the claim that not all justifiers are mental states but might be “logical or probabilistic relations” or other epistemological commitments, such as a commitment to foundationalism or coherentism. Conee and Feldman (2001) respond with a “higher-order requirement” that can be met directly from insight or reflection, and could be met by a subject’s awareness of a “supporting connection...between what is ordinarily regarded as one’s evidence and what it is evidence for.”<sup>26</sup>

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<sup>23</sup> Ibid., p.273.

<sup>24</sup> Ibid., p. 271.

<sup>25</sup> Ibid., p. 273.

<sup>26</sup> Pappas, pp.35-38.



Internalism's claim on epistemology is largely a function of its response to the two-fold skeptical challenge—a) that nothing at all can be known and b) that neither knowledge nor justified true belief can avoid circular reasoning— that has shaped epistemology's beginnings and informs contemporary debates in epistemology. Williams (2005) contends that the skeptic's challenge has placed two different constraints on the philosophical understanding of knowledge and justification. The first is a "totality condition" defined by the demand for justification for "the possibility of knowledge in general."<sup>27</sup> In other words, epistemology attempts to defend the possibility of knowing anything at all. Epistemology's primary goal then is to determine a set of epistemic norms that could be extrapolated to any pursuit of knowledge, which is undergirded by this totality condition. As a corollary to the totality condition, Williams presents a second constraint: the achievement of "full epistemic awareness."<sup>28</sup> This kind of epistemic awareness requires complete cognitive access, which is possible from the internalist position in two important respects. The first aspect of the totality condition described by Williams asserts complete cognitive access responding to the skeptic's challenge with an explanation both of "full epistemic self-awareness,"<sup>29</sup> and how any belief can be directly justified. This response requires not only access to that which justifies beliefs, but also that the subject *knows* how that belief came about and how reliable her method of justification is.<sup>30</sup> Claims of foundational knowledge because are justified by recourse to first person access to internal states and beyond those to the internal reflections of a subject. The second aspect of the totality condition described by Williams when considering the evaluation of sources or motivations of belief asserts that

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<sup>27</sup> Michael Williams. "Doing Without Immediate Justification," Matthias Steup and Ernest Sosa, Eds., *Contemporary Debates in Epistemology*. Malden, MA: Blackwell Publishing, 2005. p.207.

<sup>28</sup> Ibid.

<sup>29</sup> Ibid.

<sup>30</sup> Ibid., pp.206-207.

privileged and full access is reliable in a way that avoids circularity, which is another part of the skeptic's challenge mentioned earlier. From Williams' perspective, however, internalism is not particularly plausible for two reasons. First, internalism is incomplete if taken as a "fully general view of ordinary justification," and secondly, "everyday justification often seems to work as externalists say it does" (i.e., the self-conscious exercise of dependable recognitional abilities).<sup>31</sup> Williams concludes that because justification appears this way, "*in the particular context of the skeptical challenge*, it is easy to persuade oneself that externalism is not an option."<sup>32</sup>

Steup (2005) and Greco (2005) both claim that epistemological arguments for this reliability are based on an "epistemic duty"<sup>33</sup> or "epistemic responsibility"<sup>34</sup> that asserts "epistemic justification is a matter of meeting one's epistemic duties [and] the things that determine whether a subject has or has not met her duty are internal" to the subject.<sup>35</sup> A subject's evaluation or motivation for belief might require a consideration of the role that experience does or does not play in the epistemic process. However, to formulate the response in terms of the skeptic's challenge is to claim foundational beliefs are *a priori*, and internal. Consequently, experience as a repository of foundational belief plays no role in the epistemic process. These are but a few of the responses to the skeptic's challenge that account for the dominant internalist theme in epistemology.

The other side of this debate is the set of externalist theories that were articulated initially as arguments against internalism (Goldman (1967); Armstrong (1973); Putnam (1975)).

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<sup>31</sup> Ibid.

<sup>32</sup> Ibid., p.207, emphasis in original.

<sup>33</sup> Matthias Steup. "Justification: Introduction." Matthias Steup and Ernest Sosa, Eds., *Contemporary Debates in Epistemology*. Malden, MA: Blackwell Publishing, 2005. p.251. Hereafter "Justification"

<sup>34</sup> John Greco. "Is Justification Internal? Justification is Not Internal." Matthias Steup and Ernest Sosa, Eds., *Contemporary Debates in Epistemology*. Malden, MA: Blackwell Publishing, 2005. p.260. I should note that Greco's thesis is to ultimately reject the idea of internal epistemic responsibility.

<sup>35</sup> Steup, "Justification." p. 251.

Externalist theories claim that internal states are not the only source of justification for knowledge, which may well rest on factors external to the subject. The internalist notion of justification being “within the cognitive grasp” of a subject is replaced with the possibility that there could be specific kinds of reasons that are not entirely cognitively available to the subject, but are “nonetheless intimately connected...with the operation of [the subject’s] cognitive process.”<sup>36</sup>

Reliabilist theories, as one of the central externalist responses to internalist accounts of justification, diverge depending on the answer given as to whether or not a reliable process is enough to justify knowledge or belief, or if there is some other requirement and what that requirement should be.<sup>37</sup> Reliabilism begins with a causal account of justification, and generally advocates that epistemic justification be caused by a process or method that most reliably produces a true belief. According to Foley (2005), Gettier (1963) disputed the traditional philosophical definition of knowledge as justified true belief, which maintained three principles individually necessary and jointly sufficient conditions for knowledge: 1) that knowledge was a kind of belief, 2) that belief had to be true, and 3) that this true belief was justified. Gettier’s challenge that these principles could jointly fail to guarantee knowledge set off a flurry of responses that attempt a more suitable analysis typically involving the addition of a fourth condition to the traditional definition of knowledge. From Foley’s perspective, that search initiated a “shift...away from questions of one’s being able to justify one’s belief intellectually and towards questions of one’s being in an appropriate causal...relation with one’s external

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<sup>36</sup> Laurence Bonjour, “Externalist Accounts of Justification.” Laurence Bonjour and Ernest Sosa, Editors, *Epistemic Justification: Internalism and Externalism, Foundations and Virtues*. Malden MA: Blackwell Publishing. 2003. pp. 24-25.

<sup>37</sup> *Ibid.*, pp.25.

environment.”<sup>38</sup> The search for a reliable process or method that might precisely characterize this relation led to externalist accounts of epistemic justification. Contrary to internalist and Cartesian theories that maintain there are classes of beliefs that have an intrinsic claim to credibility, David Armstrong (1973) argues for a theory that encompasses not only an account of non-inferential knowledge, but a general theory of the nature of knowledge. In the first place, externalist theories deny that one always has full cognitive awareness, that is, that a person always either is or can be aware of the basis of her knowledge and justified belief. This claim is a rejection of the “knowing you know” aspect of access, and the internalist requirement for total cognitive awareness previously discussed. A person can have a justified belief without knowing how it is she knows, and does not necessarily know if the process or cause of her beliefs is reliable.<sup>39</sup>

From Armstrong’s point of view, full cognitive awareness and the access it provides would make it necessary to distinguish between non-inferential and inferential knowledge (basic and non-basic beliefs), and further imply that non-inferential knowledge is arrived at through this full cognitive awareness and access. Armstrong gives some consideration as to what might be considered examples of non-inferential knowledge that are not, in fact, entirely internal to the subject. He begins with an example of non-inferential knowledge found in “the simpler judgments of perception.”<sup>40</sup> Judgments such as “‘There is a noise within earshot’, ‘It is getting hotter’”, for instance, are instances of non-inferential knowledge and as such, Armstrong contends, can be understood as more than reports of sensory states but still not be enough upon

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<sup>38</sup>Richard Foley. “Is Justified Belief Responsible Belief? Justified Belief as Responsible Belief,” In Matthias Steup and Ernest Sosa, Eds., *Contemporary Debates in Epistemology*. Malden, MA: Blackwell Publishing, 2005. p.314. Hereafter, “Responsible Belief.”

<sup>39</sup> David M. Armstrong. *Belief, Truth and Knowledge*. London, UK: Cambridge University Press. 1973. pp.157.

<sup>40</sup> Ibid. 163.

which to claim knowledge. For Armstrong, the distinction between causal and reliabilist theories is important: a causal theory is one in which a subject has a belief that is based on something in the environment causing that belief. A reliabilist theory is specifically one that focuses on the empirical reliability of the belief involved.<sup>41</sup> The problem, as Armstrong sees it, is “the temptation to make inferring a far more explicit, hesitating and self-conscious affair than it always is.”<sup>42</sup> Seeing a dog in front of us may seem to be non-inferential, but the “actual process” of knowing there is a dog in front of one’s eyes is based on both the sensory data provided by vision and our inference. Why is this? Because a hologram of a dog would have the same effect as a real one. Ultimately, these notions point to empirical discussions and could not be understood as internal or *a priori*, and consequently, not an entirely internal process either.

Similarly, the reliabilist theory articulated by Alvin Goldman (1967), in response to Gettier, is that the causal connection between a belief and the facts that may justify that belief,<sup>43</sup> points to an external factor as underwriting knowledge, rather than a reflective or other mental state of a subject. Importantly, Goldman maintains that perceptual knowledge, as a result of vision, for example, is non-inferential in nature since “a percipient does not infer facts about physical objects” from brain states or sensory stimulation, and *need not know or be aware of either of these processes*.<sup>44</sup> Reliable belief-producing processes can be caused by empirical data, logical or propositional inference, and sensory perception.<sup>45</sup> According to BonJour (2007), epistemic justification is widely held to be that sensory perception is based on the reliability of “perceptual and introspective modes of belief formation...[and] that if these processes are

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<sup>41</sup> Ibid., pp.158-159.

<sup>42</sup> Ibid., p.165.

<sup>43</sup> Alvin Goldman. “A Causal Theory of Knowing.” *The Journal of Philosophy*, Vol. 64, No. 12 (Jun. 22, 1967). pp.360-361.

<sup>44</sup> Goldman, p. 359. emphasis added.

<sup>45</sup> BonJour, *Epistemology*. pp.227.

reliable in the way we normally believe them to be,” then it makes little difference whether the subject believes or knows it.<sup>46</sup>

The other side of the externalist position I will discuss comes from outside of epistemology— from philosophy of language more specifically. Lau and Deutsch (2014) assert that some arguments for epistemic externalism were thought experiments motivated by semantic externalism, which is the idea that the meanings of words are determined by external factors and thus not determined solely by internal mental states.<sup>47</sup> In this section, I will discuss Hilary Putnam’s contribution to the externalism discussion, after a short, but important digression concerning the link between the discussion of epistemological theories and the turn to concepts from the philosophy of language. There are several reasons that motivate the brief discussion of the connection between externalism in epistemology and externalism in philosophy of language. I rely here on some ideas garnered from Sanford Goldberg (2007), in his introduction to *Internalism and Externalism in Semantics and Epistemology*. Goldberg notes that epistemology and philosophy of mind and language face similar concerns that prompt their respective distinctions between internalism and externalism. In epistemology, internalist and externalist theories of justification focus on the distinctions between “states and processes available to the reflection and those that aren’t.”<sup>48</sup> In philosophy of mind and language, theories about mental content are constructed by analyzing the properties of mental content and linguistic meaning.<sup>49</sup> The bridge between these two disciplines is their similar core concern for the relation between a subject (or a mind) and the world. Goldberg’s assessment is that this shared concern arises

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<sup>46</sup> BonJour, *Epistemic Justification*. pp.26.

<sup>47</sup> Joe Lau and Max Deutsch. “Externalism About Mental Content.” Stanford Encyclopedia of Philosophy. Edward N. Zalta, Ed., 2014. pp.4-5. Hereafter “Externalism.”

<sup>48</sup> Sanford Goldberg. “Introduction,” Sanford Goldberg, Editor, *Internalism and Externalism in Semantics and Epistemology*. Oxford, UK: Oxford University Press. 2007. p.1.

<sup>49</sup> *Ibid.*, p.2.

because a) epistemology is concerned with the nature of justificatory concepts and processes, and how they might result in knowledge or justified true belief; and b) philosophy of mind and language are concerned with those “materials needed for the mind to represent, refer to and conceptualize the world,”<sup>50</sup> and ultimately, whether those representations amount to knowledge as well. Beyond the shared concern for the relation between mind and world, Goldberg stresses the implications both disciplines have on other related disciplines such as psychology, linguistics and cognitive science.<sup>51</sup>

One such implication is illustrated by Hilary Putnam in “The Meaning of ‘Meaning’” (1975). Putnam makes an early argument for semantic externalism by calling into question assumptions that are implicit in the philosophical psychology generally, and appear more explicitly in Cartesian epistemology. This theory was then extended to mental contents and had a lasting influence on how externalist theories were developed.<sup>52</sup> These assumptions idealize the state or condition of the subject, as well as the relation between the world and the structures of knowledge. Putnam believes philosophy of language could benefit from a consideration of linguistics by “shedding some light on the structure of mind.”<sup>53</sup> His thesis is that “meanings don’t exist in quite the way we tend to think they do” since the concept of meaning is based on an erroneous “pre-scientific” semantics.<sup>54</sup> The theory of meaning rests on two unchallenged (and false) assumptions:

- (i) “That knowing the meaning of a term is just a matter of being in a certain psychological state”

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<sup>50</sup> Ibid.

<sup>51</sup> Ibid., pp.1-4.

<sup>52</sup> Joe Lau and Max Deutsch, “Externalism.” p.5-6..

<sup>53</sup> Hilary Putnam. “The Meaning of ‘Meaning’.” *Minnesota Studies in the Philosophy of Science*. (1975) 7. pp.131.

<sup>54</sup> Ibid., pp.132.

(ii) That the meaning of a term (intension) determines its extension (in the sense that sameness of intension entails sameness of extension).<sup>55</sup>

These assumptions produce erroneous understandings. The first error is that the relation between psychological states and meaning and the relation between those meanings and the world, are psychological states ascribed to an individual subject. More importantly, Putnam asserts, psychological states entail a form of solipsism that is “implicit in just about the whole of traditional philosophical psychology.”<sup>56</sup> This form of solipsism does not presuppose the existence of other individuals other than the subject to whom that psychological state is ascribed.<sup>57</sup> The second error is that intension (meaning) determines extension (reference). Putnam claims that Frege’s introduction of terms that attempt to account for the ambiguity of the concept of meaning—sense and reference—is another instance of an idealization about how we arrive at meaning.<sup>58</sup> The third error is that intension is a psychological entity or state that can be shared. Putnam explains this error as an assumption that psychological states are ““public” in that different people can be in the same psychological state.”<sup>59</sup> These errors arise from the rational reconstruction of these situations, rather than looking at the actual process. According to Putnam, the “linguistic division of labor” accounts for the failure of assumptions (i) and (ii), since the average speaker’s psychological state does not match or fix with the extension of the word. Only the sociolinguistic state of the collective linguistic body to which the speaker belongs fixes the extension.<sup>60</sup> The distribution of the labor of proper use is spread across a *public* community. What is important to the consideration of externalism here is some members of the community—experts, and scientists—are doing the work of explaining the extensions of words.

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<sup>55</sup> Ibid., pp.135-136.

<sup>56</sup> Ibid., 137.

<sup>57</sup> Ibid.

<sup>58</sup> Ibid., 133.

<sup>59</sup> Ibid., 139.

<sup>60</sup> Ibid., pp.144-146.



Meaning is arrived at publicly and communally, not from the individual psychological states of a subject, but through the public use of words and concepts in use within the community. This theory of language has consequences for epistemic externalism because if the meanings of words are not internal, then it would seem to mean that words used to state propositions, knowledge claims or beliefs, are not entirely internal either.

### **Foundationalism vs. Coherentism**

Another polemic in epistemology centers on the foundationalism/coherentism issue that for my purposes focuses on two interrelated disagreements. First, there is a dispute over making a distinction between a set of self-evident, intrinsically justified beliefs that serves as the foundation for other beliefs requiring more justification. Second, there is a dispute about how this distinction impacts the manner of justification. Foundationalism is internalist in character since it appeals to justification to something of which the believer is aware, and has direct cognitive access. Those beliefs justified by direct access become the ground for the justification of other knowledge claims, indicated by the well-worn metaphor of a building's foundation and the structure built upon it. Per Steup and Sosa (2005), the foundationalist approach imposes two conditions on justification that have already been mentioned. The first condition is that justification must be supplied for all beliefs that can count as knowledge and must be robust enough to be the foundation for all other beliefs. The second condition is that this justification must not rely on other beliefs.<sup>61</sup>

Foundationalism, like internalism is shaped by the two-pronged skeptical challenge that nothing at all can be known and that neither knowledge nor justified true belief can avoid

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<sup>61</sup> Matthias Steup. "Foundational Knowledge: Introduction." Matthias Steup and Ernest Sosa, Eds., *Contemporary Debates in Epistemology*. Malden, MA: Blackwell Publishing, 2005. pp.123.

circular reasoning. The response to the first of the skeptic's challenges is the set of claims made about foundational beliefs that are internal and *a priori*. The regress problem arises when, after a subject determines or identifies good reasons or evidence for justified true belief, a subject asks what the justifications for those good reasons themselves are. If a reason counts as knowledge, it must itself be justified with reasons, and those reasons must be justified as well. This process would continue *ad infinitum*. The foundationalist thesis calls for all knowledge and justified belief to rest on a foundation of non-inferential knowledge or justified belief, which ultimately answers the second challenge by providing an "end point" for the justification process. Fumerton (2010) asserts that the thesis falls short since upon reflection, one would recognize that most of the beliefs that have achieved the status of knowledge have done so "only because we know or justifiably believe other different propositions."<sup>62</sup> Fumerton discusses the two main forms of arguments in support of the foundationalist thesis: the epistemic regress argument and the conceptual regress argument, which Fumerton claims are intimately connected. The epistemic regress argument is basically what has been already been articulated: For any belief p, if a subject has a good reason to believe that p, then a subject knows some q such that q supports p and knows some r that supports q, and so on. Thus, no belief is known unless it is supported by an infinitely long chain of other beliefs. The classical foundationalist view relies on the unacceptability of a vicious epistemic regress. This view is rebutted by infinitism. Peter Klein (2005) claims that foundationalism cannot solve the problem because foundationalism is

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<sup>62</sup> Robert Fumerton. "Foundationalist Theories of Epistemic Justification." *Stanford Encyclopedia of Philosophy*. Edward N. Zalta, Ed. 2014. p.1.

assumed to be an account for a “self-conscious practitioner” who could rely on what Klein calls “an autonomous bit of warrant” that is founded on non-basic propositions.<sup>63</sup>

Fumerton briefly outlines the internalist and externalism versions of foundationalism that respond to skepticism beyond what he terms the “epistemic conservatism” of classical foundationalism by which “one takes the mere fact that you find yourself believing some proposition P to be a *prima facie* justification for believing the proposition in question...[which] present wonderful advantages in dealing with the skeptic.”<sup>64</sup> Fumerton claims there is no clear articulation of the key disagreement between internalists and externalists but narrows it down to a controversy about what the properties of internal states are or the question of whether justification requires a particular sort of access. He considers Huemer’s views concerning distinctions between belief and “seemings,” as well as James Pryor’s claim that sensory states just are representational states that are “‘belief-like’ in that they represent the world as being a certain way...[and are] simply *prima non-inferential* justification for beliefs that share their content (that represent the same aspect of reality).”<sup>65</sup> Fumerton emphasizes that both Huemer and Pryor argue that these kinds of states may provide justification without the subject being aware of being in such or any of these sensory or representational states. Ultimately, these states may justify beliefs but provide no guarantee. Externalist versions of foundationalism, much like other externalist theories, contend that one can justify beliefs without being aware of a connection between the belief and that from which one infers that belief. Nevertheless, Fumerton argues that despite these disagreements, the structure of knowledge and justification that emerges

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<sup>63</sup> Peter Klein. “Is Infitism the Solution to the Regress Problem? Infitism is the Solution to the Regress Problem.” Matthias Steup and Ernest Sosa, Eds., *Contemporary Debates in Epistemology*. Malden, MA: Blackwell Publishing, 2005. pp.132-133.

<sup>64</sup> Fumerton, pp.19-20. Paraphrasing Michael Huemer (2001) *Skepticism and the Veil of Perception*.

<sup>65</sup> *Ibid.*, pp. 20.

from some [externalist] theories are often foundationalist in structure.<sup>66</sup> Fumerton calls upon Goldman's (1979) version of reliabilism discussed previously. Fumerton claims this position avoids epistemic regress "by embracing a kind of justified belief that does not owe its justification to the having of other different justified beliefs."<sup>67</sup>

Pryor (2005) makes the claim that coherentism was "historically directed" at theories that allowed for immediately justified beliefs. Some coherentists accept that a belief can be justified by "non-beliefs" like perceptual experiences, while others reject this notion.<sup>68</sup> In general terms, coherentist approaches take issue with the foundation/superstructure metaphor, and prefer the metaphor of a web: the strength of any given belief in one area depends on the strength of the beliefs in other areas. Consequently, coherentism generally rejects the basic/non-basic belief distinction, and posits that justification for any belief is provided by its place in a system of beliefs. What justifies any belief is how it hangs together with the entire system of beliefs. These characteristics allow for the fallibility of the epistemic subject and generally deny that it is possible for most beliefs to be immediately justified. Olsson (2014) holds that "most, if not all, influential coherence theorists...[assign] some beliefs that are close to experience a special role, whether they are called 'supposed facts asserted' (Lewis, 1946), 'truth-candidates' (Rescher, 1973), 'cognitively spontaneous beliefs' (BonJour, 1985) or something else."<sup>69</sup> Olsson contends that these theories more correctly be classified as forms of weak foundationalism than as pure coherence theories, since some beliefs may be justified by some small degree of warrant, such as

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<sup>66</sup> Ibid., pp. 21.

<sup>67</sup> Ibid., pp.22.

<sup>68</sup> Pryor, James. "Is There Immediate Justification? There is Immediate Justification." Matthias Steup and Ernest Sosa, Eds., *Contemporary Debates in Epistemology*. Malden, MA: Blackwell Publishing, 2005. pp.185. Hereafter "Immediate Justification."

<sup>69</sup> Olsson, Erik. "Coherentist Theories of Epistemic Justification." *Stanford Encyclopedia of Philosophy*. Edward N. Zalta, Ed., 2014. pp. 5-6. Hereafter "Coherentist Theories."

beliefs that result from experience or observation.<sup>70</sup> Both Pryor (2007) and Olsson (2014) agree that the issue of justification and accounts given by foundational theories show the contentiousness of defining, evaluating or determining which experiences or qualities count as epistemically efficacious. The coherentist approach comes with its own problems. Two mentioned by Olsson are that some forms of coherentism do not give experience any essential epistemic role; and that if a belief is justified by its coherence with other beliefs or system of beliefs, then it is conceivable that there are alternative, incompatible systems of belief that could justify a belief just as well.<sup>71</sup>

This falls in line with Fumerton's view that both foundationalist and coherentist theories may call for either internal or external grounds of justification. There is no consensus on how to understand or clearly separate the concepts issues thus far: internalism, externalism, foundationalism, coherentism. My focus has been on the discussion of *access* in these debates, but the issues of justification and access overlap and intersect, and are in evidence in much of the literature reviewed here. Because of this overlap, two of the primary issues that arise in these debates are how to explain the role of a subject in the epistemic process who enjoys a special kind of access to her mental or psychological states, and how a subject utilizes and evaluates those mental states. The theories discussed all stipulate at least two conditions. The first is the picture of a subject with either a strong or attenuated form of access that either solidifies the control a subject has over her epistemic claims or weakens or destroys the link between a subject's epistemic claims and the world to which a subject's claims refer. The second condition is the unsuccessful attempt to hang too much of the weight of justification for epistemic claims on some facet of the epistemic process- the subject, her mental states, or the world. The notion of

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<sup>70</sup> Ibid.

<sup>71</sup> Olsson, "Coherentist Theories." pp.4-5.

access seems to be the main point of intersection and overlap for a good reason. Perceptual experience suggests that we have infallible access to certain private experiences, but we must entertain the possibility that we could be mistaken about what those experiences mean because this is what happens to any epistemic subject. This is most evident in the type of access that has been discussed and falls within the category of non-inferential knowledge. This is “the Given.”<sup>72</sup> The basic idea is that givenness is the status enjoyed by ordinary cognitive states, and a subject’s access seems not to be in question. This status consists of the feature of a cognitive state that both serves to justify other beliefs by “its assertive or at least representational content, which enables it to confer justification on other states,” and “creates the need for it to be itself justified.”<sup>73</sup> Foley (2005) rightly claims that the paired concepts of internalism and externalism are usually understood as rivals, “but an alternative and more charitable interpretation is that externalists and internalists have different interests.”<sup>74</sup> What Foley says about internalism and externalism can also be said for foundationalism and coherentism. Given their different interests, each give an account shaped by those interests about the central epistemological issues at stake: determining a definition of knowledge, giving an account of justified belief, and criteria by which to evaluate them.

My goal in this section has been to review just two of the many debates that mark the vast and varied landscape of epistemology to show the complexity of these debates, that make it difficult to accept an account of epistemology as reducible to one or two issues or even a small constellation of issues. The naturalism Quine contends is missing in epistemology is, in fact, the motivation for the critical responses to internalism and foundationalism. Externalism and

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<sup>72</sup> Pryor, “Immediate Justification.” p.186.

<sup>73</sup> Ibid., quoting Laurence Bonjour (1985)

<sup>74</sup> Foley, “Responsible Belief.” p.314.

coherentism were anticipated by the responses to the naturalizing that occurred in the modern era, beginning with the removal of theological justifications for knowledge, and seeing human subjects as individual knowers as well as belonging to a natural kind subject to the same causal laws that were once only applicable to mere objects in nature. In the next section, I discuss Quine's meager account of modern epistemology and its reduction of the project of epistemology to the few claims of interest to Quine. This serves as evidence for the notion that QNE continues to be committed to the distorted dogmas about science as a specialized social activity that unilaterally influences the society in which it is embedded. Quine's proposal for a naturalized epistemology as a successor project must ultimately be rejected.

### **Quine's Naturalized Epistemology**

This section is an account of Quine's theories regarding epistemology and his goal of subsuming it within the scientific study of psychology. An underlying question I consider is concerned with how accurate an account of epistemology Quine has given to distinguish his naturalized epistemology from classical epistemology. The short answer—with a more detailed discussion occurring later—is that, given the complexity at which I've merely gestured at in my quick account of two core epistemological debates, Quine is not providing either a full or fair description of the work in modern epistemology. This is partly due to the analytic tradition at the time he wrote "Two Dogmas of Empiricism" (1951) that was still in the grip of some tenets of logical positivism, which Quine was intent on confronting. In the next section, after a discussion of Quine's articles provides a good picture of both Quine's critiques and a sketch of his proposed successor project to classical epistemology. Finally, in the last section, I come to some conclusions regarding Quine's cursory treatment of modern epistemology and his ultimate

inability to distinguish his theory from its modern precursors. The tensions will be discussed in terms of those elements of his theory that are problematic for feminist epistemologists and feminist philosophers of science.

The epistemology that Quine is analyzing in “Two Dogmas of Empiricism (1951) and “Epistemology Naturalized” (1968), is a partial account of epistemology alluded to previously. In “Two Dogmas,” Quine explicitly criticizes two key assumptions at work in empiricism, the rejection of which lay the groundwork for his later thesis in “Epistemology Naturalized.”<sup>75</sup> At the same time, Quine implicitly reiterates his commitments to important aspects of empiricism, which are strong currents or themes in modern epistemology. The first assumption Quine considers in “Two Dogmas” is the analytic/synthetic distinction, which grounds the distinction between analytic truths and synthetic truths.<sup>76</sup> The second assumption is a form of reductionism that begins with the idea that any meaningful statement is equivalent to some logical construct based on terms that refer to “immediate” experience.<sup>77</sup> This leads further to the idea that singular statements are the “unit of significant discourse”<sup>78</sup> for confirming or refuting claims. For Quine, both assumptions are false.

Quine begins with a discussion of Kant’s definition of an analytic statement. An analytic statement is “one that attributes to its subject no more than is already conceptually contained in the subject.”<sup>79</sup> Quine restates this as: “a statement is analytic when it is true by meanings and independently of fact.”<sup>80</sup> In restating Kant’s distinction, Quine can now tackle the issue in a way

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<sup>75</sup> Richard Cleath claims the final section of “Two Dogmas” “is the first, and one of the most systematic, of his sketches of an alternative epistemology” (Cleath, Richard. “Quine on the Intelligibility and Relevance of Analyticity.” In *Cambridge Companion to Quine*. Roger F. Gibson, Ed. Cambridge University Press (2006). p. 47. Hereafter “Intelligibility.”

<sup>76</sup> W.V.O. Quine. “Two Dogmas of Empiricism.” *The Philosophical Review*, (January 1951) 60 (1). p.20.

<sup>77</sup> Ibid.

<sup>78</sup> Ibid., p.36.

<sup>79</sup> Ibid.

<sup>80</sup> Ibid., p. 21



that illustrates his interests as a philosopher of language. He examines the concept of meaning and its relation to naming. Quine's goal in this analysis is to show the ways in which the analytic/synthetic distinction, the grounds for analyticity, and each of the other related concepts fail to explain every instance of analyticity, synonymy or interchangeability. Additionally, none of these concepts can be defined without invoking the others; hence Quine's charge of circularity. In "Quine on the Intelligibility and Relevance of Analyticity" (2006), Creath says that Quine imposes his implicit criterion for evaluating analyticity and the other concepts that is behavioral or empirical in nature.<sup>81</sup> Quine suggests that the distinction between meaning and naming is highlighted by Frege's example of "Evening Star" and "Morning Star" by which we use two singular terms to name the same thing; but the meanings are different. Quine notes this kind of distinction is present at the level of abstract terms that are "different but parallel" to the considerations of singular terms.<sup>82</sup> Frege's example shows that meaning cannot always be identified with naming or references.

Quine's next move is to consider the aspect of truth and its connection with names of general terms. Here, too Quine considers the notion of truth and finds it also lacking as a solid concept on which to ground meaning. The class of all entities of which a general term is true is called the extension of the term. Here Quine considers the distinction between a general term's meaning and its extension.<sup>83</sup> "The most conspicuous question is as to the nature of its objects: What sorts of things are meanings?" Because the answer is difficult to pin down, "there seems little hope of erecting a fruitful science about them."<sup>84</sup> The failure to understand the distinction

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<sup>81</sup> Creath, "Intelligibility." p. 48

<sup>82</sup> Quine, "Two Dogmas." p.20

<sup>83</sup> Ibid.

<sup>84</sup> Ibid., 21.

between meaning and naming has resulted in the failure of empiricism to stake its claim as a successful approach to epistemological issues. Quine asserts that

once the theory of meaning is sharply separated from a theory of reference, it is a short step to recognizing as the business of the theory of meaning simply the synonymy of linguistic forms and the analyticity of statements; meaning themselves, as obscure intermediary entities, may well be abandoned.<sup>85</sup>

Quine calls predicts that any attempt to maintain the various accounts of meaning and naming upon which the relations of synonymy are built will meet with the same failure to attach meaning to the singular terms, or general terms.<sup>86</sup>

Because meaning has lost its value, synonymy, heretofore explained in terms of meaning. Quine then considers related issues including definition, interchangeability, and semantical rules. The issue of synonymy is an expression of the notion of synthetic truths, and its relation to definition that expresses the notion of analytic truths. The standard relation is that the former reduces to the latter. Quine argues that this relation might be clarified by stating it in terms of “linguistic behavior.”<sup>87</sup> Only one connection between terms considered synonymous is clear; they come “as reports upon usage.”<sup>88</sup> These reports are also indicative of the assumptions made from “pre-existing synonyms.”<sup>89</sup> From Quine’s perspective, given that synonymy is not clearly defined, it is merely presupposed by the power and influence of use, so too analyticity is a faulty concept.

Definition, for a variety of reasons, “does not hold the key to synonymy and analyticity” either; so, Quine moves on to interchangeability in which two linguistic forms may be interchanged “in all contexts without a change of truth value, and “synonyms so conceived need

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<sup>85</sup> Ibid., pp.22-23.

<sup>86</sup> Ibid., p. 23.

<sup>87</sup> Ibid., p. 24.

<sup>88</sup> Ibid., p. 25.

<sup>89</sup> Ibid.

not be free from vagueness, as long as the vaguenesses match.”<sup>90</sup> Quine uses the classic example of ‘bachelor’ and ‘unmarried man’. Since ‘bachelor’ might refer to an unmarried man but the term also occurs in other, unrelated terms such as a kind of flower (bachelor’s buttons) or an academic degree (Bachelor of Arts).<sup>91</sup> The problem could be resolved and interchangeability could be a sufficient condition for cognitive synonymy, if one construed analytic statements more narrowly. This bit of “hocus pocus” is the problematic supposition that terms used to restrict or narrow our propositions—words like “necessarily”—are “so construed as to yield truth when and only when applied to an analytic statement.”<sup>92</sup> But this falls apart once applied to the criterion of analyticity of that very word, which makes it a somewhat circular argument. Quine concludes that “interchangeability *salva veritate*” is meaningless until relativized to a language whose extent is specified in relevant respects.”<sup>93</sup>

Having considered and rejected the shortcomings of definition and synonymy as the grounds for analyticity, Quine considers analyticity in terms of semantic rules used in translating from ordinary languages and statements in logical languages.<sup>94</sup> The purported relation between statements and languages requires a clear account but these considerations are still limited by the muddled understanding of the term ‘analytic.’ In previous considerations of analyticity in terms of definition, synonymy, and interchangeability, all failed to precisely map out their connection to each other. In every consideration, the notion of analyticity is a “will o’ the wisp” concept whose validity (truth) “depends on both language and extralinguistic fact.”<sup>95</sup>

In his discussion of the second dogma, Quine challenges reductionism which he defines as

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<sup>90</sup> Ibid., p. 28.

<sup>91</sup> Ibid.

<sup>92</sup> Ibid., p. 29.

<sup>93</sup> Ibid.

<sup>94</sup> Ibid., p.31.

<sup>95</sup> Ibid., p. 34.

verificationism and its epistemological implications. In the first place, Creath (2006) says:

This challenge...is slightly unexpected because...Quine in some sense *is* a reductionist and a verificationist. Quine generally favors whatever reductions can be achieved” with behaviorist criteria” because on Quine’s view, “verification theory purports to be an account of synonymy...so the topic is still analyticity.”<sup>96</sup>

To add further support to the claim, we recall that Quine says analyticity and reductionism “are two sides of a single dubious coin.”<sup>97</sup> This point is important to my overall argument for Quine’s entanglement with modern epistemology. Additionally, in the final section entitled “Empiricism without the Dogmas,” Quine concerns himself with “epistemic matters, with the shape and structure of an account of confirmation.”<sup>98</sup> Quine’s point is that analyticity and any other concepts that touch on meaning are “no longer epistemically relevant concepts.”<sup>99</sup> Quine states, “even in taking the statement as unit we have drawn the grid too finely. *The unit of empirical significance is the whole of science.*”<sup>100</sup> “Empirical significance” I take to mean the unit of empirical (or behavioral) confirmation. Quine gives a brief outline of Carnap’s account of the relation between statements and experiences that contribute to their confirmation, which Quine characterizes as “a naïve view...one of direct report...[or] *radical reductionism.*”<sup>101</sup> Carnap’s initial attempt was to translate all meaningful statements concerning immediate experiences into atomic, true or false statements. However, Quine remarks that Carnap abandoned that part of his project. The failure of “reductionism in its radical form has long since ceased to figure in Carnap’s philosophy.”<sup>102</sup> This reductionism continues to survive in the hypothesis that confirmation of singular statements is possible. Quine continues, “my countersuggestion...is

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<sup>96</sup> Richard Creath, “Quine on the Intelligibility and Relevance of Analyticity,” In *Cambridge Companion to Quine*. Roger F. Gibson, Ed., Cambridge University Press. 2006, p. 53.

<sup>97</sup> Quine, “Two Dogmas”, p. 20.

<sup>98</sup> Ibid.

<sup>99</sup> Creath, “Intelligibility.” p. 54.

<sup>100</sup> Quine, “Two Dogmas”, p.39, emphasis added.

<sup>101</sup> Ibid., p. 36.

<sup>102</sup> Ibid., p. 39.

that our statements about the external world face the tribunal of experience not individually but only as a corporate body.”<sup>103</sup> Creath claims that Quine’s intention was to “tar reductionism...but also to inspire and legitimate the holistic countersuggestion of modest reductionism.”<sup>104</sup> Having shown the untenability of confirmation atomism in “Two Dogmas”, in “Epistemology Naturalized,”(1969), Quine stakes out some of the implications of the failure of these two dogmas in order to propose a successor project.

In “Epistemology Naturalized,” Quine’s account of classical epistemology is that it has failed in its attempts to establish the certainty of beliefs about the world. Even though this epistemology is already “concerned with the foundations of science,” there has been no success in deriving beliefs (and certainty) about the world from our sensations.<sup>105</sup> Sensations and the claims to knowledge we make based on them can be understood in this way: “Just as mathematics is to be reduced to logic...so natural knowledge is to be based somehow on sense experience.”<sup>106</sup> This seems more interesting when we recall his determined critique of Carnap’s similar goal. Quine recommends that epistemology, as it had been practiced in the classical tradition, should be abandoned. Because of the failure of epistemology to determine a general set of norms by which to pursue certainty and knowledge Quine argues that, the concept of justification needs to be re-evaluated. Justification must be understood not as a unidirectional, “bottom up” process—i.e. moving from a set of foundational beliefs to larger or more complex structures—but justification as a process that works without the distinction between basic and non-basic beliefs, which relies on a larger body of *a posteriori* knowledge. Knowledge should be

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<sup>103</sup> Ibid., p. 38.

<sup>104</sup> Creath, “Intelligibility.” p. 56.

<sup>105</sup> W.V.O. Quine. “Epistemology Naturalized.” In Hilary Kornblith, Ed., *Naturalizing Epistemology*. Cambridge Massachusetts: Massachusetts Institute of Technology Press. 1985. p.16.

<sup>106</sup> Ibid.

taken up as a descriptive project that rejects the *a priori* by calling for a reliance on empirical insights of science, in lieu of what had heretofore been a project independent of the sciences. In the broadest sense, human beings can best be understood and studied — within the field of psychology more specifically—allowing human experience to be measured and patterns found in the stimulation of sensory receptors. The individual is no longer an ideal epistemic subject, but rather an idealized “experiencer.” As Quine claims, epistemology is properly a part of science because it studies the “physical human subject.”<sup>107</sup> This is the result of what Quine takes to be the physical or material underpinnings of epistemology. Quine sees traditional epistemology failing in its efforts at finding a general notion of justification. What has shown signs of success is the attempt to capture knowledge as an issue of physical, or sensory stimulation.

In subsuming epistemology within science, Quine means to preserve the status of knowledge by maintaining that traditional epistemology and the “rational reconstruction” of knowledge have failed, and that this work should be transferred to science. “It seems sensible to settle for psychology. Better to discover how science is in fact developed and learned than to fabricate a fictitious structure and similarly fail.”<sup>108</sup> For Quine, human knowledge is a combination of two factors: the world that provides the “stimulation” of sensory receptors, and the human subject responding to her environment. First, Quine’s assertion about the contribution of the world expressed as stimulation of sensory receptors is in fact a statement about the specificity and universality of human sensory receptors. “The human subject is accorded a certain experimentally controlled input—certain patterns of irradiation in certain frequencies for instance—and in the fullness of time the subject delivers as output a description of the three-

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<sup>107</sup> Ibid., pp.22-24.

<sup>108</sup> Ibid., p. 24.

dimensional world and its history.”<sup>109</sup> Secondly, the human subject responding and describing her world is uncertain about the truth or falsity of her knowledge claims, but this uncertainty is ameliorated by Quine’s acceptance that any description or response is to be judged by the totality of a person’s theory about the world that has already been confirmed by the scientific community. Quine’s concern with those elements of individual experience that are measured or explained in physical terms or empirical data is informed by his faith in scientific knowledge and its epistemological authority. Here, Quine makes a claim that echoes seven years later in Putnam’s claim concerning the nature of “linguistic labor” in “The Meaning of Meaning” (1975). For Quine, epistemic labor—justification—is distinguished from non-naturalized epistemology in at least three ways. One element of the epistemic labor continues to be in an epistemic subject, however, it is as a “sensing” subject that receives “input” and theorizes from the output. The second change in Quine’s account of epistemic labor is that it is shouldered by the community of which the subject is a part; a subject’s theories are holistically confirmed by that community. The individual is subordinated to the community’s claims or theories, rather than her own beliefs, such that a large part of the epistemic labor—the judging, evaluating and inferring—happen at the community level. Finally, one of the implications of Quine’s theory is that the set of those who can actually make knowledge claims verified would be limited to epistemic subjects who have access to the most current, and best available science. Quine’s theory is communal in its conception of an epistemic subject that is defined by its relation to the scientific community. In consequence, Quine’s theory is naturalistic enough to have made some epistemological improvement by introducing a larger context within which an epistemic subject exists. This larger context describes how epistemic labor actually happens, and the way

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<sup>109</sup> Ibid.

epistemic labor is shared by a group of knowers, rather than labor done by individuals. However, the theory is not naturalistic enough to eliminate the individualism that results from positing an idealized and universalized subject serving as the source of the data (sensory input) that an epistemic community evaluates.

Lastly, Quine's naturalized epistemology fails to distinguish itself in its lack of a conceptual space for evaluation of the social and cultural commitments underlying a community's epistemic labor, which include theories and explanatory models, and the acceptable criteria used to judge those theories and models as productive. I make this claim based on larger historical factors at play in Quine's theorizing. In "Two Dogmas," Quine reviews these central tenets to remove the "supposed boundary between speculative metaphysics and natural science."<sup>110</sup> Blurring the line between metaphysics and science has two different and seemingly contradictory consequences. On the one hand, it maintains Quine's empiricist commitment by referring to the contribution of behavioral, extralinguistic or empirical criteria to community judgments. He rejects theoretical arguments for analyticity bolstered by external factors—in this case, external factors are those factors such as cultural and social interests and values that lay outside of science. This is problematic, however, since, given Quine's holistic view of science, there is *nothing* outside of science. On the other hand, blurring the line between metaphysics and science is achieved in a scientific account but not an epistemological account of science. In a chapter entitled, "Bridges of Our Own Making," Lynn Hankinson Nelson (1990) asserts that

Divisions in cognitive authority and labor in scientific communities and our larger society involve epistemology only if the identities of scientists make a difference to the content of scientific knowledge— only if who is theorizing has a bearing on the research undertaken, the methodologies adopted, and ultimately, the content of scientific theories.<sup>111</sup>

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<sup>110</sup> Ibid., p. 20.

<sup>111</sup> Lynn Hankinson Nelson. *Who Knows: From Quine to Feminist Empiricism*. Philadelphia, PA: Temple University Press. 1990. p. 186.



Nelson claims that for Quine, these identities, which are social and political, may indeed have a place in our accounts of science. From Quine's perspective, however, the generation of theories and standards of evidence *would not* include these social and political factors.<sup>112</sup> The implication is that an account of science must include social and communal elements. At the same time, he points to the role of the behavioral or empirical in confirming or infirming claims. This claim finds its basis in several instances in "Two Dogmas" in which Quine indicates the central place of empirical concepts. In one instance, Quine refers to "astronomical observation" as the deciding factor in distinguishing between the meanings of "Morning Star" and "Evening Star."<sup>113</sup> In another, "linguistic behavior" is part of what a lexicographer records as facts in order to formulate a definition of a word.<sup>114</sup> In still another instance, Quine suggests that analyticity might be useful "if the mental or behavioral or cultural factors relevant to analyticity...were somehow sketched into the simplified model."<sup>115</sup> In Creath's "Quine on the Intelligibility and Relevance of Analyticity" (2002), he reflects first on Quine's rejection of the analytic/synthetic distinction and the prospects for an epistemology defined by this rejection. Creath's claim is that Quine's implicit criterion for evaluating all of these concepts is behavioral: "This is a demand... for empiricist criteria of significance. Quine is demanding behavioral criteria because he is still in line with the empiricists, which Creath says is his way of rejecting previous arguments for analyticity based on semantics or definition."<sup>116</sup> Creath then considers Quine's critique of the second dogma, reductionism (verificationism). Creath argues: "This challenge...is slightly unexpected because...Quine in some sense is a reductionist and a verificationist. Quine generally

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<sup>112</sup> Ibid.

<sup>113</sup> Quine, "Two Dogmas," p. 21.

<sup>114</sup> Ibid., 24.

<sup>115</sup> Ibid., p. 34

<sup>116</sup> Richard Creath. "Intelligibility." p.47.

favors whatever reductions can be achieved” with behaviorist criteria. The “two notions (analyticity and reductionism) are two sides of a single dubious coin.”<sup>117</sup> The point here is that regardless of the elements of non-naturalized epistemology that Quine is rejecting, he continues to give primacy to individual behavioral and sensorial information. Quine’s account of epistemology is characterized by his response to the very narrow set of issues of analyticity and reductionism, but still maintains a reductionist commitment.

Quine does not explicitly claim that analyticity and reductionism exhaust the work and concerns of Modern epistemology, but it is implied in Quine’s own approach to epistemology and the commitments entailed by that approach. From his point of view, “*Modern empiricism* has been conditioned in large part by these two dogmas.”<sup>118</sup> He speaks to empiricist epistemologists committed to a linguistic approach as the best approach to progress in scientific inquiry and knowledge. Because this approach failed, we should cut our losses and transport the *entire* epistemological project into psychology. Quine’s purpose in giving his particularized account of classical epistemology is to provide the motivation for his thesis, naturalized epistemology. The outcome, however, is that Quine fails to disentangle his theory from classical epistemology on two counts. First, his account fails to distinguish itself in by virtue of retaining some element of individualism and reductionism that generally define non-naturalized epistemology. Quine’s naturalized epistemology calls for a scientific community to evaluate theories and explanatory models. A scientific community’s evaluation and judgment of a theory relies on the data (the input) of an individual’s sense apparatus. Presumably, even the theories constructed from the data would originate with an individual’s theorizing that is based on the input: “The stimulation of his sensory receptors is all the evidence anybody has to go on, ultimately, in arriving at his

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<sup>117</sup> Quine, “Two Dogmas,” p. 20.

<sup>118</sup> *Ibid.*, emphasis added.

picture of the world.”<sup>119</sup> Secondly, Quine’s unwillingness to consider the influence of social and cultural values and interests in the epistemological account of science results in the same problem feminist epistemologists and philosophers of science have with non-naturalized epistemologies: distorted or erroneous knowledge. Even as QNE moves in the right direction towards a naturalistic account of knowledge and scientific inquiry, by not reflecting critically on those social and cultural values and recognizing their influence on these practices, QNE fails to extricate itself from non-naturalized epistemology and therefore brings with it the issues feminist epistemologies and philosophers of science find problematic in non-naturalized epistemology. The next chapter will provide an account of the general response of critical feminist theorists to Quine and specific attributes of QNE that make it indistinguishable from non-naturalized epistemology.

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<sup>119</sup> Quine, “Epistemology Naturalized,” p. 20.

## CHAPTER 2:

### Feminist Epistemologies

#### **Introduction**

Critical feminist epistemologies first emerged out of several critiques lodged against a received epistemology that emphasized a general and universalized account of knowledge. Various sources, including individually published articles (Crasnow, Wylie, Bauchspies, and Potter 2015; Anderson 1995, Nelson 1994; Longino and Lennon 1997; Code 1996; Longino 1994; Baier 1991, and anthologies of feminist epistemologies (Bailey and Cuomo 2008; Alcoff and Potter 1993; Antony and Witt 1993; Lennon and Whitford 1994; Kourany 1998) concur that feminist epistemologies should be referred to in the plural because there are many positions within the project concerning a variety of epistemological issues. These include definitions for knowledge, reason, objectivity, as well as the traits of the epistemic subject. Longino (1994), articulates an account of the generally shared assumptions in her article “In Search of Feminist Epistemology.” Longino offers two motives for a proposal for feminist epistemology. One is a response to the fact that “the scientific cards have been stacked against women for centuries.”<sup>1</sup> The upshot is that misogyny and gynophobia have shaped conceptions of knowledge and rationality such that the impetus for feminist epistemology springs from the need to consider new ways of knowing the world that would include women in epistemological endeavors. This

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<sup>1</sup> Helen Longino. “In Search of Feminist Epistemology.” *The Monist* (1994), 77 (4): p. 472.

underpins two important roles for a feminist epistemology that are “critical and constructive:” One is identifying “masculinist ideologies” in the methodologies of scientific practice as well as revealing the androcentrism of the content of that inquiry; and second, “identifying and realizing....the emancipatory potential in the sciences.”<sup>2</sup> Longino remarks that this “does not require any rethinking of fundamental philosophical issues.”<sup>3</sup> Echoing Longino’s point, Anderson (1995) points out that a primary indicator that knowledge has been influenced by gender is the distinction between objective, theoretical knowledge, which is masculine, and “natural,” “practical know-how and personal knowledge,” which is feminine.<sup>4</sup> Anderson’s distinction is based on a consideration of a common conception of “the knowledge privileged in the academy” as “impersonal, theoretical and scientific.”<sup>5</sup> It is this kind of knowledge that is considered masculine.

There is an abiding misconception that feminist epistemologies are merely the study of “feminine ways of knowing.”<sup>6</sup> These historical conceptions are compounded by the ways women have been prevented from both acquiring knowledge as well as participating in its production.<sup>7</sup> Anderson’s main goal in the text is to give a new interpretation of what feminist epistemology is: “a branch of naturalized, social epistemology that studies the various influences of norms and conceptions of gender and gendered interests and experiences on the production of knowledge.”<sup>8</sup>

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<sup>2</sup> Helen Longino. “Essential Tensions-Phase Two: Feminist, Philosophical, and Social Studies of Science.” In *A Mind of One’s Own: Feminist Essays on Reason and Objectivity*. Boulder, CO: Westview Press, Inc., 1993. pp. 25.

<sup>3</sup> Ibid.

<sup>4</sup> Elizabeth Anderson. “Feminist Epistemology: An Interpretation and a Defense.” *Hypatia*, Vol. 10, No. 3, (Summer, 1995), p. 50.

<sup>5</sup> Ibid.

<sup>6</sup> Ibid.

<sup>7</sup> Ibid.

<sup>8</sup> Ibid.

The second motive for a feminist epistemology, Longino points out, *does* require some rethinking of philosophical issues, and this comes from within philosophy itself. Longino contends that the acceptance of fallibilist and anti-foundationalist theories generally, along with arguments in support of the underdetermination thesis, have been consequences of accepting naturalistic views that acknowledge the relevance of psychological and sociological facts about human knowers to epistemological accounts. This acknowledgement would seem to invite the consideration of empirical information about gender and gender difference.<sup>9</sup> Longino bases the distinction between those philosophical issues that does not require rethinking and those that do on the goals that define feminist critiques, and the goals of the historical practice of epistemology. The labor of critical and constructive work of feminist critiques emphasizing issues of sex and gender occur outside the domain of philosophy because this critical and constructive work, from Longino's perspective, is of little to no concern in many philosophical debates, including those of epistemology. The goal of philosophical epistemology that is at issue for the feminists indicates that quite a bit of work and rethinking of epistemological theories has resulted from the acceptance of fallibilist and anti-foundationalist theories, as well as other naturalistic views. While this rethinking required acknowledgement of the relevance of psychological and sociological facts about human knowers, these naturalistic views were mostly silent on the issues of sex and gender and their impact on knowledge and the practices of science.

In the introduction to their anthology, *Feminist Epistemologies* (1993), Alcoff and Potter tackle the term "epistemologies" a little differently. Alcoff and Potter acknowledge that using the term in the plural is, in part, an indication of the variety of approaches to epistemological concerns. However, they also point out that the plural term is a way of emphasizing the

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<sup>9</sup> Longino, "In Search," p.472.

problematic assumption that there is only one feminist epistemology or one epistemological account or approach that aligns with the feminist designation. This is important because this clarification already flies in the face of an epistemological tradition that takes for granted that there is one set of epistemological norms, one account of knowing that discovers, *a priori*, justificatory standards that are universally applied.<sup>10</sup>

By contrast, in their introduction to *Knowing the Difference: Feminist Perspectives in Epistemology*, Kathleen Lennon and Margaret Whitford assert that the investigation of the connections between power and knowledge are “feminism’s most compelling insight.”<sup>11</sup> This means that not only does knowledge facilitate empowerment, but more controversially that “legitimation of knowledge-claims is intimately tied to networks of domination and exclusion.”<sup>12</sup> The result is feminist philosophers sharing the work of epistemology, and more specifically, making knowledge claims about the influence and power of these networks of domination and exclusion, and working with “social scientists, political theorists, historians, and literary theorists,”<sup>13</sup> and the “hard” sciences, in order to provide justification by way of empirical data for those claims.

Feminist epistemologies challenge the definitions of a central epistemic concept such as knowledge—including what counts as knowledge, who can make legitimate knowledge claims, the objectivity of such claims, and the “recognition of difference”<sup>14</sup> between male and female experience, as well as the difference between the knower and the objects known. They challenge

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<sup>10</sup> Linda Alcoff and Elizabeth Potter. “Introduction: When Feminisms Intersect Epistemology.” In *Feminist Epistemologies*. Alcoff and Potter, Eds., New York: Routledge, Chapman & Hall, Inc., 1993. p.1.

<sup>11</sup> Kathleen Lennon and Margaret Whitford. “Introduction.” *Knowing the Difference: Feminist Perspectives in Epistemology*. Lennon and Whitford, Eds., London: Routledge. London UK: Cambridge University Press. 1994. p. 1.

<sup>12</sup> *Ibid.*

<sup>13</sup> *Ibid.*

<sup>14</sup> *Ibid.*, p.2.

the possibility or value of one single account of knowledge, and the idea that the social and economic positions of the knowers can be ignored. Lennon and Whitford categorize feminist epistemologies as being “rooted in Enlightenment ideals of justice and freedom,” but charge that the Enlightenment idea of an “Archimedean point where a universal knower can stand and see the world without perspective” is no longer viable.<sup>15</sup> Finally, Lennon and Whitford point out that feminist epistemology is “neither the articulation of a female way of knowing nor simply an articulation of female subjectivity, which reveals itself to be too diverse, contradictory and at least partially discursively constructed through patriarchal oppositions.”<sup>16</sup> The articles in their anthology are reflections on the “nature of knowledge and our methods of attaining it,”<sup>17</sup> which, it is important to note, mesh with the concerns of what Lennon and Whitford refer to as “mainstream” epistemology, i.e., epistemology that pursues the discovery of a set of general, *a priori*, and justificatory standards that can be universally applied.

In *A Mind of One’s Own: Feminist Essays on Reason and Objectivity* (1993), Antony and Witt’s focus is not merely on rejecting androcentric definitions of reason and objectivity, but more notably, to recognize the importance of these concepts to the epistemological project generally and to the “potential usefulness for feminist theorizing.”<sup>18</sup> Here too, the authors portray feminist epistemology as multi-faceted, shaped by diverse interests and goals that ultimately “reveal that the thought of traditional philosophers is rich with possibilities for feminist interpretations.”<sup>19</sup>

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<sup>15</sup> Ibid., pp. 1,3.

<sup>16</sup> Ibid., p. 13.

<sup>17</sup> Ibid.

<sup>18</sup> Louise M. Antony, and Charlotte Witt. “Introduction.” *A Mind of One’s Own: Feminist Essays on Reason and Objectivity*. Antony and Witt, Eds., Boulder, CO: Westview Press, Inc., 1993. p. xiv.

<sup>19</sup> Ibid., p. xv.



My objective is to describe the motivations for the scrutiny of mainstream epistemology by feminist philosophers of science as motivated by the inquiries and findings that come out of scientific practice. Potter (2006) describes a series of scientific findings in the 1970s and early 1980s that attempted to explain and justify the great number of men in high ranking jobs and the higher wages earned by men in comparison to women in similar positions. Validation of male dominance was provided by scientific studies of a variety of traits including intellectual or cognitive abilities, aggressiveness, and verbal and visual-spatial abilities based on sex. These findings received a lot of media coverage, but refutations of the findings received no such attention. Potter surmises that these occurrences “beg for attention from feminists, not only for the specific hypotheses and claims...but [with respect to] the nature of the sciences themselves and our understanding of them.”<sup>20</sup> For Potter, as for Anderson, the feminist critique of science and philosophies of science are “to a greater or lesser extent naturalized philosophies of science.”<sup>21</sup> Feminist philosophies of science attempt to understand the actual history and practice of science, and subject their theories to the same criteria as the sciences such that empirically adequate data provide support for theories. For this reason, they reject philosophies of science as formerly practiced because non-naturalizing philosophers rationally reconstructed scientific practices to justify knowledge, rather than considering them without preconception.<sup>22</sup> Quine’s naturalized epistemology, though a non-feminist theory, suggests theoretical approaches that give accounts of how scientific knowledge is actually reproduced. Additionally, Quine’s naturalized epistemology offers feminist philosophers of science the possibility of applying different criteria to make distinctions between good science and bad science. There have been

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<sup>20</sup> Elizabeth Potter. *Feminism and Philosophy of Science: An Introduction*. London, UK: Routledge. 2006. p.1-3. Hereafter referred to as *Feminism and Philosophy of Science*.

<sup>21</sup> *Ibid.*, pp. 4-5.

<sup>22</sup> *Ibid.*, p. 6.

several responses to Quinean naturalized epistemology and, in the next section, I will parse those elements of Quine's naturalism taken up by feminist empiricists. I will set these out as four distinct but interdependent elements of Quine's naturalism. After describing the general reception of Quine's naturalized epistemology by critical feminist epistemologists and philosophers of science, there will be a description of some elements of Quine's naturalism that are of particular concern, both to the discussion as a whole, and to concern to the feminist critique in particular.

### **The Emancipatory Promise**

Given the critical stance of feminist epistemologists and philosophers of science toward epistemology as it had been pursued, and given Anderson's explicit interpretation and defense of feminist epistemologies as belonging to the category of naturalized, social epistemology, the shift from non-naturalized epistemology to "naturalized epistemology" was taken as a definitive move in the right direction. In "Feminist Perspectives of Science" (2015), Crasnow, Wylie, Bauchspies and Potter express the positive reception of naturalized epistemology as an "emancipatory promise."<sup>23</sup> In "What is Natural About Epistemology Naturalized?" (1996) Code asserts naturalized epistemologies were a "shift...from idealized abstraction to establish connections with epistemic practice that could enable theories of knowledge to engage constructively and critically with everyday cognitive activities."<sup>24</sup> Quine's proposal was indeed an attempt to move away from the "rational reconstructions" of epistemological work that had dominated theories in both epistemology and philosophy of science. His approach to

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<sup>23</sup> Sharon Crasnow, Alison Wylie, Wenda K. Bauchspies, and Elizabeth Potter. "Feminist Perspectives Science", *The Stanford Encyclopedia of Philosophy* (Summer 2015 Edition), Edward N. Zalta (ed.). p.3.

<sup>24</sup> Lorraine Code. "What is Natural about Epistemology Naturalized?" *American Philosophical Association*. 33(1). January 1996. p.1.

epistemology, as he understood it, was meant to be corrective. From his perspective, what was lacking in epistemological theory was a naturalism that acknowledged the human epistemic subject as itself an object of scientific study. Quine's naturalism takes his version of non-dogmatic empiricism to be a necessary component of epistemology. He takes for granted that science is the exemplar of epistemic pursuits, and as such, any account of knowledge, and any methods of justification and verification ultimately fall under the heading of science. Indeed, he makes this point in both "Two Dogmas of Empiricism" (1951) and "Epistemology Naturalized" (1969). Code claims, "naturalists assume knowledge is possible and seek to understand its real-world (natural) conditions," and [are] not committed to idealized knowers.<sup>25</sup>

At this point, it is important to clarify Quine's notion of what "natural" means as it refers to the study of knowledge and features of a knower: what is natural in the broadest sense are the natural responses of any human subject's sensory apparatus. These construed Quine's notion of "natural" responses of human subjects' and was a very narrow category of phenomena. Other feminist scholars, to varying degrees, and with diverse responses, agree with Code (Kourany 1998, Baier 1991, Antony 1993, Nelson 1990, Potter 1993, Lovibond 1989) about the significance of this shift in approach and the "radical feminist import of Quinean naturalism."<sup>26</sup> These scholars agree that a big part of the emancipatory promise of naturalized epistemologies had to do with the possibility of uncovering those practices in knowledge production that "sustain a social-political status quo... [since] epistemic agendas and social-political commitments are inextricably intertwined and mutually constitutive" in order to maintain epistemic authority.<sup>27</sup> The scope of hypotheses and questions are issues that feminist scholars

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<sup>25</sup> Ibid., p.1.

<sup>26</sup> Ibid., fn23, p. 18.

<sup>27</sup> Ibid., p. 1-2.

claim motivate scientific inquiry, and should include discerning and measuring the impact of socio-political factors on human subjects. Quine believes a viable scientific process is a holistic endeavor that proceeds by accumulation of empirical data about human experience and evaluation of data applicable to community-derived theories. The results of this process contribute to our knowledge of the world and are sufficient to naturalize the broader epistemological enterprise. Scientific methods, theorizing and research programs are not at issue for Quine. At issue are our metaphysical commitments and their effects on scientific theorizing and confirmation. These feminist philosophers of science agree with Quine on two points. The first point is that important information can and should be gleaned from a human subject's sensory apparatus, and secondly, that there are implicit commitments expressed in theories, hypotheses, and research programs. Feminist philosophers of science part ways with Quine in their critical stance about those implicit commitments, and in how these commitments shape theories, hypotheses and research programs.

According to Code, Quinean naturalized epistemology (QNE), "limits its promise" because of features that are "interconnected, mutually informative and yet separate."<sup>28</sup> One feature is a reductive scientism that gives an unexamined, privileged epistemic status to science in general, and psychology in particular; and the other is the recreation of "contestable representations of 'nature' both physical and human"<sup>29</sup> in laboratory settings and in theoretical explanations. Quine's claim is that humans, as objects of psychological study, are understood more thoroughly and successfully through scientific protocols for the qualitative study of the *individual* human subject. Quinean naturalism paints a picture of human subjects as solitary information processors: "the abstract individual who figures, implicitly, as the knower is one

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<sup>28</sup> Ibid., p. 2.

<sup>29</sup> Ibid.

such construct, a faceless, dispassionate, infinitely replicable ‘individual’ who knows only when he is successful in suppressing interdependence, affect, and meaning, and indeed all aspects of his individuality.”<sup>30</sup> The consequence of this picture of the human subject in Quinean naturalism plays out in two steps: first universality is extrapolated from innate biological and psychological qualities or processes of a human object of study, and secondly, the “individualism in its empirical-scientific psychology forms fails, indeed refuses, to individuate. Rather, it reduces and assimilates differences, both ‘natural’ and socio-political, under its universality and objectivity requirements; and in so doing it denatures the very natural kinds to which its best intuitions appeal.”<sup>31</sup>

Baier (1990) speaks more specifically to the second limitation Code discerns in Quinean naturalized epistemology. For her, a naturalist view is a “personalist view of nature” that emphasizes the interdependence of persons, allowing us—through written and spoken language— to be communicative and responsive to one another.<sup>32</sup> This view “takes our biological nature seriously...not as a handicap but as a source of strengths as well as weaknesses.”<sup>33</sup> A naturalist, Baier contends, must attend to our inclination for representing, or perhaps more importantly, *mis*representing anything of interest to ourselves, including our origins, our defining traits, our responsibilities, and limitations. The notion that we are singular selves, “free from our actual history” of dependency, biological limitations and mortality makes it easier to make claims of personhood and in this context, epistemic labor that are free from any “shared responsibilities, or equally shared burdens.”<sup>34</sup> These are just two criticisms—in broad

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<sup>30</sup> Ibid., p. 7.

<sup>31</sup> Ibid., p. 8.

<sup>32</sup> Annette Baier. “A Naturalist View of Persons.” In *Proceedings and Addresses of the American Philosophical Association*, 65: 3 (November 1991). p. 5.

<sup>33</sup> Ibid., p.10.

<sup>34</sup> Ibid., p.12.

strokes— of Quine’s naturalism. To provide more detail concerning the feminist critique, the next section will be a review of specific elements of Quine’s naturalism—his holism, non-dogmatic empiricism, anti-individualism, and anti-foundationalism— with which most of the aforementioned feminist philosophers of science are in agreement.

The starting point for this discussion is Quine’s holistic approach because it informs all the other elements of his naturalized epistemology. In *Who Knows: From Quine to a Feminist Empiricism* (1990), Nelson provides an account of Quine’s theory that she claims shares some accord with feminist concerns. Quine’s holistic approach is about “rubbing out boundaries,”<sup>35</sup> which Quine alludes to in the introduction to *Two Dogmas*: “One effect of abandoning [these dogmas] is ...a blurring of the *supposed* boundary between speculative metaphysics and natural science.”<sup>36</sup> One branch of his holistic approach is linguistic analysis. Language is, some ways, an implicit expression of our metaphysical commitments. Nelson asserts that for Quine it is impossible to discuss ontology without discussing theory, and theory is formulated in language. Ontological commitments are “always propounded in theorizing; they are not established, discovered or posited prior to that activity.” In making this claim, Quine takes a step away from the method of a non-naturalized epistemological theory that prioritizes individual, internal beliefs and the epistemic claims based on them, and confirms those beliefs and knowledge claims by means of reductive analysis of the smallest units of meaningful content. On his holistic understanding of language, it is the whole of a language that establishes meaningful content, not in words or sentences but in language itself. Claims are always confirmed holistically, given the ways in which theories already carry in them several metaphysical commitments. Fodor and

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<sup>35</sup> Lynn Hankinson Nelson. *Who Knows: From Quine to a Feminist Empiricism*. Philadelphia, PA: Temple University Press. 1990. p. 95.

<sup>36</sup> Quine, *Two Dogmas*, p. 20; emphasis added.

Lepore (1992) contend that Quine conflates his semantic holism with his epistemological holism such that what Quine means in saying that “the unit of empirical significance is the whole of science,” at bottom means “the unit of [any] significance is the whole belief system.” This interpretation is validated in “Things and Their Place in Theories” (1981), in which Quine describes the series of shifts in empiricism, from the semantic primacy of words, to the primacy of sentences that then gives way to primacy and analysis of “systems of sentences.” This shift is necessary for the “recognition that in a scientific theory even a whole sentence is too short to serve as an independent vehicle of empirical meaning.” Quine takes Duhem’s underdetermination thesis, which pertained specifically to confirmation of theories in physics, and extends it such that the confirmation of knowledge claims—common sense claims and scientific claims— must be attempted holistically by reference to several parts of the network of theories in use, rather than just one. A holistic understanding of science means “all sciences interlock to some extent.”<sup>37</sup> The whole of science is a network of theories that are assumed in language that explains experience at the everyday, common sense level, as well as at the level of scientific investigation: “total science, mathematical and natural and human, is similarly but more extremely underdetermined by experience.”<sup>38</sup> An important aspect of this holism lies in Quine’s insistence on the continuity of knowledge claims: scientific claims are formalized in a way common sense claims are not. However, because of their places within a network of belief, they are also equally subject to revision. As mentioned earlier, this holism shines through in the other elements of QNE.

Non-dogmatic empiricism is the second element of Quine’s naturalism to be considered. Quine’s charge is that the separation of epistemology from science is wrong. An epistemology

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<sup>37</sup> Ibid., pp. 70-71.

<sup>38</sup> Quine, “Two Dogmas”, p. 42.

that is taken to be autonomous, and conceptually first in relation to science, is not empirical, and therefore is not naturalistic. That is, non-naturalized epistemology ignores the behavioral and empirical aspects of the human subject by focusing on that which is outside or beyond experience and a deliberate discounting of other theories and constructs that we assume and use in language and science. Quine understands language to be a natural phenomenon that should be studied using the same scientific methods used to study and understand all other kinds of natural phenomena. As discussed in the previous chapter, Quine is critical of dogmatic empiricism that attempts to theorize about the human subject and her epistemic claims from a pre-theoretical, pre-experiential position. A non-dogmatic empiricism, as Quine holistically conceives it, is one that understands the nature of language and science as interdependent tools of scientific inquiry that help one theorize about experience, articulate hypotheses based on that experience, and collect and interpret data based on the metaphysical commitments implicit in the language used to theorize and hypothesize.

The third component of Quine's naturalism is his critical anti-individualism with regard to knowledge claims. Epistemology is not naturalized if it gives primacy to an individualistic account of knowledge that starts from the internal mental processes and ideas of individual, knowing subjects. Quine believes that beginning with the epistemological standards of an individual and extrapolating to a general set of epistemic norms has been a failed project. This can be extracted from Quine's discussion in "Facts of the Matter" (1978). One of the reasons he rejects an individualistic account of knowledge is because there is too much reliance on *ideas*. Ideas are "frail reeds" that language reinforces."<sup>39</sup> Words should therefore be the place to begin philosophical analysis. Some epistemologists have failed to recognize the essential role practice

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<sup>39</sup> W.V.O. Quine. "Facts of the Matter." *The Southwestern Journal of Philosophy*. Vol 9, 2. Summer 1978. p.155.



and use play in language and the articulation of theories, and the criteria used to evaluate those theories. What they miss is that epistemic labor is properly done at the level of communities that can rely on public scrutiny of knowledge claims and the community's criteria for judging them. Nelson (1990) notes "ontology is not what mainly matters" to Quine. It is theories that matter because they are 'artifacts of what we produce and use to bridge our experience and, as the scope of our theories becomes more general, to bridge other such bridges.'<sup>40</sup> Adding to this, his claim that theorizing is done collectively explains why Quine argues that what has empirical meaning is 'the whole of science' – including sense data and common sense. The collective use of language and its expression of the bridge between theories and experience qualify as activities in the pursuit of knowledge—regardless of the level at which it is practiced.

The last component is Quine's anti-foundationalism. The dogmatic epistemology that begins from the internal processes of individual subjects also errs in its commitment to foundationalist approaches to justification. These approaches claim, first, that there is a distinction between basic and non-basic beliefs, which is closely related to the notion of necessity and contingency as it pertains to justificatory processes. In building on a foundation of basic, *a priori* beliefs that are necessary and thus supposedly immune to skepticism, all beliefs, however far along on the chain of inferences they are located, can ultimately be traced back to those basic, *a priori* beliefs. Secondly, foundationalist approaches make a parallel move to reduce the unit of analysis and confirmation to individual words in sentences. Regardless of which aspects of those words or sentences are analyzed, consensus on meaning and conditions of truth or falsehood cannot be guaranteed. Attempts to analyze the building blocks of claims, observations and theories have failed. Quine's response is to argue for a broader view of what

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<sup>40</sup> Nelson. *Who Knows*. p. 108.

science and epistemology are: a singular phenomenon that operates within, and expresses the same commitment to, a network of theories concerning humanity and its connection with the world, and humanity's attempts to comprehend and explain it. This is a call for a holistic approach to confirmation that understands a theory as a network in which statements are nodes and the paths between the nodes are the relations between the statements. If any part of the theory changes, there is a corresponding change to the semantic meanings of all the statements in the system. Changes in the theory would be subject to a community's judgments that plausibly would take the entire network of beliefs into consideration in its judgments. My objective in the next section is to talk about responses to Quine's naturalized epistemology, with emphasis on the aforementioned elements.

### **Critical Feminist Responses to Quine**

*In Feminism and Philosophy of Science: An introduction* (2006), Potter marks out the feminist critique in four distinct categories: naturalized feminist empiricism, the cooperative model of theory justification, feminist contextual empiricism, and standpoint theory. I will consolidate the discussion of the naturalized and contextual empiricisms for the most part, because they align themselves in important ways with Quine's empiricism and naturalism. The works of Harding (1986), Longino (1989), Nelson (1990), and Solomon (2001) support Quine's steadfast commitment to non-dogmatic empiricism. Nelson contends that her fundamental goal is to "reopen or redirect a discussion of scientists and the feminist philosophers of science about the nature of science."<sup>41</sup> Nelson's goal points to a broader claim made by feminist philosophers of science. It has been assumed in both science and philosophy of science that when "social

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<sup>41</sup> Ibid., p. 1.

values and interests (understood as biases) enter the laboratory, they enter scientific research in itself, and the result is bad science.”<sup>42</sup> Feminist scientists and philosophers of science would agree that this is *sometimes* the case, but they would certainly question whether it is *always* the case. Therefore, Potter observes, “no one is well served by philosophies of science that make it impossible to find out.”<sup>43</sup> Giving a feminist account of the impact of social values and interests on scientific inquiry begins with the feminist empiricists. Potter’s take is that feminist empiricists have accepted a consequence of Quine’s holism and empiricism that is important to their own feminist theories: there are simply no “pre-theoretic” observations. Rather, all observational experience in scientific settings itself rests on theoretical accounts supported in turn by data acquired in a variety of biological sciences including neurobiology, developmental biology, and neuropsychology.<sup>44</sup> Another point on which they agree with Quine is the denial of epistemic individualism- understood by feminist philosophers as the general picture in which autonomous individuals can produce knowledge promulgated and maintained by groups, or by communities of people as illustrated by practices such as peer-review and replication.<sup>45</sup> There is consensus about communities in which individuals are situated as the primary vessels of knowledge, but there is no consensus on what it means to say that epistemic communities are the primary vessels of knowledge. Feminist philosophers of science are also in accord about the idea that individuals “tacitly hold the explicit beliefs of their communities.”<sup>46</sup> Proposed remedies would find and highlight those values. The “remedies” include 1) an attempt to balance naturalizing and normative considerations; closely related to 2) a critical analysis of the relationship between

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<sup>42</sup> Ibid., p. 7.

<sup>43</sup> Ibid.

<sup>44</sup> Ibid., pp. 7-8.

<sup>45</sup> Ibid. p. 12.

<sup>46</sup> Ibid. p.13.

science and values, and 3) the nature of objectivity and how to achieve it, 4) acceptance of pluralistic theories and explanations, 5) recognition of the effects of underdetermination on theories and explanations, 6) how best to characterize the agents of knowledge, and finally, given the aforementioned remedies, 7) offer ways to respond to the problem of epistemological relativism. Feminist philosophers of science aim to determine whether and how social values and interests “enter the ‘content’ of good scientific work, what is termed ‘the context of justification.’”<sup>47</sup> To clarify, Reichenbach’s distinction between context of discovery and context of justification was a way of addressing “irrational guessing” and other elements of scientific inductive method by which theories are conceived. Context of discovery includes the “actual circumstances under which a hypothesis or model is conceived, and personal, commercial, and social values and interests at play.”<sup>48</sup> Context of justification includes work confirming or disconfirming a hypothesis, or a model, or any work carried out in accordance with the best relevant methods. Reichenbach notes, “The act of discovery escapes logical analysis” [but] “the logician’s task is to account for scientific discoveries; all he can do is to analyze the relation between given facts and a theory presented. Logic is concerned only with the context of justification. And the justification of a theory in terms of observable data is the subject of the theory of induction.”<sup>49</sup> With Potter, several other feminist empiricists maintain this distinction as a valid one; including Longino (1989), and Solomon (2001).

Nelson’s critique of dogmatic empiricism builds on Quine’s version of non-dogmatic empiricism. Nelson asserts that for many feminist scholars, empiricism is “an inherently flawed doctrine that underwrites an erroneous view of the world of evidence, and theory formation.”<sup>50</sup>

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<sup>47</sup> Ibid. pp. 7-9.

<sup>48</sup> Ibid.

<sup>49</sup> Hans Reichenbach. *The Rise of Scientific Philosophy*. Berkeley: University of California Press. 1951, p. 231.

<sup>50</sup> Nelson. *Who Knows*. p.4.

Feminist science criticism of empiricism has developed outside of the arena of Western scientific practice for decades. It might be said that this is the reason why the wider scientific community is indifferent to feminist science criticism. It seems disingenuous, however, to assume this is the only reason for the indifference. Given the commitments to empiricist tenets and empiricist accounts that dominate science, the scientific community deem the feminist critique a “category mistake.”<sup>51</sup> The community’s indifference can more forthrightly be attributed to the “assumption that feminist criticism has few or no implications for the soundness of our current understandings of science or current scientific practice.”<sup>52</sup> Nelson’s claim is that while feminist criticisms have been characterized as anti-empiricist, they are not inevitably non-empirical. The call for empiricism to be discarded as a foundational tenet of science is unwarranted. What is necessary is that work should be done to incorporate feminist criticisms of science, which would include incorporating values into the practice. She admits that “the science we should work to bring about will be different from the conception many scientists and philosophers have about science, and it will be different from science as it is actually practiced, just as these are already different from one another.”<sup>53</sup>

For Nelson, there is no viable alternative to a theory of evidence based on something other than empiricism. The only viable option is a feminist empiricism whose view of science can both account for the success of science in explaining and predicting experience, and encompass feminist insights into the relationships between sex/gender, politics and science. What this means, first, is that the “new” feminist science will incorporate values, and not deny when they are incorporated: “The infusion of values will be self-conscious and subject to critical

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<sup>51</sup> Ibid., pp. 4-5.

<sup>52</sup> Ibid., p. 5.

<sup>53</sup> Ibid.

scrutiny.”<sup>54</sup> Secondly, this work is already presaged in the work feminist philosophers of science have done and are currently doing. Nelson asserts that the feminist critique challenges what we think science is by criticizing current science and leads to a conception of science as it should be. Feminist empiricism is a view of science that can account for the success of science in explaining and predicting experience and encompass feminist insights into the relationships between sex/gender, politics and science. This makes it “a viable and powerful option.”<sup>55</sup>

Nelson’s defense of empiricism is important because it is of a particular implication of Quine’s holism with which she disagrees. Nelson provides a brief discussion of Quine’s consideration of values and science in a section entitled “A Remaining Boundary.”<sup>56</sup> She notes that although Quine was interested in “rubbing out boundaries” (i.e., boundaries between epistemology and science) he is was less willing to take on values in a scientific context for a couple of reasons. One reason is that Quine states values are social (like language) but “derivatively so for they are probably grounded in natural selection and inherited by individuals.”<sup>57</sup> Values, if indeed they are the product of natural selection, would imply that they are “uncontroversial” and thus good because they have aided in survival, and “they meet the common needs of society, and of humankind.”<sup>58</sup> Secondly, values can be incorporated into science only as a matter of discovering scientific explanations for the origins of moral values. However, because there are no agreed upon criteria by which to judge values in terms of empirical content, science should remain removed from value judgments. Nelson writes, “a view clearly implied by Quine...[is] that...there is no judging [values] in the way that scientific claims

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<sup>54</sup> Ibid., p. 9.

<sup>55</sup> Ibid.

<sup>56</sup> Ibid., p. 130.

<sup>57</sup> Ibid., p. 132.

<sup>58</sup> Ibid., p. 133.

can be judged and adjudicated by reference to evidence.”<sup>59</sup> Because there is no empirical content to values, they lie beyond the work and scope of science. Quine’s reluctance in removing the boundary between science and values is problematic because, Nelson argues, science must involve itself in the “business of explaining values because to make a claim about values as products of evolutionary processes implies “any” moral values could be justified, requires that we be very “self-conscious” about our explanations. Quine’s position is also problematic because it is contradictory to say science could explain the origins of values and still claim that it stands aloof from values. Ultimately, Nelson supports “the spirit of Quine’s use of science, of the knowledge we acquire about how things are being brought to bear on moral, social, and political values.”<sup>60</sup> However, we must tread carefully since that which is “brought to bear” on values is evidence. Nelson bases her evidence model on what she calls “a feminist account of evidence” that uses community-produced standards and methods that evaluate evidence. A detailed discussion of this account of evidence will be included in the next section.

Nelson (1990), Longino (1989), and Solomon (2001) would agree that a *naturalized* feminist philosophy of science should first, be commensurable with actual historical and contemporary practice of science. This would mean that it would also be subject to “empirical adequacy and conform to a rich body of evidence and/or have a scope or range of applications.”<sup>61</sup> Secondly, it should be grounded in sciences relevant to theories of theorizing, e.g. empirical psychology, social psychology, cognitive science, evolutionary biology, and/or sociology; and finally, the methodological principles used should be consistent in order to “explain consensus and dissent”, and “progressive and less progressive episodes in science.”

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<sup>59</sup> Ibid., pp. 131-133.

<sup>60</sup> Ibid., p. 133.

<sup>61</sup> Potter, *Feminism and Philosophy of Science*. p.32.

Nelson contends “philosophers of science attending to the practice of feminist and non-feminist scientists and to results in feminist as well as mainstream science scholarship satisfy these criteria “better than those who do not.”<sup>62</sup> In “Empiricism Without Dogmas” (1996), Nelson argues for a more naturalized philosophy of science that is distinct from traditional epistemology in both its core research questions and its goals. The methodology of this naturalized philosophy of science is constituted by a theory of evidence—what Nelson calls a “feminist account of evidence” (FAE) that holistically includes claims and theories informed by social beliefs and values in its interpretations of evidence.<sup>63</sup> “It is science communities rather than scientists qua individuals that are the appropriate loci of philosophical reconstructions and explanations of scientific practice. A broader implication of holism is that naturalized philosophy of science is a normative and not simply a descriptive enterprise.”<sup>64</sup> Nelson’s theory begins with Quine’s conclusions that there is no distinction between theory and observations, and no *a priori* foundations of knowledge. With Quine, Nelson claims that evidence is the “final arbiter of our theories”:

The evidence supporting a specific theory, hypothesis, or research program is constituted by observation, itself largely structured as current theories would have it, and other theories that together constitute a current theory of nature, inclusive of those informed by social beliefs and values.<sup>65</sup>

Thus, FAE claims that evidence is established by both observations and other theories that are also supported by scientific evidence and other scientific theories. Nelson’s FAE, Potter claims, distinguishes Nelson’s empiricism from other feminist empiricisms because other empiricisms would hesitate to accept the broad notion of evidence entailed by FAE, since empirical data are

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<sup>62</sup> Ibid., pp.32-33.

<sup>63</sup> Lynn Hankinson Nelson, “Empiricism Without Dogmas.” In *Feminism, Science and the Philosophy of Science*. Dordrecht: Kluwer Academic Publishers. 1996. pp. 95.

<sup>64</sup> Ibid.

<sup>65</sup> Ibid., p. 100.



“held to be independent of any theories” to avoid begging the question.<sup>66</sup> FAE also distinguishes itself from Quine’s holistic approach if we recall that Quine argues that a network of theories encompasses all of our theories, common sense, philosophical and scientific. Potter reads Nelson’s theory of evidence as continuing to uphold the norms of non-feminist science that distinguish between good and bad science by leaving intact values such as empirical adequacy, explanatory power and predictive power.”<sup>67</sup> Nelson, however, maintains the “normative import” of her model disavows the old understanding of those norms on two levels:

- 1) These principles, implicit or explicit, constitute norms for practitioners of philosophy of science: “prescribing and...circumscribing, the questions and consideration legitimately pursued and emphasized in the practice.”
- 2) These principles “shape philosophical explanations and the criteria that function in philosophical evaluations of that practice.”<sup>68</sup>

Maintaining normative import has contributed to a revitalized view of science such that “feminist scientists and science scholars have identified a wide range of cases in which social processes, internal and external to science, and social beliefs and/or values have been at work in cases [and nevertheless] taken to constitute good science.”<sup>69</sup> Theories put forth by Nelson and Longino share the following aspects: they advocate non-dogmatic empiricism, anti-individualism, and reliance on confirmation holism. Similarly, they both reject some of the traditional values of non-naturalized philosophy of science and favor the installation of new epistemological values that articulate the continuity of social and rational accounts of knowledge and entail redefined notions of knowledge and objectivity.

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<sup>66</sup> Potter, *Feminism and Philosophy of Science*. p. 34.

<sup>67</sup> Ibid.

<sup>68</sup> Nelson, “Empiricism Without Dogmas,” p. 96.

<sup>69</sup> Ibid.

Nelson's emphasis on the normative import of naturalized epistemology is reiterated in Longino's articulation of the motives for feminist epistemology of science. Two dimensions of importance were discussed at the outset of this chapter: the "demonstration of masculine bias ...that grounds "philosophical analyses of objectivity, reason, knowledge and rationality," and the constructive "carving out a space for specifically feminist programs of inquiry, identifying or defending epistemic guidelines of feminist inquiry."<sup>70</sup> These include feminist standpoint theory, feminist empiricism, and feminist forms of pragmatism.<sup>71</sup> This pluralistic position is essential for several reasons of which I highlight two. Pluralism is the ground of Longino's argument for the analysis of theoretical values in inquiry she calls a "contextualist" account of objectivity by which theories and models are justified by a set of community standards grounded in the agreement of that community, which also sets the cognitive goals for inquiry. Pluralism is also an important element of Longino's rejection of the monism in scientific practice that assumes the aim of science is to produce a unified account of the natural world, and that the ultimate success of science consists in producing that account. These, in turn, rest on two further assumptions: first, that all models and theories scientists produce can be unified into one set of theories (such as the Grand Theory of Everything), and second, that the models and theories produced can completely describe all the processes in a way that represents nature.<sup>72</sup>

For Longino, a good epistemology and, by extension, a good philosophy of science, both set out the practical conditions that must be satisfied to classify something as knowledge, and describe what knowledge seekers do. Potter categorizes Longino, like other feminist empiricists, as attempting to naturalize epistemology and philosophy of science by "giving accounts of

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<sup>70</sup> Longino and Lennon "Local Epistemology," p. 20.

<sup>71</sup> Ibid.

<sup>72</sup> Potter, *Feminism and Philosophy of Science*. p. 111.

knowledge in general and scientific knowledge in particular based closely on what scientists and other knowers *actually do* when they produce and transmit knowledge.”<sup>73</sup> Knowledge is social, guided by social norms, and therefore Longino also assumes there are no pre-theoretical observations or theories, and importantly, that “philosophy should be both normative and empirical,” disputing the dichotomy drawn between social and rational accounts of knowledge.<sup>74</sup> Removing the dichotomy highlights the continuity between values and interests, and knowledge, supports the idea “that scientific knowledge is produced through practices carried out primarily by communities working with background assumptions.”<sup>75</sup> Longino is not aiming to prescribe *one* theoretical model but rather an overlapping set of theoretical models, each with its cognitive goals, which would not privilege any specific perspective. This is just one implication of Longino’s denial of individualistic conceptions of theory production or confirmation. There are two different ways this anti-individualism is articulated. The social/communal aspect of Longino’s theory argues that benchmarks set by a community (or communities, depending on the scope of the research program) aid in the development of cognitive goals and criteria for evaluating theories. Furthermore, Longino argues “the under-determination argument necessitates a move away from individualism in philosophy of science and epistemology: “in light of the gap between hypotheses and the statements describing data, the statements acquire evidential relevance for hypotheses only in light of the background assumptions. Justificatory practices must include not only the testing of hypotheses against data but the subjection of background assumptions to criticism from a variety of perspectives.”<sup>76</sup>

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<sup>73</sup> Ibid., p. 97; emphasis added.

<sup>74</sup> Potter, *Feminism and Philosophy of Science*. p. 98, quoting Helen E. Longino, *The Fate of Knowledge*. 2002; p.10

<sup>75</sup> Ibid.

<sup>76</sup> Longino and Lennon, “Local Epistemology.” p. 28.

Longino, with Nelson, also relies on non-dogmatic empirical methods of scientific inquiry, while advancing feminist theoretical values in inquiry, theories, models and hypotheses that have “empirical adequacy (common to all researchers), novelty, ontological heterogeneity, complexity or mutuality of interaction, applicability to human needs and decentralization of power or universal empowerment.”<sup>77</sup> I want to emphasize two particular values here that are necessary for both the critical and constructive dimensions of feminist epistemologies. Just as importantly, these two values make it possible for the other values to be considered. One value is novelty, which Longino describes as a value of frameworks of understanding that “protect against an unconscious perpetuation of the sexism and androcentrism of traditional theorizing.”<sup>78</sup> Novelty would aid in the discovery of “salient aspects of experience or reality hidden or marginalized by presently accepted theory.”<sup>79</sup> The other value that stands out is “ontological heterogeneity,” by which differences in phenomena are prioritized along with similarities. Non-naturalistic theoretical models favor and encourage uniform specimens with a view toward generalization, but this uniformity misses important differences. Consequently, “the male of a species is taken as paradigmatic for the species” or that males are “the only causally effective agents in a population.” “Heterogeneity is thus opposed to ontological simplicity and the associated...virtue of unification.”<sup>80</sup> The institution of these values, along with the others previously enumerated, point to the increased possibility of achieving the cognitive goal of feminist researchers: to reveal the operation of gender, “by making visible both the activities of

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<sup>77</sup> Ibid., p. 21.

<sup>78</sup> Ibid., p. 22.

<sup>79</sup> Ibid.

<sup>80</sup> Ibid.

those gendered female and the processes whereby they are made invisible, and by identifying the mechanisms whereby female gendered agents are subordinated.”<sup>81</sup>

Longino contends that these values tell us something about the prospects for a normative feminist epistemology based on them. In the first place, while most (but not all) feminists endorse these values, their subordination to a “broader cognitive goal means that they are not in and of themselves feminist theoretical values. They have no intrinsic standing as feminist theoretical virtues but only a provisional one ... consequently, whilst these values promote the goal of revealing gender, they can serve the norms of feminist inquiry.”<sup>82</sup> Secondly, the normative claim of these values is also limited to the community that shares the primary goal: “On those who do not share it, these values have no claim.”<sup>83</sup> Longino refers to this as a “local” scope that emphasizes “the provisionality and locality of alternative virtues, which contrasts with traditional values which, as (purely) epistemic are represented as universally binding.”<sup>84</sup> Thus, traditional values of “domination and control” are missing in her conception of “local” epistemology.<sup>85</sup>

Like Nelson, Longino prefers a method of confirmation that does not rely on rational reconstructions of scientific practice, and argues that evidence for hypotheses, models, and theories is not definitive but “always depends on one’s background beliefs and assumptions.”<sup>86</sup> Longino argues, as a strong proponent for the importance of underdetermination in any consideration of evidence, that “hypotheses, models and theories are logically underdetermined by the evidence/data used to support them.” Thus, a set of observations can provide evidence for

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<sup>81</sup> Ibid., p. 26.

<sup>82</sup> Ibid., p.27.

<sup>83</sup> Ibid., p. 28.

<sup>84</sup> Ibid.

<sup>85</sup> Ibid.

<sup>86</sup> Potter, *Feminism and Philosophy of Science*. p. 117.

several different, and at times, conflicting hypotheses.<sup>87</sup> Underdetermination is an important component of the holistic approach feminist epistemologists and philosophers of science advocate. This holism justifies the use of a wide range of empirical science. Making use of empirical data from other disciplines aid in providing a representation of the world we live in that is more accurate in light of values and interests under which that representation is forged. I now turn to Alison Wylie’s consilience model of confirmation that has a different take on what confirmation holism contributes to a robust empiricism that acknowledges background assumptions in both theorizing and confirmation.

Alison Wylie’s consilience model of confirmation and Nelson’s naturalized feminist empiricism are both holistic and empirical in that they both argue that evidence depends on scientific communities—as creators of observations and theories—as producers and maintainers of knowledge. The standards and methods of science, on which these observations and theories depend, shift and change over time. Wylie’s notion of evidence garnered through her work and experience in archeology and the basic claims she makes based on that work points to what she sees as a less relativistic model for confirmation than Nelson’s. Archeologists begin inquiries with a range of assumptions about people that include assumptions they make about themselves. They then “use evidence from an enormously diverse range of natural and social sciences and different lines of evidence that mutually constrain a hypothesis when they converge or fail to converge on a coherent account of a particular past context.”<sup>88</sup> Wylie argues this type of confirmation model results in a “mitigated objectivity” that avoids both extreme epistemological relativism<sup>89</sup> and the problematic circularity of Nelson’s FAE.

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<sup>87</sup> Ibid.

<sup>88</sup> Ibid.

<sup>89</sup> Ibid.

The consilience model of confirmation assumes that knowledge can be achieved through the agreement among different academic disciplines, in their approaches especially the agreement cuts across the boundary between the sciences and the humanities. Wylie’s own experience in the field of archeology provides a good case study, since archeology is a hybrid science that exemplifies the desired agreement between science and the humanities. It uses specialized tools of the physical sciences, e.g. carbon dating, and life sciences, such as paleobiology, paleo-botany and paleoenvironmental sciences, and evidence from the social sciences. Wylie states that a primary concern in archeology has been the problem that arises from an assumption taken as given in feminist philosophy of science, the theory-ladenness of the evidence archeologists find. Wylie begins to build what she takes as an important element of the consilience model of confirmation—namely, a way of relying on knowledge and evidence from other disciplines without committing oneself to a vicious circularity. This method is referred to as “tacking.” According to anthropologist Clifford Geertz, tacking means taking “‘experience-distant’ concepts from [one’s] own culture and using them to try to understand the ‘experience-near’ concepts of the people [one] studies.”<sup>90</sup> Ethnographers make use of the “distant concepts—theoretical, abstract concepts—from [one’s] own culture and then tack back and forth between them and the subjects’ experience-near concepts—concrete, experience-embedded concepts.”<sup>91</sup> This tacking of one’s own experiences toward abstract and concrete concepts, is really two different kinds of tacking. There is vertical tacking from the researcher to the subjects: researchers apply concepts across contexts— “abstract to concrete, familiar to alien.” The other kind is horizontal tacking, in which theoretical concepts are applied from within the context of

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<sup>90</sup> Ibid., p. 60.

<sup>91</sup> Ibid.

the subjects being studied.<sup>92</sup> Thus, ethnographers begin with their own practical knowledge, as well as general theories about human motivations, beliefs and capabilities. Potter states that Wylie's mitigated objectivity depends on taking the hypotheses and theories offered by archeologists and testing them "against evidence that ethnographers have grasped the meaning of their subjects' practices."<sup>93</sup>

Actual archeological practices provide Wylie with an empirically adequate model of confirmation. 'Tacking' practices provide evidence that researchers' experience-near and experience-distant concepts are used as starting points for theorizing about their findings. To avoid claims of relativism, however, Wylie must then show how empirical evidence is used to confirm theories based on evidence gathered from contemporary peoples, which is then applied to archeological sites.<sup>94</sup> In practice, archeologists challenge theories and interpretations of evidence by providing evidence or additional background knowledge that either supports or casts doubt on a particular theory or interpretation. In this way, archeologists judge each other's claims and, rather than leading to disagreement and relativism in archeological theory, Wylie finds many points of agreement among archeologists including the idea that data and evidence are neither stable nor independent of theory; that identification of archeological data and their constitution as evidence are based on linkage principles (represented by the tacking concepts); and that archeological data and evidence are interpretive constructs without being viciously circular.<sup>95</sup> She believes this is possible because even though evidence must be theory-laden in order to be considered evidence at all, archeological hypotheses are constrained by what Wylie refers to as "mitigated objectivism" or modern scientific realism, which Wylie takes as "crucial

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<sup>92</sup> Ibid.

<sup>93</sup> Ibid., p. 61.

<sup>94</sup> Ibid., p. 63.

<sup>95</sup> Ibid.



to archeological practice.” Mitigated objectivity constrains the credibility of claims about evidence presented such that “while judgments [about theoretical claims or confirmation of evidence] aren’t certain, they aren’t arbitrary either.”<sup>96</sup> What this means is that objectivity is achieved when the theories used, infused with the tacking of researchers, nevertheless are judged “secure” and “epistemically independent.” Security is understood in two senses:

Security<sub>1</sub>: The background knowledge used to link the present record (data) with antecedent causes or past events must be credible in its home context.

Security<sub>2</sub>: The inferences supported by this background knowledge are secure to the degree to which the links between the present record (data) and antecedent causes or past events (background assumptions) are unique or deterministic, and to the degree to which the argument chains are relatively short and simple.”<sup>97</sup>

Likewise, epistemic independence has two senses:

Epistemic Independence<sub>1</sub>: Background assumptions used to establish the evidence, must be vertically independent of the hypothesis being tested; and

Epistemic Independence<sub>2</sub>: Background assumptions (linking principles) derived from one or more different sources used to establish the evidential import of archeological data must be horizontally independent of one another<sup>98</sup>

Any claim, any background assumption, and any theoretical model proffered must meet these constraints. What seems to be absent in the discussion is any consideration of its categorization as a specifically feminist theory. What makes this a particularly feminist perspective is made more evident by her response (1992) to charges from other North American archeologists concerning a lack of objectivity in the practice of archeology generally and in particular, archeological research that focuses on women and gender as subjects of study. The worry is that background assumptions and conceptual tacking imperil the neutrality of scientific practice with what might be considered “explicitly political (feminist) commitments,” since this might result in

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<sup>96</sup> Ibid., p. 64.

<sup>97</sup> Ibid., p. 65.

<sup>98</sup> Ibid., p. 66.

a standpoint that I specific and partial. Wylie’s take is that “a feminist perspective, *among other critical, explicitly political perspectives*, may well enhance conceptual integrity and empirical adequacy of knowledge claims.”<sup>99</sup> Wylie believes that “explicitly political feminist thinking” has undoubtedly contributed to increased attention to gender or willingness to advocate for research programs about gender. However, this influence, Wylie notes, is most likely indirect. That is to say, feminist critiques of discourse and practice in scientific disciplines would likely make one aware of or at least sympathetic to women’s issues in both abstract “experience-distant” concepts, and “experience-near” concepts that in turn become the background knowledge a researcher brings to the research and the data. Even if feminist-inspired background assumptions are utilized, as long as the theories offered can be proven secure and independent in every sense previously noted, they would not be considered biases that distort theories and confirmation (and consequently make for bad science). For Wylie, this is made evident in “feminist-inspired research across the social and life sciences [that] has provided strong, substantive grounds for questioning the ‘self-cleansing’ capacity of scientific method,” partly motivated by the Reichenbach distinction, and “identified myriad instances of gender bias that have persisted” in both “bad” and “good” science.<sup>100</sup>

In epistemologies presented by Nelson, Longino, and Wylie, the elements of what Quine deems necessary to a naturalized epistemology have been considered. These epistemologists found ways to take these important Quinean elements—holism, and its influence on the definitions of anti-individualism, anti-foundationalism and non-dogmatic empiricism— and use them to make clear how it is gender influences conceptions of knowledge and how we evaluate

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<sup>99</sup> Alison Wylie, “The Interplay of Evidential Constraints and Political Interests: Recent Archeological Research on Gender,” *American Antiquity*. 57 (1), 1992: p. 15; emphasis added.

<sup>100</sup> *Ibid.*, p. 19.

knowledge claims as they pertain to epistemological and scientific practices. Just as importantly, they have called much-needed attention to the ways in which women and people of color have been excluded from scientific inquiry, and the necessity for informed, feminist critiques of theories and “objective” findings that reflect distorted claims and interpretations of empirical data that had gone unquestioned. Nelson, Longino, and Wylie have offered differing accounts not only of how to overcome these distorted claims and interpretations, but how to devise new models that acknowledge values and interests such that they can contribute to good science. Feminist epistemologists and philosophers of science disagree with Quine in ways mentioned earlier: his scientism gives epistemic privilege to science and psychology, which leads to an unquestioned faith in scientists’ ability to recreate physical and human natures in laboratory settings. In analyzing these weaknesses, it becomes apparent that Quine’s naturalism continues to lack a proper view of the human subject, as well as the communities in which the subject is embedded. As Baier (1991) has argued, a persistent conception of the individual as freed from “actual history of dependency, biological limitations and mortality,” in turn defines epistemic labor as free from “shared responsibilities, or equally shared burdens.”<sup>101</sup> Nelson (1990) contends that engaging with Quine’s critique of the Hempel/Nagel tradition of empiricist philosophy of science helped her recognize that sociological accounts of science “raise serious questions about the adequacy of viewing science as a body of theories [that focus], to the exclusion of broader considerations, on the logic of justification.”<sup>102</sup>

My objective has been to consider feminist responses to Quine and his attempt to naturalize epistemology. The assumption is that the pursuit of knowledge is a holistic matter. For most of the feminist epistemologists, any naturalistic account of science must challenge

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<sup>101</sup> Baier, “A Naturalist View of Persons,” p. 5.

<sup>102</sup> Nelson, *Who Knows*, p. 10.

boundaries between science and epistemology and the implicit methodological and sociological assumptions and biases that invariably make their way into theories and models of explanation, and the values that underlie them. Quine provides some promising avenues for feminist philosophers of science, but at bottom, Quine is not interested in the intersection of science and values. In his disregard to this particular issue, feminist philosophers of science find the greatest limitation of his theory. To ignore the values at work in the theories and practices of traditional, non-naturalized science would remove much of what motivated the feminist critique in its earliest stages and so much of the work that has ensued in the last four decades. Many feminist philosophers of science—with the possible exception of Nelson—read Quine’s unwillingness to engage with the issues that arise with values and with scientific inquiry as a basic reason for throwing Quine back into the “mainstream” of non-naturalized epistemology from which Quine was intent on disassociating himself.

Critical feminist epistemologists were motivated initially to accept QNE as a positive move toward a more naturalistic production of knowledge and scientific inquiry. They expected this naturalistic move to provide a theoretical space to address concerns regarding androcentrism in epistemological endeavors. As I have shown, critical feminist theorists approved of the move from the “idealized abstraction” of non-naturalized and non-feminist epistemologies to theories that constructively and critically engage with “everyday cognitive activities.”<sup>103</sup> This positive view began to change with time and consideration of those elements of QNE that run counter to the commitments feminists argue are necessary for a truly naturalized epistemology. These would include an account of science as it actually is practiced and importantly, and acknowledgement of social and cultural values and interests in both the social account of

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<sup>103</sup> Nelson, “What is Natural about Epistemology Naturalized?” p. 1.

scientific practice and the epistemological account of science. It would also require a pluralistic approach to both the accumulation of data as well as construction of explanatory models, hypotheses and theories used to explain the data. Finally, a naturalistic account and approach would retain the normative import of these commitments to the practices of scientific inquiry, epistemology and philosophies of science, since the feminist critique is informed by a common set of political goals. In the chapter that follows, the discussion of the critical feminist response continues with an account of feminist standpoint epistemologies with the aim of distinguishing Sandra Harding's feminist standpoint epistemology (FSE) as a particular version of standpoint theory that I claim provides the best course towards a critical, naturalistic philosophy of science that can serve as model for a more robustly naturalistic epistemology that is critical and self-reflective.

## CHAPTER 3:

### Standpoint Epistemologies

#### **Introduction**

The focus of this chapter is Sandra Harding's feminist standpoint epistemology (FSE) and its place in the category of feminist responses to Quinean Naturalized Epistemology and other non-feminist epistemologies. Ultimately, I am attempting to position Harding's FSE as a candidate for the project of naturalizing epistemology. I do not mean to say that FSE would serve as a singular approach, but rather part of a pluralistic one that would be revised. In the previous chapter, I gave a broad overview of the feminist response to Quine and set a specific boundary on this overview by focusing on those feminist epistemologies commonly held in the literature as exemplars of the feminist critiques of science and philosophies of science. In locating feminist empiricism, the consilience model, and local epistemology within that range, I did not include the post-modern critique put forth by feminist scholars such as Donna Haraway. This omission can be attributed partly to my reliance on Elizabeth Potter's book, *Feminism and Philosophy of Science: An Introduction* (2006), in which she categorizes some of the feminist critiques as generally promoting the notion that the introduction of social values and interests *can* result in bad science. These feminist scholars hold fast to the idea that it is "possible to determine whether and how social values and interests enter the 'content' of good scientific work."<sup>1</sup> Good scientific

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<sup>1</sup> Potter, *Feminism and Philosophy of Science*, p. 7.

work that recognizes social values and interests as a part of good science is what Potter assumes defines naturalistic theory. Potter borrows from Nelson three criteria for naturalized epistemologies that should: 1. Reflect the history and practice of science and, importantly, 2. Be subject to the same criteria as the sciences, and “grounded in sciences relevant to theories of theorizing,” and 3. Use consistent principles by which to explain both consensus and dissent, and progressive and less progressive episodes in science.<sup>2</sup> By virtue of these criteria, the feminist critiques discussed in the previous chapter, as well as Harding’s FSE, are considered naturalized epistemologies. What makes Potter’s account relevant to my project is that, as she explains in the introductory remarks of *Feminism and Philosophy of Science*, the order of the feminist critiques in the book are arranged by how naturalized and how normative the critiques are. These discussions include accounts of the different views toward issues such as justification, values and objectivity, underdetermination and pluralism, among other topics. Potter places Harding’s FSE at the end of the list in virtue of its status, by Potter’s lights, as the least naturalized feminist epistemology and least normative. Furthermore, Potter does not include the postmodern feminist response because she does not believe it meets the aforementioned criteria. By way of contrast, Harding makes it clear in her writings that the postmodern feminist critics, most notably Donna Haraway, make an important contribution to Harding’s FSE, and to the epistemology project in general. As a postmodern feminist, Haraway is skeptical of feminist projects that do not question or attempt the disruption of, what she takes to be fundamental aspects of the western, androcentric scientific endeavor. Specifically, Haraway rejects feminist critiques or proclaimed successor projects because they continue to incorporate gendered and humanistic features of the scientific enterprise at issue. Haraway has been consistently critical of modern humanism,

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<sup>2</sup> Ibid., pp. 5-6.

characterizing it as a subjugating force that find its source in man's narcissism. From her perspective, disembodied scientific objectivity has fostered scientific practice that is misogynistic, racist, and speciesist. As she articulates in "Situated Knowledges" (1988), scientific inquiry turns everything it studies into "passive and inert things."<sup>3</sup> Her critical view of humanism undergirds her challenges to the origins of biological theory and the language employed in it, as she argues in "In the Beginning Was the Word: The Genesis of Biological Theory" (1981): "Biology is the science of life, conceived and authored by a word from the father. Feminists have inherited knowledge through the paternal line."<sup>4</sup> Therefore, it seems that most attempts at feminist science are doomed to complicity or cooptation. Harding's perspective is not so dark. In both *The Science Question*, and *The Feminist Standpoint Reader*, Harding acknowledges that it is useful to see standpoint epistemologies as "'successor science' projects ... [since] they aim to *reconstruct* the original goals of modern science."<sup>5</sup> Harding makes clear that feminist postmodernism more directly challenges those goals in a way that Harding finds indispensable, even as it is, in some important ways, at odds with her own project.

From Haraway's perspective, feminists must argue for a theory of representation that attempts to avoid both the exclusion of women from the scientific process and the disorder that may result from the rejection of common representations or metaphors used in biological or scientific explanation. As a result, skepticism about non-feminist epistemologies and the universalized knower they posit becomes necessary to the feminist project. Haraway describes the projects of Harding and others as merely responding to how "the life and human sciences

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<sup>3</sup> Donna Haraway. "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," *Feminist Studies*, Vol. 14, No. 3. (Autumn, 1988), p. 592. Hereafter "Situated Knowledges."

<sup>4</sup> Donna Haraway, "In the Beginning Was the Word: The Genesis of Biological Theory," *Signs: Journal of Women in Culture and Society* 6 (3), p.470. Hereafter "In the Beginning."

<sup>5</sup> Sandra Harding. *The Science Question In Feminism*. Ithaca, NY: Cornell University Press.1986. p.142; emphasis added.



have been obscured by the position of the knowers--on top,"<sup>6</sup> and ignoring the ways in which "naming a thing is the power of objectifying."<sup>7</sup> With this remark, Haraway expresses her concern for any project that attempts to name or rename objects of study and the epistemic products that result, since these would repeat the objectification and creation of erroneous dichotomies already set forth by traditional science. Haraway does not find these approaches convincing, although she recognizes their value.<sup>8</sup> She takes any of these successor projects to be another instance of a humanist project and therefore, "all of the epistemological and political problems of humanism and realism are latent--or patent--here."<sup>9</sup> As indication of the clear-eyed perspective with which most feminist scholars view their projects, however latently humanist or realist they may be, I take note first of Lorraine Code, writing in "Taking Subjectivity Into Account"(1993), "[T]he project of remapping the epistemic terrain...is subversive, even anarchistic, in challenging and seeking to displace some of the most sacred principles of standard Anglo-American epistemologies."<sup>10</sup> Secondly, I look to Ruth Bleier's (1982) commentary on Haraway's "In the Beginning" article. Bleier responds to Haraway's distrust of the scientific observations provided by Bleier and other primatologists:

While we recognize that in science, as in any other field, all "knowledge," "evidence," "data," "observations," "facts," "truths" are products of the perceptions, judgments, opinions, methodologies and language of those who describe them, they are nonetheless, all that we have as the material objects of our discourse; they are our subject matter when we attempt our deconstructions and reconstructions of our scientific theory.<sup>11</sup>

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<sup>6</sup> Haraway, "In the Beginning," p. 481.

<sup>7</sup> Ibid., p. 480.

<sup>8</sup> Haraway, "In the Beginning," p. 481.

<sup>9</sup> Ibid., p. 480.

<sup>10</sup> Lorraine Code, "Taking Subjectivity Into Account," In *Feminist Epistemologies*. Linda M. Alcoff and Elizabeth Potter, Editors., New York: Routledge, Chapman and Hall, Inc. 1991. pp. 15-48.

<sup>11</sup> Ruth Bleier, "Commentary on Haraway's "In the Beginning Was the Word: The Genesis of Biological Theory," *Signs*, Vol. 7, No. 3, *Feminist Theory* (Spring, 1982), p. 725.

Bleier suggests that feminist scientists would be more interested in looking for or presenting alternative conceptual frameworks that “reveal the complexity and ever-changing nature of natural and social relationships,” even as they recognize the subjective nature of reality.<sup>12</sup> These assertions offer support for my claim that Harding’s FSE represents an optimistic view of the feminist critique, and the scientific and epistemic enterprises, in general. Additionally, Haraway’s position—that feminist postmodernism is usually understood as a way of decentering, a negation of not only a method but the possibility of knowledge that is both useful and as nondiscriminatory as possible on those groups it affects—is a strong counterpoint to Harding’s optimistic standpoint theory. The tensions expressed in these counterpoints foster the critical self-reflection Harding sees as necessary for her approach to be epistemically productive.

The chapter is divided into five sections, beginning with a general definition of standpoint theory, and the three claims common to the approach. Next, I offer justification for placing Harding’s FSE at the forefront of this discussion. This explanation will provide the context within which much of the discussion in this chapter is located, especially given both the number of scholars who identify as standpoint epistemologists, and the historical roots of standpoint theory. I then will draw connections between FSE and the other feminist epistemologies discussed previously. In important ways, FSE and other feminist epistemologies share assumptions about critical feminism and the objectives of their analyses. Showing these assumptions requires talking about the epistemic dimensions of FSE without engaging too much with the political roots of the feminist critique, if for no other reason than it would lead the discussion too far afield. My focus will be on the epistemological goals and characteristics of FSE and other standpoint epistemologies. In the fourth section, I will parse out the important

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<sup>12</sup> Ibid., p. 726.

distinctions between FSE and other feminist epistemologies using criteria formulated by theorists within the philosophical tradition of the Frankfurt School. Finally, I return to a central element of support for FSE's standing as a naturalistic theory by responding to Potter's (2006) position concerning FSE. As mentioned previously, standpoint theories, and specifically, Sandra Harding's version are the last approach she discusses since she takes Harding's FSE to be the *least* naturalized and the *least* normative of the theories she examines. This claim is one with which I must take issue. My assert that Harding's FSE is the most naturalized and normative of the feminist responses discussed. By reviewing criteria set out by Lynn Hankinson Nelson, and used by Potter in her work, I will determine whether Harding's FSE is the most naturalistic and therefore, the best response to QNE and other empiricist epistemologies, both feminist and non-feminist varieties.

### **Standpoint Theories**

Harding (2004), Crasnow, Wylie, Bauchspies, and Potter (2015), and Howell (2010) define feminist standpoint theory as a political strategy that is emancipatory because it attempts to empower marginalized and/or oppressed groups by valuing their experiences, and aid in the development of an "oppositional consciousness."<sup>13</sup> In producing oppositional and shared consciousness in oppressed groups, it "creates oppressed peoples as collective subjects of research rather than only as objects of others' observations."<sup>14</sup> Crasnow et al. (2015) point out the commonalities of the various philosophical accounts of standpoint epistemology. These include the endorsement of three common propositions: situated knowledge, epistemic privilege, and the achievement thesis.

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<sup>13</sup> Sandra Harding, "Introduction," In *The Feminist Standpoint Theory Reader*. New York: Routledge. 2004. p. 2-3.

<sup>14</sup> Ibid.

The situated knowledge thesis, argued for in a variety of ways by Haraway (1988); Longino (1989); Longino and Lennon (1997); Harding (1983), (1984), (1991), (2004), Code (1993) and Wylie (2004), among others, is based on the understanding that “knowledge is for and by a particular set of socially situated knowers and so is always local.”<sup>15</sup> It is a social, cultural and political “location” characterized by the power relations that occur in such settings. Of importance is the recognition that this socially situated community of knowers must contend with the tension inherent in this thesis. Haraway (1988) describes this incongruity as the desire to “have simultaneously an account of radical historical contingency for all knowledge claims and knowing subjects ... and a no-nonsense commitment to faithful accounts of a “real” world.”<sup>16</sup> Harding reiterates this point in *The Science Question in Feminism* (1991): “Feminists who deny the possibility of access to a real world and an objective standpoint appear to cut off the possibility of a degendered science at all.”<sup>17</sup> Harding ultimately staves off this conclusion by recognizing that science is a social endeavor that has never been and never will be gender-free. In recognizing the irreducibly social and gendered aspects of scientific inquiry, objectivity does not have to be surrendered, but rather reconceived. Harding acknowledges the value of Haraway’s articulation of this ambivalence, and sees it as a boon for feminist critiques, motivating self-critical reflection in feminist standpoint epistemologies.<sup>18</sup>

The second shared thesis is epistemic privilege. Feminist standpoint theories argue that the epistemic privilege of an oppressed group is defined by the different experiences and understandings that group has *vis-à-vis* the dominant group. Standing outside of the dominant

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<sup>15</sup> Crasnow, Wylie, Bauchspies, and Potter, “Feminist Perspective on Science,” *Stanford Encyclopedia of Philosophy*. p. 57.

<sup>16</sup> Haraway. “Situated Knowledges” p. 579.

<sup>17</sup> Harding, *The Science Question*, p. 137.

<sup>18</sup> *Ibid.*, pp. 137-138.

group's experiences and practices provides the oppressed group with the insight not only to see and experience the distorted knowledge of the dominant group, but also to illumine the "blind spots" that shape those distortions and the knowledge produced. Harding (2004), Haraway (1988), and Grasswick (2013) argue that epistemic privilege is not automatic as one might expect if one were a member of the dominant group and embedded in its practices. The location occupied by the oppressed group achieves this privileged position, and the "moment of critical insight,"<sup>19</sup> as a result of political struggle. This is a rejection of the claim made by conventional non-feminist epistemologies and philosophies of science that political interests and values distort the production of what would otherwise be "good" science, and objective scientific knowledge.<sup>20</sup> For these non-feminist epistemologies, objectivity is defined as a neutral, disembodied "view from nowhere." This phrase was made famous by Thomas Nagel in his 1986 book, *A View from Nowhere*, in which he attempts to reconcile both objective and subjective descriptions of the world, while giving primacy to objectivity.<sup>21</sup> The full range of critical feminist analyses, from feminist empiricism to feminist postmodernism, point to a scientific tradition that utilizes a universal objectivity that "devours" all other perspectives and is presented as transparent and totalizing, and thus hard to analyze or question.<sup>22</sup> Critical epistemologies, including standpoint epistemologies, insist instead that political interests and values be acknowledged and valued as contributing to good science. Rather than argue for a view from everywhere, and the relativism it would entail, Harding (1983), (1984), (1991) and Haraway (1978), (1988) advocate for the efficacy of partial perspectives that derive from communities claiming an epistemic privilege that

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<sup>19</sup> Sandra Harding, "Introduction," In *The Feminist Standpoint p. 9*. Harding encloses this phrase in quotation marks without attribution.

<sup>20</sup> *Ibid.*, p. 1.

<sup>21</sup> Thomas Nagel. *The View from Nowhere*. New York: Oxford University Press. 1986. I take Nagel's position to be that this objectivity is not a definitive absolute but rather that it falls within a spectrum of 'understandings' about the world made up of the subjective and objective.

<sup>22</sup> Haraway, "Situated Knowledges," p. 582.

*contributes* to good science, replacing the value-neutral objectivity traditionally aspired to. What's more, these partial perspectives have already had effects on scientific practice. Howell (2011) argues that traditional, non-feminist epistemologies and their distorted theories of knowledge, after confronting the critique of feminist epistemologies and philosophies of science, have subsequently been shaped by "the political inflections of the feminist movement."<sup>23</sup> What this means is that when confronted by the feminist critiques and evaluations, non-feminist scientists responded to those criticisms, and consequently instigated changes in research programs, theoretical models, and funding.<sup>24</sup> In many ways, however, the changes have been limited. Methods and theoretical models in use continue to view values and interests as contributing to bad science, rather than serving as a resource for good, or perhaps, better science.

The third thesis, entailed by epistemic privilege, is the achievement thesis. Harding argues that understanding this thesis properly "requires distinguishing a standpoint from a perspective."<sup>25</sup> The achievement of a standpoint requires a political and reflective struggle to create a group consciousness, rather than an individual shift in perspective.<sup>26</sup> The emphasis on the political and reflective struggle to create a group consciousness is shaped by the situatedness of that group and its local knowledge. The fact that the struggle, including the epistemic work done to recognize their distinction from the dominant group, is socially shared is what makes this achievement a standpoint rather than merely a perspective. There are a variety of standpoint epistemologies that specify the social location and scope of the privileged standpoint, the nature of the epistemic superiority claimed by each, and the critique informed by that privileged

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<sup>23</sup> Tracy Howell, "Feminist Standpoint Theory." *Internet Encyclopedia of Philosophy*. Melissa Masko, ed., 2010. p. 4.

<sup>24</sup> *Ibid.*

<sup>25</sup> Sandra Harding, "A Socially Relevant Philosophy of Science Resources from Standpoint Theory Controversiality." *Hypatia: A Journal of Feminist Philosophy*. 2004. 19 (1): pp. 31-32.

<sup>26</sup> *Ibid.*

standpoint.<sup>27</sup> In the next section, I offer some justification for my use of Harding's FSE as canonical in this discussion. There are elements of her standpoint epistemology that make it a more fruitful and constructive response than other feminist responses discussed in chapter two.

### **Feminist Standpoint Epistemology**

In what follows, I focus on Sandra Harding's brand of FSE. I chose this particular strand of FSE largely because Harding's presence has been detected in the earliest accounts described as feminist epistemology. Grasswick (2016) cites Harding's 1982 article, "Is Gender a Variable in Conceptions of Rationality: A Survey of Issues" as one of two articles that year to be "clearly identifiable" as such.<sup>28</sup> In this article, Harding recounts the feminist challenges to theories and observations that use sex as a variable in the distribution of rationality represented by the many "empirical and theoretical studies [that] attempted to restore women as missing 'objects of knowledge' to the body of social and natural knowledge."<sup>29</sup> What is of interest is that Harding acknowledges this critical work in two ways. In one way, this critical work has failed. The idea that women's experiences could be restored into the body of social and natural knowledge is not feasible: to simply "add women" to a conceptual framework and the working assumptions it entails would make it difficult, if not impossible, to produce undistorted accounts of women's experiences. Secondly, in a positive sense, the critical feminist work to which Harding refers has been incredibly beneficial and has served as the empirical resource that both motivates the critical element of feminist standpoint epistemology and provides it with evidence on which to

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<sup>27</sup> Elizabeth Anderson, "Feminist Epistemology and Philosophy of Science." *The Stanford Encyclopedia of Philosophy*. Edward N. Zalta, Ed., 2012. pp. 17-18.

<sup>28</sup> Heidi Grasswick, "Feminist Social Epistemology." *The Stanford Encyclopedia of Philosophy*. Edward N. Zalta Ed., 2016, p. 6.

<sup>29</sup> Sandra Harding, "Is Gender a Variable in Conception of Rationality? A Survey of the Issues." *Dialectica*. Vol 26 (2/3). 1982. p. 226.

theorize. These two seemingly contradictory conclusions about critical feminist scholarship and scientific data point to the value and purpose of a critical feminist approach and its impact on scientific inquiry. This tension will be an important aspect of Harding's FSE and one aspect of its usefulness as a productive resource for epistemology and perhaps a stimulus for progress.

Beyond Harding's early and significant presence in the feminist literature, further support for taking Harding's brand of FSE as canonical is Grasswick's emphasis on the influence of Harding and Hintikka's (1983) anthology *Discovering Reality: Feminist Perspectives on Epistemology, Metaphysics, Methodology and Philosophy of Science*. "[R]ates of publication in feminist epistemology picked up significantly"<sup>30</sup> after 1983. According to Grasswick, Harding and Hintikka's volume "set the stage for future discussions within feminist epistemology that included the following undertakings: deconstructive projects, scientific studies that showed 'congruences' between scientific theories and contemporary socio-political theories, and "reconstructive epistemological projects in response to such findings."<sup>31</sup> Standpoint theory offers an extensive argument "for the grounding of epistemic perspectives in one's social position," which made and continues to make the anthology, one of the most "fruitful and heavily debated areas of theorizing for feminist epistemologies."<sup>32</sup> In *Discovering Reality*, Harding and Hintikka lay out their commitment to the value of empirical data garnered by feminist scientists for the complementary projects they see before them. The first is the deconstructive project of showing how the social and natural sciences, as well as philosophy, have been informed by "masculine experience."<sup>33</sup> This critique targets a broad range of canonical philosophies, including Plato,

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<sup>30</sup> Grasswick, "Feminist Social Epistemology," p. 6.

<sup>31</sup> *Ibid.*, pp. 7-8.

<sup>32</sup> *Ibid.*, p. 7.

<sup>33</sup> Harding, Sandra and Merrill Hintikka. "Introduction," In *Discovering Reality: Feminist Perspectives on Epistemology, Metaphysics, Methodology and Philosophy of Science*. Dordrecht: D. Reidel Publishing Company. 1983, p. x.



Aristotle, Descartes and Rousseau, all taken to be foundational sources for assumptions, both metaphysical and practical, in the sciences and philosophy. The second project of the anthology is the reconstructive project, in which authors employ empirical data and theoretical models that discusses distinctive elements of women's experience in order to build a "more representatively human understanding."<sup>34</sup>

Harding and Hintikka's anthology has been characterized as productive for standpoint theory because it presented theoretical knowledge and empirical data collected from critiques that highlighted the shortcomings of non-feminist scientific practice by authors and theorists "actively engaged ... in disciplines other than philosophy."<sup>35</sup> Standpoint theories have become a central outlet for feminist critiques within various disciplines. Beyond criticism, these critiques offered methods to improve the production of knowledge and mitigate the sexism and androcentrism that defined scientific inquiry and knowledge production in their respective disciplines. Improvements, however, though discernible, are still slow. In the introduction to the second edition of *Discovering Reality* (2008), Harding notes one chief implication of the publication of a second edition: "Unfortunately, mainstream epistemology, metaphysics, methodology, and philosophy of science as practiced in the natural and social sciences as well as in philosophy have not yet fully adopted feminist insights (to understate the issue)" but they have nonetheless "stimulated self-reflection in these fields."<sup>36</sup> Importantly, standpoint theories have contributed to the improvement of the natural and social sciences in at least two important ways. One way is the motivated self-reflection in mainstream or non-feminist science and philosophies

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<sup>34</sup> Ibid.

<sup>35</sup> Sandra Harding. "Discovering Reality Twenty Years Later: Introduction to the Second Edition." Harding and Hintikka, Eds., *Discovering Reality: Feminist Perspectives on Epistemology, Metaphysics, Methodology and Philosophy of Science*. Netherlands: Kluwer Academic Publishing. 2003, p. x.

<sup>36</sup> Ibid., p. xi.

of science highlighted by Harding. The second way is that active feminist scientists now have a space within science in which to add to the body of scientific knowledge. Finally, Harding's canonical influence is further supported by a research bibliography for critiques of science compiled by Alison Wylie and Kathleen Okruhlik (1990), Harding's work— as author, co-author and editor of articles and books— is part of the core literature. Wylie and Okruhlik acknowledge that given the volume of the literature, they limited their compilation to those sources that dealt with epistemology and methodology specifically and raised issues involving “scientific rationality, knowledge claims and research methodologies from a feminist perspective.”<sup>37</sup>

Beyond the common features Harding's FSE shares with other standpoint theories, it also takes as given some basic tenets of the diverse feminist responses to non-feminist epistemologies and philosophies of science discussed in the previous chapter, and specifically, to Quinean naturalized epistemology. FSE is a social epistemology in that it locates epistemic labor at the community level, rather than at the individual level. Like the other feminist epistemologies, FSE focuses on the influence of norms and conceptions of gender on the production of knowledge. Which is to say, it is concerned with “*how* our social relations of gender have shaped our knowledge practices...[and] whether and how these relations *should* play a role in good knowing.”<sup>38</sup> Feminist epistemologies theorize a community of knowers that are situated; and importantly, this fact results in “experiential differences that lead to differences in perspective, and these perspectival differences carry epistemic consequences.”<sup>39</sup> The difference, as Bowell puts it, is that FSE “puts the relationship between political and social power and epistemic labor

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<sup>37</sup> Alison Wylie and Kathleen Okruhlik, “Philosophical Feminism: A Bibliographic Guide to Critiques of Science.” *Resources for Feminist Research*. Vol 19 (2), 1990. pp. 2-3.

<sup>38</sup> Harding *Feminist Standpoint Reader*, p. 1.

<sup>39</sup> *Ibid.*, p. 13.

front and center.”<sup>40</sup> It should be noted however, that though the relation between political power and epistemic labor does indeed have an important place in Harding’s distinctive theory, she parts ways with socialist feminist theories that are suspicious of the possibility of “truly” feminist scientific practice until feminist theories and models are also fully assimilated by society. This claim has been made by Elizabeth Fee (1981), as well as Jaggar (1983), and Longino and Doell (1983), who argues that the construction of a feminist science can only begin when a feminist society has been established since, now quoting Fee, “we can expect a sexist society to develop a sexist science.”<sup>41</sup> Haraway (1981) remarks that Harding and other feminist scholars have to “wait” to authentically contribute to a science that is new and freed from the untenable weaknesses of humanistic science (or science as usual). Harding does not believe this “wait” is necessary and adds that “feminist theoreticians have already proposed concepts of knowers, the world to be known, and the processes of knowing that distinguish feminist theories of knowledge from the dominant Western view of the last few centuries.”<sup>42</sup> This issue points to the fact that Harding’s FSE, like some other feminist epistemologies and philosophies of science, does not adopt a “monolithic position with respect to epistemic work.”<sup>43</sup> The implications of these varied and diverse critiques will be considered in a later section of the chapter in which I discuss distinctions between Harding’s FSE and other feminist critiques.

We can surmise three things from Harding’s claims that help draw out the descriptive and prescriptive features of FSE and its relation to other feminist epistemologies. One is that the descriptive project Harding describes emphasizes FSE’s place within social feminist

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<sup>40</sup> Bowell, “Feminist Standpoint Theory.” pp. 1-2.

<sup>41</sup> Elizabeth Fee. “Is Feminism a Threat to Scientific Objectivity?” *International Journal of Women’s Studies*. (1981). 4(4). p.378.

<sup>42</sup> Harding, *Science Question*, p. 140.

<sup>43</sup> *Ibid.*

epistemologies exemplified by the feminist empiricists. They agree knowledge production is a social and gendered phenomenon. In this sense, the shared features of FSE and other feminist epistemologies dovetail naturally. First, by exposing the androcentric biases and assumptions at play in the actual practices of non-feminist scientists and philosophers of science, the descriptive part of the critique is made evident. Secondly, the critiques coming from those feminist scientists and scholars provide the constituents for improvements in actual scientific practices, expressed as research programs and theoretical models that are more inclusive, and explanations of empirical data that are receptive to explanatory schemes from other disciplines exemplifying the (re)constructive part of the feminist critique. In the following section, I consider some important distinctions between FSE and the other feminist epistemologies. To help make these distinctions apparent, I will begin with account and application of two interrelated issues from Raymond Geuss's (1981) discussion of the Frankfurt School project of critical theory: its three conceptions of ideology and the theses of critical theory proper. Secondly, I highlight some commitments entailed by Harding's FSE that distances from the more political stances articulated by other critical feminist responses, especially the earliest articulations of feminist standpoint theory. At the outset, I want to make clear that I do not intend to categorize Harding's FSE as critical theory of the Frankfurt School variety. I merely find some of these distinctions helpful in describing the subtle but important distinctions between Harding's FSE and other feminist epistemologies discussed in the previous chapter.

### *Ideology and Critical Theory*

For a general account of ideology, and its role in Harding's FSE, I turn to two texts. The first is *The Idea of a Critical Theory* (1981), in which Raymond Geuss examines the various ways ideology develops, marks out the three theses that designate a theory as critical, and analyzes the cognitive structures and epistemology of critical theory. The second text is *Critical Theory: A Very Short Introduction* (2011), in which Stephen Bronner provides a broader, historical view of critical theory. Geuss's account aids in delineating the common positions between Harding's FSE and other critical feminist epistemologies and philosophies of science. Bronner's account emphasizes what I take to be several important distinctions between Harding's FSE and other feminist critiques. I begin the discussion with Geuss, who outlines three ways ideologies are formed and used. Geuss's case for outlining the different conceptions of ideology is to shed light on how each conception results in a different approach to critical analyses. There is a conception of ideology that is descriptive, the result of some part of a system or cultural arrangement that is or can be studied. Ideology in this descriptive sense shapes the research program: it objectifies all or part of a social or cultural system in order to describe it or create a taxonomy of features.<sup>44</sup> Secondly, there is "ideology in the pejorative sense, as delusion, [and is] critical or negative."<sup>45</sup> The research program that arises is a program of criticism of the beliefs, attitudes, and wants of the agents in a particular society. Finally, there is the definition of ideology "in the positive sense [which] isn't something 'out there' to be found...[but rather] something *to be constructed*, created or invented; it is a *verité à faire*."<sup>46</sup>

In the descriptions I have laid out so far, feminist critiques, including feminist standpoint theories use all three of these critical conceptions of ideology, pointing again, to the

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<sup>44</sup> Raymond Geuss. *The Idea of a Critical Theory: Habermas and The Frankfurt School*. Cambridge: Cambridge University Press. 1981. pp.4-5.

<sup>45</sup> *Ibid.*, p. 12.

<sup>46</sup> *Ibid.*, p. 23; emphasis added.

commonalities between FSE and the other feminist critiques. In turn, Geuss's accounts of ideology determine how the theses common to critical theories are manifested; and specifically, how it is I have ascertained FSE to be not only distinct from the other feminist critiques, but also more naturalistic in its theoretical scheme. The first thesis is that criticism of society and dominant ideology are "inseparable."<sup>47</sup> Many of the feminist critiques discussed make explicit that the biases and androcentric dispositions displayed in scientific practice also can be found to be in society generally. To criticize scientific practice is to criticize society as well since they share an ideology. The second thesis is that the dominant ideology is criticized "for being false...a form of delusion."<sup>48</sup> This is illustrated in the three-pronged ideological feminist critique against the dominant group: the epistemic distortions and errors of the dominant group, the ways these distortions and errors have shaped the structures and institutions of a society, and finally, given the focus of this discussion, the ways in which knowledge produced by the dominant group is similarly distorted and in some instances, erroneous. The last thesis is that a critical theory has a different cognitive structure from that of scientific theory. This last thesis, when applied to Harding's FSE, highlights what I claim distinguishes FSE from other feminist theories. It further explains the placement of Harding's theory at the end of Potter's analysis of feminist philosophies of science, where Potter believes is the least naturalized of the theories discussed. Importantly, it becomes the motivating characteristic I argue makes Harding's FSE a more authentically naturalistic approach to philosophy of science and epistemology.

Bronner's historical account acknowledges the Marxist origins of critical theory but also marks the shift in focus from critical theory that emphasized economic and systematic claims to a focus on Marxism's critical method. This indicates the emphasis on the political and cultural

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<sup>47</sup> Ibid., p. 26.

<sup>48</sup> Ibid.

“superstructures” of society rather than the economic base and the concern with alienation and reification. Alienation is defined “with the psychological effects of exploitation and the division labor,” and reification is “identified with how people are treated instrumentally, as ‘things’ through concepts that have been ripped from their historical context” Ultimately, this shift expresses a stronger commitment to contesting “the deformation of the individual.”<sup>49</sup> These superstructures and their varying influences on feminists and their critiques are targeted by Harding in *Whose Knowledge? Whose Science?* (1991). Harding acknowledges that feminists who struggle together also disagree about important issues. Such fundamental disagreement is what the task of feminist analysis is. There are those who believe the task of feminist analysis is to object to “bad science” and those who think that “the whole scientific enterprise, its purposes, its practices and its functions should be the target of feminist criticisms.”<sup>50</sup> Critics of *bad science* see the critics of the scientific enterprise itself as undermining their attempts “to end sexist hiring practices, [as well as] sexist and androcentric biases”<sup>51</sup> in science. Critics of the entire scientific enterprise, which Harding refers to as “critics of science-as-usual” see bad science critics as a distracting and particularly difficult part of the problem of science-as-usual: essentially bad science critics are complicit “with our culture’s failure to question deeply enough the ethics, goals and functions of science.”<sup>52</sup> Harding’s discussion, she reveals the manner in which feminist empiricism (FE) is an expression of the first and second conceptions of ideology discussed by Geuss. First, FE scholars have turned their attention to the specific elements of scientific practice that are directed by the interests and attitudes of a specific group. The research

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<sup>49</sup> Stephen Eric Bronner. *Critical Theory: A Very Short Introduction*. New York, NY: Oxford University Press. 2011. pp. 2-4.

<sup>50</sup> Harding, Sandra. *Whose Knowledge? Whose Science?* Ithaca, NY: Cornell University Press. 1991. p. 54.

<sup>51</sup> *Ibid.*

<sup>52</sup> *Ibid.*

program of FE scholars objectifies the social and cultural segments of the scientific enterprise in order to describe it. Secondly, FE uses the data and observations of their research to analyze the beliefs and attitudes of that particular group. In this case, their focus is on male scientists, their beliefs and attitudes, as well as the ways in which knowledge production is limited by these beliefs and attitudes. Harding discusses this thorny issue in this text as well as in *The Science Question in Feminism* (1986). She describes FE as an epistemological strategy that advances a critique of “bad science” that is an interesting instance of “limited critique”: “[FE’s] practitioners do not usually label it at all; they see themselves as primarily following more rigorously the existing rules and principles of the sciences.”<sup>53</sup> She emphasizes that while she is critical of FE, she is critical not of empirical research per se, but rather, “of FE as a *theory* about how to do research and to justify its results.”<sup>54</sup> As a method, Harding finds FE has two important strengths that are beneficial to science. One such strength is that many of the claims in biology and social research generated by feminist research are true or ‘less false’ than those they oppose and “research intending to re-evaluate women’s nature and roles and the social dimensions of gender certainly meet overt standards of ‘good research.’”<sup>55</sup> Harding’s point is that when feminist claims are considered appropriate it is because they are claims that are explained “in terms of conventional scientific virtues” and also supported by sufficient empirical data.<sup>56</sup> Another strength of FE is that it “appears to challenge mainly the incomplete practice of the scientific method, not the norms of science themselves.”<sup>57</sup> As a result, FE encounters less resistance in entering “conventional bodies of knowledge” because it uses accepted conceptual frameworks

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<sup>53</sup> Harding, *Whose Knowledge?* p. 111.

<sup>54</sup> *Ibid.*, p. 112; emphasis in original.

<sup>55</sup> *Ibid.*, p. 112.

<sup>56</sup> *Ibid.*, pp. 112-13.

<sup>57</sup> *Ibid.*, p. 113.



and language. This has had the positive result of expanding the number of women in scientific ranks. The aforementioned strengths and the positive result of more women practicing science are two of the reasons why Harding, while critical of FE, does not dismiss or deny its value, since “its central assumptions and claims are not false and...it is effective at explaining the successes of feminist-inspired research.”<sup>58</sup> The value of the work of this group of feminist epistemologies and philosophies of science is that they contribute to the descriptive element of the feminist project, broadly construed. This value is evident in many of Harding’s own books. In *Discovering Reality*, Harding and Hintikka anthologize and cite the analyses of empirical work by feminist scholars including Haraway (1978) in history of science and biology, Flax in philosophy, Fox-Keller in biology, philosophy, and history of science, Longino in philosophy of science, Nelson in epistemology and philosophy of science, and Moulton in philosophy. In a similar vein, the first section of *The Feminist Standpoint Theory Reader* (2004) is dedicated to several foundational feminist critiques from the late 1970s and early 1980s that reveal the implications of Marxist insights on the specific practices in which these feminist scholars work. These include: Smith (1974) and Rose (1983) in sociology, Hartsock (1983) in political science, Jaggar (1983) in ethics, and Collins (1986) in philosophy and black feminist thought. Importantly, these diverse works and analyses serve as data out of which to construct the prescriptive element of feminist work, and they become a part of the specific prescriptive and emancipatory elements that motivate the distinctive aspects of Harding’s FSE. Feminist work in science helps bring together many facets of actual scientific practices by revealing old assumptions and distorted results, and offering critiques of the rational reconstructions that form the narrative of science-as-usual. The benefits of FE analyses support Harding’s call for the use

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<sup>58</sup> Ibid. p. 114.

of interdisciplinary theories and strategies that value the data and knowledge from other fields of study, usually kept separate from epistemology and philosophy of science. In using the data provided by FE scholars, Harding situates FSE as a broad, critical program with several ongoing processes. These includes data, and theoretical models from FE and other disciplines that serve two purposes: one, to establish the descriptive parts of FSE, and the second, to supply empirical and theoretical support for a portion of the reconstructive goals of the FSE program. The feminist critiques described fit well in the conceptions of ideology in Geuss's account. The ideology that is the object of inquiry is the ideology of the dominant group practicing science—a group distinguished as male, White, and Western. The critique entails describing the origins and practices of the dominant group's ideology, in order to show a) its shortcomings and delusions, and b) its complicity in practices and institutions that oppress those outside of the dominant group. The third thesis held by critical theories is their use of a cognitive structure that differs from that of natural science. In the following, I point out the ways in which FSE's cognitive structure differs not only from natural science, but also from the bulk of the feminist empiricist theories previously discussed. The key point of difference Geuss identifies in the cognitive structures specific to critical theories is that, contrary to those inherent in received science, they are reflective rather than objectifying.

Most of the feminist responses reviewed here and in chapter two could be categorized as critical theories based on these three points. First, an assumption the feminist critique shares with a critical theory is that science and society are inseparable, as Geuss asserts. Secondly, critical theory criticizes the dominant ideology for being “false knowledge,” or a form of delusion. A consequence of this is the recognition that critiques by feminist empiricism and feminist

standpoint theories are, in fact, a “cognitive enterprise, a form of knowledge.”<sup>59</sup> The third point is where we see a distinction between feminist empiricism and Harding’s FSE: the cognitive structure of FSE is distinguished from the cognitive structure of natural science in that it requires, for proper analysis, some basic changes in the epistemological view we have inherited from traditional and feminist forms of empiricism, which are modeled on natural science.

According to Geuss, the difference between the cognitive structures of critical versus scientific theories is illustrated in three different features. “First, they differ in their aim or goal, and hence in the way agents can use or apply them.”<sup>60</sup> The goal of scientific theories is “instrumental.” That is, the interpretation of data and the formulation of hypotheses and theories are used to deal with and control the external world. From Harding’s perspective, those critical feminist scholars whose focus is “bad science” or “science-as-usual” (feminist empiricism, local empiricism and the consilience model) are motivated in the same way natural science is motivated to do its work, which is to explain, predict, and control the outside world. They themselves would characterize their own work as aligned with good science. Harding’s FSE, motivated as it is by “emancipation and enlightenment” differs from both natural science and (although less so) from other feminist epistemologies.<sup>61</sup> The second difference lies in the cognitive structure. In natural science, there is a clear distinction made between the theory and the objects the theory describes. As Donna Haraway (1991) points out in “Situated Knowledges,” science objectifies everything it studies. Science is an “ideology of direct, devouring, degenerative and unrestricted vision whose technological mediations are simultaneously celebrated and presented as utterly transparent.”<sup>62</sup> Harding is in agreement with this element of Haraway’s critique, although Harding talks about

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<sup>59</sup> Geuss, *The Idea of a Critical Theory*, pp. 24-26.

<sup>60</sup> *Ibid.*, p. 55.

<sup>61</sup> *Ibid.*

<sup>62</sup> Haraway. “Situated Knowledges” p. 582.

this objectification in terms of specific concepts such as “woman” and “feminine.” In *Science Question* (1986), Harding explains that scientific projects and inquiries dominated by male experiences created these terms. This is also the case for other such terms such as “African,” and “Third World.” Because these terms are neither questioned nor revisited, they illustrate the ahistoricity of underlying concepts. Harding concludes that concepts referring to culture or ethnic identity “paper over the differences between the histories and present projects of hundreds of indigenous ... cultures.”<sup>63</sup> Additionally, using ahistorical concepts such as these assume that colonial rule “has left unchanged the presumably ancient ways of understanding self, others, and nature.”<sup>64</sup> The same can be said of a “women’s world view.” These always change over time and yet use of these terms assumes “continuity between, before and during the historically specific history of men’s subjugation of women.”<sup>65</sup> FSE is reflective and self-referential and questions its own use of concepts, methods and techniques. It can also give an historical account of its own history and its place in the domain of objects described in theories.<sup>66</sup> Historical changes in critical theory also provide a way to understand the distinction between early feminist standpoint theories and Harding’s FSE. In Bronner’s discussion of critical theory, he describes the willingness of critical theorists to submit their own principles to keen critical analysis because ultimately, “contesting hegemony”<sup>67</sup> in its many forms is a method for achieving its goal of emancipation. Much like Harding’s attitude toward Enlightenment ideals, she maintains a critical and optimistic view of the other feminist theories already discussed, but also maintains every aspect of FSE. As I note in chapter two, to be committed to the Quinean metaphor of a

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<sup>63</sup> Harding, “Other “Others” and Fractured Identities: Issues for Epistemologists,” In *The Science Question in Feminism*. Ithaca, NY: Cornell University Press. 1986. pp. 169-173.

<sup>64</sup> Ibid.

<sup>65</sup> Ibid.

<sup>66</sup> Geuss, *The Idea of A Critical Theory*, p. 55.

<sup>67</sup> Stephen Eric Bronner. *Critical Theory: A Very Short Introduction*. New York, NY: Oxford University Press. 2011. p. 21.

web or network of interrelated beliefs means that critical analysis of one set of beliefs entails looking at other beliefs too. A theory such as Harding's FSE does this in its attempts to describe the historical particularity of the objects of study and in a reflexive manner, makes use of what Harding calls the "tensions" in our understandings and explanations of the world. Harding concludes that "we should explicitly recognize the ambivalences and contradictions within both feminist and androcentric thinking and learn how to cherish beneficial tendencies while struggling against the social conditions that make possible regressive tendencies in both."<sup>68</sup>

In this context, Bronner's description of the shifting concerns of critical theories gives a sharper outline of the critical and ideological approach Harding takes, and shapes the practical, experiential consequences of FSE as an emancipatory theory. First, the significance of revealing embedded beliefs, values and interests in scientific inquiry point at the distorted knowledge produced by objectivity commonly understood and pursued in non-feminist scientific inquiry. Concepts and definitions are static and result in a harmful instrumentalism that is exploitative and seemingly floats outside of any historical context. Harding's goal is to foster an approach that "tr[ies] to fashion conceptual schemes that are more alert to the complex and often beneficial ways in which the modernist world(view) is falling apart."<sup>69</sup> Secondly, as Bronner describes, the Marxist critical method as practiced in the West stresses the role of ideology but with less emphasis on how "theory must change in order to meet the changing needs of changing times."<sup>70</sup> Harding, however, places a strong emphasis on changing need and changing times. Scientific theories require empirical evidence, garnered from experience and observation. As has been shown, other feminist epistemologies align themselves with the sciences in striving for the same

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<sup>68</sup> Harding, *Science Question*, p. 164.

<sup>69</sup> Ibid.

<sup>70</sup> Bronner, *Critical Theory*, pp. 17-19.

kind of evidence. In this sense, when it comes to concepts and categories in use in scientific practice and theorizing, feminist epistemologies lack a more thoroughly historical perspective. For Harding, this is not an uncharitable criticism of the theories, but she does see these theories as limited in their ability to accomplish the over-arching goal of Harding's project, which is to emancipate the aforementioned "others" and to give them a space in which to contribute to scientific progress and the accumulation of knowledge. This requires acknowledging historical contexts and the reevaluation of definitions and concepts Harding's motivation is to consider the possibility that there is a "mode of knowledge-seeking not structured by ... sets of dualisms" used in the androcentric ideology of contemporary science and posited as necessary: culture vs. nature, rational mind vs. pre-rational body and irrational emotions and values, objectivity vs. subjectivity, public vs. private. In each dichotomy, there is a favored, or more highly valued term, and a less favored term. These dualisms then link men and masculinity to the former, and women and femininity to the latter.<sup>71</sup> As a distinct epistemic strategy, FSE is not restricted to only social and political issues in scientific practice, but targets "the very standards for what counts as knowledge, objectivity, rationality and good, scientific methods."<sup>72</sup> The criteria and kinds of evidence considered relevant for determining whether evidence is cognitively acceptable are different from those of the natural sciences. Scientific theories require empirical confirmation through observation and experiment and, per Geuss, a reflective critical theory will accept evidence that is "reflectively acceptable," i.e., that the theory "survives a more complicated process of evaluation."<sup>73</sup> In "Gender as Variable for Rationality" (1983), Harding calls not only on feminist scientists, but other feminist scholars to be a part of this process. She

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<sup>71</sup> Ibid., p. 136.

<sup>72</sup> Harding, *Reader*, p. 2.

<sup>73</sup> Geuss, *The Idea of a Critical Theory*, pp. 56-57.

specifically cites reviews of several disciplines in two issues of *Signs: Journal of Women in Culture and Society* (Autumn and Winter, 1975) that mark the epistemological implications of the feminist critiques in those disciplines to uphold her claim that gender bias has been implicit and explicit in scientific methodologies.<sup>74</sup>

Similarly, in the introduction to *The Feminist Standpoint Theory Reader* (2004), Harding contends that FSE has both an “explicit and implicit history.”<sup>75</sup> FSE has an explicit, intellectual history that begins in the origins of Marxist theory that were used in various disciplines (Smith 1974; Rose 1983; Hartsock 1983; Collins 1986) to explain and consider the epistemic disadvantages that result from gender-related, economic, and social disadvantages. These epistemic extrapolations, Harding contends, also “make up an implicit “folk” history visible in its appeal to groups around the world seeking to understand themselves and the world around them in ways that have been blocked by the conceptual frameworks dominant in their cultures.”<sup>76</sup> Feminist standpoint epistemology has its beginnings in the work of feminist thinkers who independently found Marxist insights useful for understanding institutionalized relations between men and women. Early on, some standpoint theorists, including Smith (1974), Collins (1986), Rose (1983), and Hartsock (1983) use “ideology” to explain dominant accounts of relations of gender, race and class that provide different accounts of native and social relations. The critical ideology develops, as we recall, from the project of critiquing a dominant group’s beliefs, and attitudes, and the way these beliefs and attitudes have shaped their relations with others and their epistemological and scientific endeavors. Standpoint theorists, working and theorizing from outside the dominant group make observations “that agents (in this case, men) in

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<sup>74</sup> Sandra Harding, “Is Gender a Variable in Conception of Rationality? A Survey of the Issues.” *Dialectica*. Vol 26 (2/3). 1982. FN1, p. 225.

<sup>75</sup> Harding, *Reader*, p. 1.

<sup>76</sup> *Ibid.*, p. 3.

the society are deluded about themselves, their position, their society, their interests...ideology in this sense is a delusion.”<sup>77</sup> This set of beliefs, produced by economic and social conditions, about social life misrepresents and distorts the world and reproduces these distortions. Different “locations” in gender, racial and class relations generate distinctive accounts of nature and social relations that arise from the Marxist insight that “the material conditions of people’s lives can actually shape their understanding of the social and natural world.”<sup>78</sup>

This “explicit history” explains the resemblance of standpoint epistemologies even as they articulate their projects differently. These common elements—the situatedness of knowledge, epistemic privilege, and achievement theses are also the sources of contention between other feminist philosophies of science and standpoint theory. The feminist empiricist theories and Wylie’s consilience model, discussed in the previous chapter, illuminate the continuity between social and rational accounts of knowledge. However, what this means is that ultimately, knowledge and objectivity must be redefined. Nelson offers a version of objectivity she calls a Feminist Account of Evidence, Longino offers an account of local objectivity, and Wylie proposes mitigated objectivity. Harding will also provide her own reconceived concept of objectivity—what she calls “strong objectivity.”

To summarize, my account of the characteristics of Harding’s FSE have replicated her own way of describing the theory as descriptive, prescriptive, and emancipatory. Firstly, FSE is a descriptive theory that questions the accuracy of rational reconstructions in non-feminist, naturalized epistemologies and philosophies of science. FSE serves as specific method by which to analyze critically, as all standpoint theories have done, the actual history and practice of scientists. Importantly, this history and its legacy become important elements with which to

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<sup>77</sup> Geuss. *The Idea of a Critical Theory*. pp.12-13.

<sup>78</sup> Potter, *Feminism and Philosophy of Science*. pp.133-135.



contend. The priority given to knowledge claims that have observational content and can be scientifically tested, as Quine has argued, is problematic in that they restrict definitions of knowledge and by extension, definitions of rationality, to those definitions shaped by a dominant group within the society. Secondly, FSE is a prescriptive theory because it provides a methodology that not only utilizes knowledge from other disciplines to discern not only the distinctive conceptions of human nature at work in epistemology, philosophies of science, and scientific practice, but also anticipates critiques of conceptions that serve the interests of a dominant group and look to acknowledge the central role sociality, psychology and political values and interests play in these conceptions and in practices. Thirdly, the influx of women in the scientific disciplines, as well as the reflection and responses to feminist critiques provide empirical data to support the critical analysis of the limitations and biases of a dominant group, serving as the first step toward the emancipatory goals that motivate FSE. The location of epistemic labor is another essential and authoritative feature of feminist standpoint epistemologies since they have a more nuanced account of what “social” epistemology means, especially given their aim of including different standpoints in practice. FSE holds that communities produce knowledge in two different senses. One sense is that different communities differ from each other culturally, and racially, among other things, and the other sense is “that communities as epistemic agents are internally heterogeneous, multiple and very likely contradictory or incoherent, not homogenous, unitary, and coherent.”<sup>79</sup> Another crucial aspect of the community as epistemic agent is that “generating critical questions about received belief marks the process of producing and maintaining a standpoint. This critical questioning requires reflection and constant self-reflection.”<sup>80</sup> This self-reflection requires a redefinition of

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<sup>79</sup> Ibid., p.138.

<sup>80</sup> Ibid., p. 139.

objectivity. Harding calls this kind of objectivity “strong objectivity.”<sup>81</sup> This will be the focus of the following section. This requires some discussion of the overall approach of standpoint theories generally and Harding’s FSE specifically, with regard to objectivity and the value-neutrality it entails. In the final section of the chapter, I recall L.H. Nelson’s criteria for a naturalistic epistemology and show how Harding’s FSE meets them.

### **Strong Objectivity**

Given the discussion so far, two assumptions about objectivity should be reiterated: one is that the goal of non-feminist epistemologies and philosophies of science is an objectivity that requires value-neutrality. In conventional accounts of objectivity, beliefs or scientific claims that achieve the status of knowledge must “transcend their original ties to local, historical interests, values and agendas.” The second assumption is that value-neutrality is the best method for getting an accurate account of the “real world,” and that there is, indeed, one accurate account of the world. By Harding’s lights, the problem with this definition of objectivity is not that it’s “too objectifying” but “that it is not rigorous or objectifying enough; it is too weak to accomplish even the goals for which it has been designed.”<sup>82</sup> Scientists suspicious of social interests and values endeavor to practice “good” science and produce objective knowledge that serves society by providing an accurate account of nature. For Harding, another way to understand the standard account of objectivity is as a means to “depoliticize” science. To depoliticize science is to remove scientific inquiry from the influence and dynamics of historical, social, and cultural forces and changes. “Philosophical and scientific appeals to objectivity and value-free inquiry

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<sup>81</sup> Ibid.

<sup>82</sup> Sandra Harding, “Rethinking Standpoint Epistemology: What is Strong Objectivity?” In *Feminist Epistemologies*. Alcoff & Potter, Eds., New York: Routledge, Chapman & Hall, Inc., 1993. p.51. Hereafter referred to as “Strong Objectivity”

have often provided covers for the refusal to scrutinize the social values and projects that have played an important role in the history of science and its intellectual structures.”<sup>83</sup> The widespread assumption is “that while false beliefs often require social explanations, true beliefs are the consequence only of natural processes.”<sup>84</sup> Objectivity requires value-neutral and disinterested inquiry and feminist critiques have done much to show how this definition of objectivity has been used to exercise power “less visibly, less consciously, and *not on but through* the dominant institutional structures, priorities, practices and languages of the sciences.”<sup>85</sup> This is not to say there have not been great successes in the knowledge produced; the issue for feminist scholars is that some of the knowledge produced has been at the expense of women and marginalized peoples.

In “Rethinking Standpoint Epistemology: What is Strong Objectivity?” (1993), Harding isolates two interrelated concerns that motivate feminist scholars’ critical stance regarding conventional accounts of objectivity. The first concern is to “explain the surprising fact that politically guided research projects have been able to produce less partial and distorted results of research that those supposedly guided by the goal of value-neutrality” (e.g., discoveries of sexism and racism, distorted accounts of nature and social life, especially as it pertains to people of color and women).<sup>86</sup> The second concern is to determine how feminists can create research that begins with questions that arise from women’s lives, and provides answers to those questions that are less distorted, and less partial.<sup>87</sup> From Harding’s perspective, “How one answers the second question depends on what one thinks is the best answer to the first one” since

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<sup>83</sup> Harding, *The Science Question*, p. 137.

<sup>84</sup> *Ibid.*, p. 65.

<sup>85</sup> Sandra Harding, “After the Neutrality Ideal: Science, Politics, and “Strong Objectivity.” *Social Research*. Vol 59 (5). (Fall 1992). p. 567, emphasis in original.

<sup>86</sup> Harding, “Strong Objectivity,” 49.

<sup>87</sup> *Ibid.*, pp.49-50.

“recommendations for future scientific practices should be informed by the best accounts of past scientific successes.”<sup>88</sup> The aforementioned concerns are revealed in the critiques and the work of feminist scholars in the 1970s and 1980s, which demonstrated that it is possible to have socially situated knowledge, and that research *guided by*, rather than eschewing social values and interests, can indeed give rise to “good” science. Feminist researchers highlighted the problems they encountered in the standard procedures in their field, and through their own research processes, assumed “they were doing more careful and rigorous research and that consequently, sexism and androcentrism could be eliminated from the research conducted.”<sup>89</sup> This was followed by the articulation of feminist epistemologies and philosophies by Longino (1994, 1993) and Nelson (1990), among others, “that incorporate social values and interests in the context of science.”<sup>90</sup> These points go to show how strongly feminist reflections on scientific knowledge have challenged non-feminist epistemologies and philosophies of science. The drawback, however, is that “most of these feminist discussions have *not* arisen from attempts to find new ways either to criticize or carry on the agendas of the discipline.”<sup>91</sup> Citing critical feminist standpoint theories (Smith 1987, Hartsock 1984) and others, Harding points to standpoint epistemologies that provide a theory of knowledge, “a fundamental map or “logic” for how to criticize and carry on the agenda of the discipline.” Harding quotes Dorothy Smith: we must “start thought from marginalized lives [and] take everyday life as problematic.”<sup>92</sup> Value neutrality and objectivity would have to be defined differently in order to do this. That which characterizes Harding’s FSE as a critical theory provides the point of departure from the other

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<sup>88</sup> Ibid., p. 50.

<sup>89</sup> Ibid., p. 51.

<sup>90</sup> Ibid., pp. 51-52.

<sup>91</sup> Ibid., p. 49, emphasis in original.

<sup>92</sup> Ibid., FN 5 citing Dorothy Smith (1987), p.50.

feminist responses. Standpoint epistemologies, in contrast to previous feminist responses, are attempting to reconstruct the agenda of the discipline. This requires a reevaluation of the working assumptions and goals of scientific activity and critical self-reflection, which is applied to the notion of objectivity. She contrasts standpoint epistemologies and “older epistemologies” in terms of the respective grounds for knowledge, and the kinds of subjects/agents of knowledge needed prove the necessity of a stronger standard of objectivity that provides “systematic methods for locating knowledge in history.”<sup>93</sup>

Standpoint theorists claim that the methods and norms of scientific inquiry—both in non-feminist and feminist empiricists forms— are too weak a strategy to facilitate the systematic identification of social values, interests, and agendas shared by an entire scientific community and develop strong criteria for systematic ways to maximize objectivity. This plays out in two different ways. The scientific method described by these groups has not been ““operationalized” to detect sexist and androcentric assumptions “that are collectively (versus only individually) held.”<sup>94</sup> Harding places high value on recognizing these changes in concepts because they have significant effects on the methods employed in scientific research. As she asserts in “The Method Question” (1987), “preoccupation with method mystifies what have been the most interesting aspects of feminist research processes.”<sup>95</sup> The critical work of women in the sciences illustrates her opposition to proposals for any method of research that is distinctively feminist. One of the first and most important aspects of that critical work is the questioning of the narrow range of methods favored by researchers. This has been productive in that many concepts, methods and techniques used without question for decades were investigated and found deficient. It is

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<sup>93</sup> Ibid.

<sup>94</sup> Ibid., p. 52.

<sup>95</sup> Sandra Harding. “The Method Question.” *Hypatia*. Vol 2 (3). (Fall 1987). pp. 19-20.

important to add that at the end of the day, Harding finds the argument for a distinctively feminist method just as problematic as the acceptance of mainstream scientific concepts and methods, and for the same reasons. Her wariness of endorsing one particular method is in line with FSE's status as a type of critical theory that wants to reconstruct the agenda of feminist critiques to make themselves an object of critical reflection. Standpoint theories start with the idea that in societies stratified by race, ethnicity, class, gender, and sexuality, these collective assumptions shape activity at two levels. At the top, the activity of the dominant group shapes how scientific inquiry is organized and "sets limits on what persons who perform such activities can understand about themselves and the world around them."<sup>96</sup> In contrast, the activities of those at the bottom of social hierarchies can provide starting points for thought—for everyone's research and scholarship—from which humans' relations with each other and with the non-human natural world can become visible. This is because the experience and lives of marginalized peoples, as they understand them, provide particularly significant problems to be addressed or to become the focus of research agendas. This kind of objectivity is less distorted because it takes situatedness to be essential to the pursuit of knowledge. According to Harding, objectivity is maximized with the inclusion of values that permit accounts of nature and human relations that meet the admittedly difficult aim of having both a "no-nonsense commitment to faithful accounts of a "real" world *and* historically contingent knowledge claims and knowing subjects."<sup>97</sup> Consequently, the grounds of knowledge for standpoint theories are "from the lives of marginalized people." Even so, Harding is quick to point out that this epistemologically advantaged starting point does not guarantee maximized objectivity. It provides "only a

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<sup>96</sup> Harding, "Strong Objectivity." *Ibid.*, p. 52.

<sup>97</sup> *Ibid.* p. 50.

necessary not a sufficient starting point for maximizing objectivity.”<sup>98</sup> Scientific inquiry motivated by the assumption that value-neutrality is the best method for getting an accurate account of the (one) “real world” attempts to trump all other accounts with what Donna Haraway called “the God-Trick.” Science practiced in this way provides the “God’s eye” view from nowhere that objectifies everything it studies with “devouring, degenerative and unrestricted vision.”<sup>99</sup> This objectifying vision draws attention to the assumed value of a specific kind of subject. For empiricist, non-feminist epistemologies, the subject or agent of knowledge is supposed to be 1) culturally and historically disembodied since knowledge is universal, 2) homogeneous and unitary because knowledge must be consistent and coherent, and 3) distinct from the objects being studied. As discussed in chapter two, feminist empiricist epistemologies reject these traits. Feminist empiricists, however, maintain a commitment to the notion of a subject that is “trans-historical since knowledge is initially produced (discovered) by individuals and groups of individuals, not specific societies or subgroups”<sup>100</sup> since they question the rigor of non-feminist scientific inquiry and not its constitutive assumptions and commitments. The subjects of knowledge for standpoint epistemologies, including Harding’s FSE, construe the subject/agent of knowledge as embodied and visible, and as such, “the same kinds of social forces that shape objects of knowledge also shape (but do not determine) knowers and their scientific projects. This includes the fact that nature is an object of knowledge.”<sup>101</sup> Objectivity itself must be an object of knowledge, shaped by historical, social, and cultural forces, and should be critically reevaluated. This is a crucial element of Harding’s strong objectivity. Thus,

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<sup>98</sup> Ibid., p. 57.

<sup>99</sup> Haraway, “Situated Knowledges,” p. 582.

<sup>100</sup> Harding, “Strong Objectivity,” p. 62.

<sup>101</sup> Ibid., pp. 63-66.

strong objectivity requires “strong reflexivity,” a deliberate and reflective scrutiny at all stages of knowledge production:

This is because culturewide beliefs function as evidence at every stage in scientific inquiry: in the selection of problems, the formation of hypotheses, the design of research, the collection of data, the interpretation and sorting of data, decisions about when to stop research, the way results of research are reported, and so on.” The subject of knowledge and the historically located social community whose unexamined beliefs its members are likely to hold “unknowingly” must be considered as part of the object of knowledge from the perspective of scientific method.<sup>102</sup>

A notion of objectivity that requires elimination of all social values and interests from research process and the results of research assumes all social values will result in bad science or knowledge distorted by unchallenged assumptions, concepts and definitions. Harding’s point, again, is that not all social values and interests undermine results. And if, as Harding contends, epistemology and research methodology are indeed “deeply implicated in each other,” then “*there is not just one legitimate way to conceptualize objectivity*, any more than there is only one way to conceptualize freedom, democracy or science ... The notion of objectivity is useful in providing a way to think about the gap that should exist between how any individual or group wants the world to be and how in fact it is.”<sup>103</sup>

There is broad acceptance of at least two assumptions of strong objectivity: theories are underdetermined by possible evidence to support them, and observations are theory-laden. These reiterate Quine’s own commitments. The difference is that Harding and other standpoint theorists take on the social and cultural elements that shape underdeterminism and theory-laden observations, rather than setting them outside the boundaries of scientific and epistemological labors. Drawing on a standpoint-pluralistic approach, strong objectivity maximizes objectivity rather than neutrality by examining social and cultural relations. The issue then becomes how to

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<sup>102</sup> Ibid., p. 69.

<sup>103</sup> Ibid., p. 72, emphasis in original.



determine “which competing grounds for claims about nature and social relations” we should prefer.<sup>104</sup> This question brings with it concerns about a deleterious relativism that seems inevitable to those who cling to the old objectivity. Harding outlines how the term “objectivity” is a contested concept since it has no specific reference. She confirms that “maximizing objectivity is not identical to maximizing neutrality, as conventional understandings have assumed,”<sup>105</sup> and that scientific explanation has been shown to be inadequate for understanding. Hence the charge that without conventional objectivity, we are faced with either “no epistemological standards” or “a crowd of incommensurable heterogeneous standards.”<sup>106</sup> Harding is unwilling to take this all or nothing view. Harding’s position is that we must resist being drawn to the implications that there is no cognitive value in epistemic heterogeneity, or that there are no guiding principles that might help us navigate this heterogeneity.<sup>107</sup> The guiding principles she looks for may be found in whatever it is that enabled cultures to engage effectively with their natural and social environments. On offer is a general and normative epistemic principle that might serve as a benchmark for resolving the conflict of competing knowledge claims. One such principle would be a weak universalist empiricism, defined broadly as “being grounded in experience.” Everyday experience grounds the understanding every culture has, and relatedly, every culture therefore relies on some empirical epistemological standards just as Western sciences do. In *Is Science Multicultural?* (1998), arguing for a kind of epistemic pluralism, Harding acknowledges and values the resources provided by the responses and critiques of the traditional narrative of modern science, both in terms of where the critiques

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<sup>104</sup> Harding. “Strong Objectivity” : A Response to the New Objectivity Question.” *Synthese*. Vol 104 (3) (Sept 1995). p. 332. Hereafter referred to as “New Objectivity Question.”

<sup>105</sup> Ibid.

<sup>106</sup> Sandra Harding. “How Many Epistemologies Should Guide the Production of Scientific Knowledge? A response to Maffie, Mendieta and Wylie.” *Hypatia*. 23(4) (Oct-Dec 2008), pp. 213.

<sup>107</sup> Ibid.

converge with and diverge from the narrative. There are “epistemological lessons” to be gleaned from those intersections and variances without entirely rejecting the epistemology of modern science.<sup>108</sup>

### **FSE’s Controversy and Productivity**

Since its introduction, standpoint has been a controversial methodology, and has been disseminated across a wide range of research disciplines. It is controversial in part because “the scientific/epistemological and ethical/political are inseparable in standpoint approaches.”<sup>109</sup> Standpoint is a “trans-disciplinary regulative ideal”<sup>110</sup> that has been used in research projects that focused specifically on race, class, sexuality and post-colonial research, though unacknowledged as a logic at work in these projects. A 2009 issue of *Hypatia* was devoted to standpoint theory’s value as a resource for feminist epistemology. Crasnow suggests that even if it fails to develop a feminist epistemology, standpoint theory’s successes in the social sciences indicate that it would be worthwhile resource to explore.<sup>111</sup> My claim is that Harding’s FSE is not only useful for a feminist epistemology, but useful for epistemology more generally. I would suggest that Harding’s position is an attempt to articulate an epistemology that is not constrained by any particular political goal, nor any particular group, except insofar as it pursues an emancipatory goal for a marginalized group. The political goal and the marginalized group are always yet-to-be-determined.

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<sup>108</sup> Sandra Harding. *Is Science Multicultural? Postcolonialisms, Feminisms, and Epistemologies*. Bloomington IL: Indiana University Press. 1998. p. 125.

<sup>109</sup> Sandra Harding. “Standpoint Theories: Productively Controversial.” *Hypatia*. Vol 24 (4). (Fall 2009). p. 193. Hereafter referred to as “Productively Controversial.”

<sup>110</sup> Ibid.

<sup>111</sup> Sharon Crasnow. “Is Standpoint Theory a Resource for Feminist Epistemology? An Introduction” *Hypatia*, Vol. 24, No. 4 (Fall, 2009), p. 189.

Evidence of FSE productivity is discussed in detail in Schiebinger (2008), who frames the works anthologized in *Gendered Innovations in Science and Engineering* as an exploration of how “gender analysis” has already changed these disciplines. Schiebinger sets out three levels of analysis that have practical goals, echoing the account I’ve given of theoretical claims of Harding’s FSE. Furthermore, Schiebinger’s levels of analysis form a network of interrelated practical goals that also fit well with Harding’s perspective. The first level looks at “fixing the number of women participating in science and engineering.” This was a treatment of the history and sociology of women in scientific institutions and practice. Schiebinger describes this as both a historical analysis as well as a practical matter, which is to say, the fixing came about by way of increased funding for women’s research and workshops to teach women “how to succeed in a man’s world.”<sup>112</sup> This analysis arose out of the first surge of women who joined the ranks of science and engineering researchers. As recounted in chapters two and three, gender analysis was initiated by feminist scientists and researchers in the 1970’s and 1980’s, which questioned research methods and techniques, as well as formulations of hypotheses and interpretations of data. Gender analysis at this time was seen as something that was done by women.

The second level of analysis was aimed at “fixing the institutions” and the cultures of science and engineering. Schiebinger speaks of “the unspoken assumptions and values of its members” that developed in the constructed absence of women in those fields. Programs have been put in place to remedy this with grants that focus on “transforming university cultures.” The third level of analysis is “fixing the knowledge” which focuses on the consequences of excluding women, and more specifically, on the consequences of “this exclusion (of women) for

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<sup>112</sup> Londa Schiebinger. “Introduction: Getting More Women into Science and Engineering—Knowledge Issues.” In *Gendered Innovations in Science and Engineering*. Stanford CA: Stanford University Press. 2008. p. 5. Hereafter referred to as “Introduction.”

human knowledge more generally.”<sup>113</sup> People inside and outside of scientific disciplines practice feminist virtues but are wary of calling themselves feminists. She explains this as a distinction between liberal feminism and difference feminism. Liberal feminism is the position of supporting equality in professional opportunities for women. Difference feminism, which emphasizes differences between men and women, including cultural differences—codes of behavior, language, and interaction—that have excluded women. From Schiebinger’s perspective, “the term feminist continues to refer to people and policies on the radical cutting edge.”<sup>114</sup>

Another aspect of “fixing the knowledge” is the use of gender analysis to rectify the negative effects to our knowledge due to ignoring gender in the results of science and engineering. Gender analysis is central to all levels of analysis but seems to be of highest benefit in this third level. Acknowledging the exclusion of women (and, Harding would add, other marginalized groups), as well as the need for reform in social attitudes and institutions is not that difficult to accomplish. What is harder to concede is the need for analyses to determine precisely how gendered ideologies have structured knowledge. Specific training of scientists and researchers in the performance of gender analysis becomes a central element of innovation and progress not just for scientific disciplines for the progress of knowledge in the broad sense. Gender analysis is shown to augment human knowledge with creativity that generates new questions and new avenues of research. As Schiebinger notes, “We need to be open to the possibility that human knowledge—what we know, what we value, what we consider important—may change dramatically as women become full partners.”<sup>115</sup> To those who are

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<sup>113</sup> Ibid.

<sup>114</sup> Schiebinger, “Introduction” pp. 5-6.

<sup>115</sup> Ibid., p. 6.

suspicious or critical of the controversial aspects of this new logic, Harding suggests that both the controversiality and productivity of standpoint theories like hers are “two sides of a coin that can be best explicated in terms of the politics of standpoint research.” This is due to the fact that the ethical and political and the scientific and epistemological are “inseparable” in all standpoint approaches. The research that uses standpoint logic is committed to getting information— about bodies, environment, economic, governmental and legal institutions and practices— that will help people “survive and flourish.”<sup>116</sup> Harding then poses a question: “Whose experience is to count in formulating ideals of objectivity, rationality, and good method?” Tellingly, she suggests that this same question could be posed to the well-established ideals already in place in Western scientific practice.<sup>117</sup>

Schiebinger’s work is motivated by the prospect of gender analysis being incorporated into the methodology of scientific research. Both the levels of analysis Schiebinger describes, as well as the move to change methodologies in light of those analyses, mirror Harding’s own project. There has been success in integrating gender analysis in disciplines that have high numbers of women in their ranks—biomedicine, primatology, archaeology and biology— with less commitment to it in physics, chemistry, and electrical engineering. Nevertheless, training students and faculty to integrate gender analysis into their research is a strong first step. Step two would be to actually conduct gender analysis on current research.<sup>118</sup> Schiebinger also notes that the NSF has policy initiatives that would require federally funded research programs integrate gender analysis into their design.<sup>119</sup>

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<sup>116</sup> Harding, “Productively Controversial.” p. 193.

<sup>117</sup> Ibid.

<sup>118</sup> Schiebinger, “Introduction.” pp. 18-20.

<sup>119</sup> Ibid., p. 21.

Rouse asserts that standpoint theories are a naturalistic conception of knowledge that frames all knowledge claims and their justifications as arising in specific circumstances, and with real consequences. The implication of this view is indicated by how we understand knowledge claims, what criteria are necessary to achieve knowledge, and importantly, by an epistemic normativity with a flexibility that results from the critical, self-reflective approach of FSE. He believes that in philosophy, seeing standpoint's naturalistic character "has been impeded by narrow and reductive conceptions of nature and naturalism." Nature conceived from a God's-eye point of view lacks the richness and the resourcefulness of standpoint theory's naturalism that seeks not only to know the world but also "to understand knowledge and inquiry as integral aspects of the world we seek to understand."<sup>120</sup> Standpoint theories also show that "the world is not an epistemically homogeneous space of reasons and normative authority," and can avoid claims of relativism and inaccessibility by taking the approach that epistemic claims are part of practical activities that happen in shared contexts of specific power relations, as well as issues of identity and difference.<sup>121</sup> Finally, the metaphor that arises from the term "standpoint" invokes particular assumptions common to traditional, non-feminist epistemologies, leading again to the problematic implications of relativism and inaccessibility. These challenges are mitigated somewhat by letting go of another belief in the network of beliefs at work in non-feminist epistemologies: the separation of subject and object, "a spectatorial conception of knowing, a contrast with the unity and identity of the knower and a static and perhaps mostly retrospective understanding of epistemic normativity."<sup>122</sup>

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<sup>120</sup> Joseph Rouse. "Standpoint Theories Reconsidered." *Hypatia*. Vol 24 (4) (Fall 2009). p. 201.

<sup>121</sup> *Ibid.*, p. 203.

<sup>122</sup> *Ibid.*, p. 204.

Because of the inseparability of the epistemic and the political, Harding argues that standpoint approaches bring into focus the “inseparability of commitments to male supremacy and conventional regulative ideals of scientific research” as is has heretofore been conducted.<sup>123</sup> Research that uses a FSE logic is motivated to acquiring information about bodies, environment, economic, governmental and legal institutions that will help marginalized groups to survive and flourish.<sup>124</sup> This points to a charge of relativism on several fronts. In the first place, the term “standpoint” is a technical term that refers to an achievement, rather than a perspective or point of view. Achieving a standpoint necessitates empirical work to study what is labelled “natural” because, as it will be shown in chapter four, what is considered natural changes. Secondly, standpoint epistemological projects are not relativist because FSE theorists strive to “redefine epistemic standards for more accurate, comprehensive, objective (in Harding’s sense) and rational production of knowledge,”<sup>125</sup> and consequently, look to the successful practices rather than the truth of representations of nature that are offered.

### **FSE’s Naturalistic Epistemology**

In this final section, I determine FSE’s status as a naturalistic epistemology. I examine Potter’s claim that FSE is the least naturalistic and normative of critical feminist responses. I employ Nelson’s three criteria for naturalized epistemology to make my assessment. A naturalized epistemology must reflect the history and practice of science, be subject to the same criteria as the sciences, and use consistent principles by which to explain consensus and dissent, and progressive and less progressive episodes in science.<sup>126</sup> I take up the first two criteria,

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<sup>123</sup> Harding, “Productively Controversial.” p. 197.

<sup>124</sup> Ibid.

<sup>125</sup> Ibid., p. 195.

<sup>126</sup> Potter, *Feminist Philosophies of Science*, 5-6. Op. Cit., p. 62.

deferring my discussion of the last criterion to the fourth and final chapter that will cover naturalism, and FSE's approach to its definition and application. The purpose of applying these criteria to FSE is to offer the following theses as FSE's resources for epistemology, and to bring forth and question entrenched concepts and spur epistemic progress that includes: the recognition of difference; critical self-reflection on all aspects of inquiry; including epistemic subjects and the objects of inquiry; recognition of the significance of acknowledging values and interests in our criteria for objectivity rather than value-neutrality, and the impact of social, cultural and political structures and institutions on epistemic inquiry.

As I outline in chapters two and three, feminist epistemologies and feminist standpoint theories take as starting points the history and practice of science with the aim of identifying the features of the ideology of the practitioners, including the cultural values and arrangements that have shaped said history and practice. They also outline their own ideological stance that stems from this program of criticism of the beliefs, attitudes, and desires of the subjects who practice science. In this respect, Harding's FSE does not distinguish itself from other feminist critiques. FSE does distinguish itself, however, in its account of what the work of feminist critiques does for the history and practice of science overall. The processes at work in scientific inquiry, made murky by the rational reconstructions of non-feminist philosophers of science, were clarified by the critical work of feminist empiricists from their respective disciplines. Their empirical work and critical analyses coalesce into an achieved standpoint. Exposing androcentric biases in the actual practices of non-feminist scientists and philosophers of science is the descriptive part of Harding's project. In this sense, Harding's FSE straightforwardly meets the first condition set by Nelson.



The second condition requires that the theory be subject to the same criteria as the sciences. The critical feminist responses discussed in chapter two point to how feminist naturalized and contextual empiricisms align in important ways with the non-feminist practice of science. The critiques of feminist scientists and philosophers of science were intent on showing where scientific inquiry had gone awry, and calling for more rigor in the production of less distorted knowledge. These scholars located themselves within the historical lineage of science as it had been practiced because they continued to strive for empirical evidence, garnered from a narrow conception of experience and observation, just as non-feminist scientists would. In this context, Harding's FSE seems not to meet the second condition. From Harding's point of view, these critiques challenge the incomplete practice of the scientific method, *not the norms of science themselves*, which Harding takes to be an important element of the reconstructive project of her standpoint epistemology. The limitation in the critical feminist empiricist response is that it cannot aid in Harding's over-arching emancipatory goal, which would make a space in which marginalized others, from an achieved epistemological standpoint, can contribute to scientific progress and the accumulation of knowledge.

Harding's FSE, when understood as a type of critical theory, deliberately distinguishes itself from both non-feminist science and philosophies of science and feminist critiques of these. It eschews an allegiance to the norms and practices of any science whose underlying commitments to static definitions, concepts, and kinds make it improbable that feminist insights could be a resource and a motivation for changes in the way science is practiced. This conclusion notwithstanding, I want to claim that another implication of categorizing Harding's FSE as a critical theory is that FSE and scientific inquiry *should* be subject to the same critical self-reflection of all parts of the process of inquiry, including a review of assumptions,

definitions, and methods entailed in hypotheses, theoretical/conceptual models, and research programs.

The critical self-reflection of Harding's FSE has important consequences for Nelson's third condition for naturalized epistemology: the use of consistent principles by which to explain consensus and dissent, and progressive and less progressive episodes in science. As I have attempted to show in previous sections of this chapter, Harding's contention is that her definition of strong objectivity will result in more accurate explanations both of consensus and dissent, and of how these explanations account for progressive and less progressive episodes in science. Strong Objectivity flies in the face of non-feminist science aims for objectivity achieved through a commitment to value-neutrality, the de-politicization of inquiry, and a singular account of "reality." Strong objectivity goes beyond acknowledging social interests and values, and beyond the influence and explanatory power of these non-cognitive values closely aligned to gender, race, ethnicity, and cultural biases to show no one method can achieve this. Strong objectivity is a goal that requires different strategies staked out by the objectives of the inquirers. These strategies must be reviewed. Harding's aim, already implied in the discussion of the second standard for naturalized epistemologies, is to submit science—comprising its practices and theoretical assumptions—to critical assessments that include historical and self-reflective analyses. Critical accounts of past scientific successes would serve as evidence in support of recommendations for future scientific practices informed by how success is or has been defined and their effects on marginalized peoples. In the final chapter, I focus on several issues. One of these is naturalism and other beliefs embedded in it, along with a formulation of Harding's critique of naturalism. Harding's critique provides several points on which to give an account of strategic naturalism and its effect on how science focuses its efforts to understand and know.

Another issue is to describe the productivity of FSE in philosophy of science and scientific practice, and how this could serve as a resource for epistemology.

## CHAPTER 4:

### Naturalisms

#### **Introduction**

One of the motivating questions of this dissertation is whether Sandra Harding's Feminist Standpoint Epistemology (FSE) is a more efficacious naturalism than naturalisms of the past. These naturalisms will be discussed in this chapter. Given their underlying assumption of the continuity of scientific practice and epistemology, the point of the discussion is to propose FSE as a more truly naturalistic methodology that is applicable to science as well as epistemology. Ultimately, the naturalism of FSE is more fruitful for epistemology than the naturalism proposed by Quine. Is FSE's naturalism better? An attempt to answer the question has required some discussion of the main concepts under review: epistemology and feminist epistemologies, standpoint epistemologies, and naturalism. In answering this question in the affirmative, I want to further claim that the kind of naturalism Harding is arguing for could be a resource for epistemology, not a replacement or successor project. Harding's work began and remains in the disciplines of philosophy and sociology of science, and the critical approach she advocates is pluralistic and interdisciplinary. These pluralistic standpoint insights have been used productively in many disciplines in the natural and social sciences, but epistemology. My contention, based on my reading of Harding's work, is that the resistance stems in large part from a constellation of beliefs associated with the Archimedean point of view described

previously. As I recount in previous chapters, Harding interprets the rise of modern science and modern epistemology as two projects that overlap and support each other in a way that is more complex than the fact that they are both concerned with knowledge. Their close, historical ties point to shared commitments to specific views about humans both as natural objects of study and inquirers into nature.

The discussion here concerns naturalism as well as other commitments the variants of naturalism entail. After laying out the classifications of naturalism, I provide a critique of naturalism that I believe is supported by Harding's work in philosophy of science. I will then hone in on the kind of naturalism Harding is pursuing, given her feminist and epistemological commitments. I have named Harding's position "strategic naturalism." I offer two humble reasons for the use of this term and one caveat. One reason for applying this label to Harding's version of naturalism is bolstered by her own use of a related expression. In a 1999 response to an article that charges feminists with being too wary or too critical of realism to make good use of it, Harding uses the term "strategic realism" to argue for a more nuanced reading of the feminist response to critical realism.<sup>127</sup> Importantly, Harding's main contention concerns her interlocutor's (Lawson) view about the structure of reality. He acknowledges the important and influence of social structure. Additionally, Lawson assumes scientific knowledge is fallible and partial, and that scientific theory is subject to revision. Nevertheless, he concludes that there is but one basic structure of reality and one theory of nature that precedes all the partial views and that this is so despite the fallibility and partiality of scientific knowledge. What Harding finds equally problematic is the implication that this basic structure can and should be represented in a

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<sup>127</sup> Sandra Harding. "The Case for Strategic Realism: A Response to Lawson," *Feminist Economics*. 5 (3), 1999. p. 127.

culture-free way.<sup>128</sup> Another reason for using “strategic naturalism” has to do with her commitment to the overarching emancipatory goal shared by both critical theories and feminist standpoint theories. This aligns with the use of the term “strategic” as referring to long-term or superordinate aims and interests and the means for achieving them. The very broadness of “strategy” suggests my caveat regarding Harding’s FSE and her general stance on scientific inquiry and epistemological concepts. I do not propose that by using “strategic” I mean that Harding’s FSE is an attempt to establish a monolithic method to establish and pursue static objectives. Strategic naturalism must be viewed as necessitating a multiplicity of approaches shaped by the changing goals and objectives of the inquirers and those who would benefit and/or harm. What qualifies as emancipatory must be determined by considerations of historical, cultural, and social contexts, and the goal and outcomes projected by such inquiries.

The term also suitably describes how the descriptive and prescriptive elements of Harding’s theoretical approach are in service to FSE’s emancipatory goal. As demonstrated in my chapter on feminist epistemologies, many feminist scholars initially responded positively to the naturalism Quine espoused since these scholars – conceiving of naturalism differently – were at the forefront of investigating and describing actual scientific practices and questioning foundational concepts and definitions. Similarly, in the standpoint epistemology chapter, the various standpoint epistemologies expressed the naturalistic move to be an “emancipatory promise” that served the political aims of feminist standpoint theory. That is to say, feminist standpoint theorists, including Sandra Harding, make it clear that all standpoint theories have a common emancipatory aim: to empower marginalized and/or oppressed groups.<sup>129</sup> Bronner’s

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<sup>128</sup> Harding, Sandra. "Representing Reality: The Critical Realism Project." *Feminist Economics* 9 (1), 2003.p. 154.

<sup>129</sup> Sharon Crasnow, Alison Wylie, Wenda K. Bauchspies, and Elizabeth Potter. "Feminist Perspectives Science", *The Stanford Encyclopedia of Philosophy (Summer 2015 Edition)*, Edward N. Zalta (ed.). p.3.

discussion is again useful given his reference to “counter-hegemonic” strategies that empower those in society who are exploited.<sup>130</sup> This parallels Harding’s position: the practical work of early feminist scholars accomplish objectives that contribute to the empowerment of oppressed peoples, utilizing in a critical, dialectical method such as FSE. Harding’s emphasis on the historical analyses of every element of scientific process provides a theory that is descriptive, and prescriptive rather than proscriptive.<sup>131</sup> The first phase of FSE’s strategy is to describe actual scientific practices, and identify the distortions in the knowledge produced by these practices. The responses to Quine discussed in chapter two were the consequence of misgivings feminist epistemologists and philosophers of science had with aspects of scientific inquiry. I highlighted three: the entrenched and outdated goals and methods of science, the distorted accounts of reality these produce, and what most feminists would characterize as the limited and problematic application of the term “natural” to objects of scientific study.

I revisit these topics to frame what I take to be Harding’s response to naturalism and its commitments as they are commonly understood. Much like her critical stance toward objectivity, any absolutist claim about naturalism must be questioned. Naturalism must be acknowledged as a continually revisable term, and naturalizing in scientific inquiry and epistemology must be responsive to the situatedness of human subjects and communities, as well as to the goals and projects of their inquiries. The holism Quine advocated is still on display in Harding’s FSE. An implication of this holism is that methodology and ontology are implicated in each other; and consequently, critically reflecting on aspects of one implies reflecting on the other. Naturalism is one belief among others and if we are willing to see the usefulness of revising categories, entities, and concepts – like gender, race and ethnicity, for example – at work in theories and

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<sup>130</sup> Bronner, *Critical Theory*, p. 18.

<sup>131</sup> Ibid. The term “proscriptive” is used by Bronner in his discussion of Antonio Gramsci’s work, pp. 17-20.

explanatory models in science, it seems inevitable that this would also apply to the epistemological concepts rooted in those theories and models. In the next section, I define naturalism and explain the different perspectives as clearly as is possible for such an imprecise term. I lay out ontological and methodological positions and highlight aspects of each that will help me make room for the kind of naturalism Harding is after. I lay out Harding's critique of these naturalist positions with a brief review of the important features of FSE's epistemological commitments, including some important points from previous chapters. This will include the position Harding takes in the "Strategic Realism" (1999) article, and other Harding writings that outline Harding's epistemological commitments and provide support for my claim concerning Harding's strategic naturalism and its applicability to epistemology.

### **Naturalism in a Broad Context**

It seems unproblematic to say that there is some significant consensus in the literature about the term naturalism, particularly as it pertains to epistemology. Jacobs (2017), Kornblith (1984), Friedman (1996), Wagner and Warner (1993), and Kitcher (1992), begin their respective discussions with straightforward characterizations of naturalism as an approach to philosophical problems that rejects *a priori* theorizing and a special and autonomous status for philosophy, while placing the methods and results of the empirical sciences at the center of philosophical work. For some scholars, this means "[aspiring] to reductionism and physicalism."<sup>132</sup> For Papineau (2009), Rysiew (2017), Stroud (2009a), Stroud (1999b), however, naturalism is a broader term that has no precise definition in its use in contemporary philosophy. The term refers to different approaches, commitments, and assumptions. Papineau (2009) does

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<sup>132</sup> Jon Jacobs. "Naturalism" *The Internet Encyclopedia of Philosophy*. ISSN 216-0002. <http://www.iep.utm.edu/home/about/>. 17June2017: p. 1-2.



acknowledge that naturalism is a positive term, as few contemporary philosophers would want to claim to be non-naturalists. Stroud refers to it as a “trendy” term and asserts that the term ‘naturalistic’ “has been applied more widely, at more different times and places, and for more different purposes, than probably any other notion in the whole history of human thought.”<sup>133</sup> De Caro and Macarthur (2004) similarly claim that it is “philosophically commonplace that Naturalism means many different things to different people.”<sup>134</sup> Nevertheless, in a broader context, there is a core conception of naturalism that “motivates a great deal of current philosophical thought.”<sup>135</sup> One of the goals of this section will be to discuss this “substantial core” and then provide an overview of naturalism as it is used in epistemology and philosophy of science.

Naturalism falls into two broad categories: ontological naturalism and methodological naturalism. Both Papineau (2009), and De Caro and Macarthur (2004) discuss these categories even as they explain that the naturalism of each category continues to be imprecise. Per Papineau (2009), contemporary philosophers are still not clear on nor can they satisfactorily explain how mental events can have causal force. “The driving motivation for ontological naturalism is the need to explain how different kinds of things can make a causal difference to the spatiotemporal world.”<sup>136</sup> Those who fall within this category thus want to place “strong restrictions” on the kinds of things that can have “strong effects.”<sup>137</sup> And yet, Papineau notes, this “places no immediate constraints on categories that lack any such effects ... [namely] mathematical and

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<sup>133</sup> Barry Stroud b. “The Charm of Naturalism.” *Presidential Address delivered before the Seventieth Annual Pacific Division Meeting of The American Philosophical Association* in Seattle, Washington, April 5, 1996. p. 43.

<sup>134</sup> Mario De Caro and David Macarthur, “Introduction” In *Naturalism in Question*. Cambridge, MA: Harvard University Press. 2004. p. 3.

<sup>135</sup> Ibid.

<sup>136</sup> David Papineau. “Naturalism” *Stanford Encyclopedia of Philosophy*. Edward N. Zalta, Editor, ISSN 1095-5054. 2009. p. 4.

<sup>137</sup> Ibid.

modal realms and perhaps the normative realm.”<sup>138</sup> Naturalism in this sense can be understood as anti-supernaturalism. Papineau’s tactic is to discuss the ways in which the ontological thesis as causal influence plays out in modern science. In early 17<sup>th</sup> century mechanistic models of the physical world, there were a very narrow range of causes. Physical effects were caused by the impact between material particles.<sup>139</sup> This view points to the strong anti-supernaturalism that motivated these models. Early Newtonian physics with its recognition of action at a distance is more liberal in its limits on causes. Papineau remarks that “early Newtonians posited distinct mental and vital forces alongside magnetic, chemical-cohesive, gravitational and impact forces. Accordingly, they took *sui generis* mental action in the material world to be perfectly consistent with the principles of physics.”<sup>140</sup>

By the mid-19<sup>th</sup> century, physics and conservation of energy “plus potential energy came to be accepted as a basic principle of physics.” However, these principles implied that “special forces must be governed by strict deterministic laws” which would restrict how much potential energy could be produced.<sup>141</sup> This thus limited the range of possible causes again. The tide turns again in the 20<sup>th</sup> century, as

scientific opinion became even more restrictive about possible causes of physical effects, and came to reject *sui generis* mental or vital causes, even of a law-governed and predictable kind. Detailed physiological research, especially into nerve cells, gave no indication of any physical effects that cannot be explained in terms of basic physical forces that also occur outside living bodies. By the middle of the 20<sup>th</sup> century, belief in *sui generis* mental or vital forces had become a minority view. This led to the widespread acceptance of ‘causal closure’ or ‘causal completeness’ of the physical realm, according to which all physical effects can be accounted for by basic physical causes,” including fundamental forces.<sup>142</sup>

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<sup>138</sup> Ibid.

<sup>139</sup> Ibid., p. 5.

<sup>140</sup> Ibid., p. 6.

<sup>141</sup> Ibid.

<sup>142</sup> Ibid., pp. 6-7.

For Papineau, the acceptance of causal closure leads to even stronger ontologically naturalist views since the causal closure thesis implies that any mental and biological causes must themselves be physically constituted “if they have physical effects.”<sup>143</sup> This has the added result of strengthening ontological naturalism into ontological physicalism. The underlying assumption is that throughout the shifts in the boundaries of causal closure, this kind of naturalist view already goes beyond its ontological meaning to shape the methods by which empirical data is gathered, and the theoretical models that help explain the data. Papineau’s historical account of the naturalist ontological commitment provides an example of a term that remains stable while its meaning and reference change in response to variations in theoretical physical models describing natural phenomena and the behavior of objects in nature.

De Caro and Macarthur (2004) straightforwardly describe the ontological thesis as a scientific conception of nature. This theme says “modern natural science provides a true picture of nature, but more contentiously, that it is the only true picture.”<sup>144</sup> They attribute this to the “Great Success of Modern Science Argument (GSMS)”: the GSMS argues that “given the great success of modern natural science in predicting, controlling, and explaining natural phenomena,” the claim that the conception of nature in the sciences “is very likely to be true and moreover, that this is our only bona fide or unproblematic conception of nature. It is the latter claim that earns scientific naturalism the label of ‘scientism.’”<sup>145</sup> The widespread acceptance of the scientific conception of nature is, according to De Caro and Macarthur, the main reason for the multiple naturalizing projects that have been part of the dominant currents in contemporary philosophy. In the first part of the 20<sup>th</sup> century, these projects were conceived as semantic

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<sup>143</sup> Ibid., 6-7.

<sup>144</sup> De Caro and Macarthur, p. 3.

<sup>145</sup> Ibid.

projects in which “non-natural” discourses were to be “reduced or reconstructed in scientific terms” in order to treat them as either “useful fictions” or take them to play a “nonfactual linguistic role,” or sometimes, altogether to dismiss them as “pre-scientific” thinking.<sup>146</sup> I note here, somewhat unsurprisingly, that this take on the dominant currents in contemporary philosophy does not include feminist critiques in their many forms.

The second thesis is Methodological Naturalism. This thesis is an expression of the continuity of philosophy and science. Epistemology and philosophies of science are to be aligned with science, using similar methods and pursuing similar goals. The primary goal is to establish knowledge about the natural world by comparing theories with empirical and/or physical data. Papineau’s discussion focuses on methodological naturalism in terms of its effect on philosophical practice. As previously mentioned, there is a broad range of attitudes toward and motivations for philosophical methods that align with scientific methods. Methodological naturalists see philosophy and science as engaged in essentially the same enterprise, pursuing similar ends and using similar methods. Papineau cautions that if one understands methodological naturalism as the assertion that “philosophy and science have just the same aims and methods,” it further implies a shared goal “to establish synthetic knowledge about the natural world, in particular, knowledge of laws and causal mechanisms.” This is achieved by “comparing synthetic theories with the empirical data.”<sup>147</sup> There are some methodological naturalists who would say there are differences between philosophy and science, although they could be described as relatively superficial differences. These differences are not in aims or methods, but a matter of philosophy and science focusing on different questions. This kind of naturalism holds that whereas scientists think about specific phenomena, philosophical questions

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<sup>146</sup> Ibid., pp. 4-5.

<sup>147</sup> Papineau, p. 26.

are often distinguished by their great generality. Papineau states that categories, both those specific to science, e.g., electrons, stars, and those specific to philosophy, e.g., universals and identity, “structure all our thinking about the natural world.”<sup>148</sup> Philosophers can and do gather empirical data, but not in the same manner as scientists. Papineau suggests that this is because a single experiment would not suffice to modify a going theory, nor would it be the basis for alternative theories at this level. “Even so, the naturalist will insist, such theories are still synthetic theories about the natural world, answerable in the last instance to the tribunal of empirical data.”<sup>149</sup>

Regardless of whether philosophical questions are general or specific, some methodological naturalists claim the theoretical stance and the generality that characterizes philosophical method will not always have a need for empirical data. Empirical information can be used in different ways so specific empirical data is not critical for answering theoretical questions. The issue is that we might “have all the data we could want, but [we] can’t find a good way to accommodate them”<sup>150</sup> in a theory. Philosophical theorizing requires “unearthing implicit assumptions that we didn't realize we had ... a search for alternative positions that don't generate further contradictions” or re-evaluating premises that may be faulty.<sup>151</sup> “Still, methodological naturalists will urge, this doesn't mean that cogent empirical theories are not the aim of philosophy. An empirical theory unraveled from a tangle is still an empirical theory, even if no new data went into its construction.”<sup>152</sup> Along similar lines, David Schatz (1993) puts forth a proposal in “Skepticism and Naturalized Epistemology,” in which he describes “integrative

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<sup>148</sup> Ibid., p. 27.

<sup>149</sup> Ibid.

<sup>150</sup> Ibid.

<sup>151</sup> Ibid.

<sup>152</sup> Ibid.

naturalists” as those who hold that empirical inquiry can be used and applied to traditional epistemological questions.<sup>153</sup> There are alternatives to the replacement thesis that may be implied by varying commitments to methodological naturalism. Given Papineau’s account of methodological naturalism, science’s effect on philosophical practice appears to intently rely on and respond to scientific conceptions of nature—of what there is and what it does or does not do. This in turn implies some kind of implicit reliance on the ontological variety of naturalism.

De Caro and Macarthur take a somewhat different historical view. To distinguish it from other or older versions of naturalism, they refer to methodological naturalism as scientific naturalism – referring to its role since the beginning of the scientific revolution which they define as the gradual reversal of the roles of philosophy and science. The first decisive step is made by Hume, “who limited the scope of *a priori* knowledge to the relation of ideas and advocates a new ‘science of man’ whose guiding ideal is to regard the human as simply a part of nature; not set over against it.”<sup>154</sup> De Caro and Macarthur are in agreement with Quine that the naturalism advocated in QNE is a rejection of the idea that philosophy is prior to science but further, that with respect to the sciences, philosophy no longer plays the foundational role it once did. De Caro and Macarthur state that scientific naturalists would defend an even stronger claim: “Philosophy is continuous with the sciences; philosophy has no autonomy and philosophy IS science in its general and abstract reaches.”<sup>155</sup> They categorize three types of naturalism from within the category of scientific naturalism:

- i) The ontological scientific naturalist who holds that the entities posited by acceptable scientific explanations are the only genuine entities that there are. A weaker version holds that the only unproblematic entities are scientific posits.

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<sup>153</sup> David Schatz, “Skepticism and Naturalized Epistemology,” in *Naturalism: A Critical Appraisal*. Steven J. Wagner, Richard Warner, Editors. Notre Dame, IN: University of Notre Dame Press. 1993. p. 119.

<sup>154</sup> De Caro and Macarthur, p. 6.

<sup>155</sup> Ibid.

- ii) The methodological scientific naturalist holds that it is only by following the methods of the natural sciences or at the minimum, the empirical methods of a posteriori inquiry—that one arrives at genuine knowledge. A weaker version holds that the methods of the natural sciences are the only unproblematic (or non-mysterious) kind of knowledge that there is, thus provisionally allowing for nonscientific knowledge in some loose or practical sense.
- iii) The semantic scientific naturalist holds that the concepts employed by the natural sciences are the only genuine concepts we have and that other concepts can only be retained if we can find an interpretation of them in terms of scientifically respectable concepts. A weaker version holds that such concepts are the only unproblematic concepts we have.<sup>156</sup>

De Caro and Macarthur position scientific naturalism as a strong claim, “a global doctrine,” committed to these theses that are based on the ambition of science to give a complete explanation for all phenomena.<sup>157</sup> This becomes an important consideration in light of the powerful influence of modern scientific practice on philosophical methods. De Caro and Macarthur summarize the connection between scientific naturalism and the analytic tradition by acknowledging the decisive influence of 19<sup>th</sup> century positivists like Comte, Mill, and Mach, who were a part of “the first fully fledged scientific naturalist movement.”<sup>158</sup> This movement was then confronted by thinkers who became the founders of analytic philosophy-- Frege, Russell, and Wittgenstein – who rejected positivists’ psychologism and were critical of scientific naturalism. This rejection was fueled by the idea that philosophy and science were distinct, each with its own domains. Quine later undermined this distinction by disassembling the logical analysis of concepts that was central to the linguistic turn in philosophy. De Caro and Macarthur claim that Quine’s naturalized epistemology, in strongly endorsing the continuity of philosophy and science, was a significant contribution to establishing the orthodoxy of scientific naturalism within Anglo-American philosophy. In describing the differences between the various types of

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<sup>156</sup> Ibid., pp. 6-7.

<sup>157</sup> Ibid., p. 7.

<sup>158</sup> Ibid., p. 8.

naturalism, De Caro and Macarthur give priority to the ontological theme. Per De Caro and Macarthur's account, ontological naturalism is generally the result of the formation and success of modern, post-seventeenth century science and methodological (or scientific) naturalism followed, as a response to its "foundational relation to the enterprise of scientific inquiry."<sup>159</sup>

### **Harding's Critical View of Naturalism**

The scientific conceptions of nature of which feminists are generally critical have overshadowed conceptions of what it means to naturalize epistemology. To naturalize epistemology as Quine had proposed illustrates problematic commitments described by the three types of scientific naturalism outlined by De Caro and Macarthur: to scientism, to the totalizing and objectifying stance of science, and acceptance of the view that scientific methodology and concepts are the best available means for making and justifying knowledge claims. I frame Harding's critical view in terms of her overarching emancipatory goal and how this goal informs the holistic elements of her strategic naturalism. These holistic elements are those first described in my chapter on Quine. They will serve as starting points for discussions of how Harding has advanced that holistic view, how this contributed to changes in philosophies of science and scientific practices, and finally, how these contributions may become a valuable resource for epistemology. The first holistic commitment is a straightforward one: the continuity of epistemology and science especially as it pertains to the advance of knowledge claims, both common-sense and scientific. As Quine argues, these claims are confirmed or disconfirmed by reference to several parts of the current network of beliefs. In Harding's work, as I hope I have made clear, the naturalism she finds problematic is one that is directed toward the achievement

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<sup>159</sup> Ibid., p. 6.



of the closest approximation of the God's-eye view. This presents a singular reality, comprised of static entities and relations. The standard story of the development of science is that by adhering to a scientific method, political interests and values could be kept out of our inquiries and explanations of the natural order. Naturalism has had a wide range of meanings that changed from the strict rejection of supernaturalist explanations to expressions of the prevailing metaphysical beliefs of the inquirers, and reduction of phenomena to scientific descriptions. Strategic naturalism would take this as an account of what actually happens when knowing subjects attempt to naturalize elements of inquiry, putting naturalism in an historically situated context. Furthermore, it positions naturalism as but one belief that makes up a system or network of beliefs and therefore, makes it a proper candidate for revision. For FSE, the continuity of epistemology and science maintains a holistic and attenuated view of the fact/value distinction taken for granted in the discussion of naturalism. While it is possible and valuable at times to distinguish claims with explicit normative content from those with explicit descriptive content, this distinction obscures the influence of other non-epistemic, and non-scientific norms on justifications of knowledge claims or the nature of knowledge. As I discuss in chapter three, Harding's position is that an empiricism that refers to everyday experience is a worthwhile notion with which to begin. To naturalize would require not merely looking at everyday experiences but analyzing the ideologies that undergird our descriptions and interpretations of everyday experience.

The second holistic commitment of Harding's version of naturalism is the rejection of the distinction between knowing subjects and the objects of study. Strategic naturalism is not a static concept that is applied by knowing subjects or communities onto passive objects of study. Rather, it is a position that must be understood historically, previous definitions and applications,

determined by actual practice, and must be reflected upon. The ambiguity of naturalism, and Papineau's historical account of the shifting meanings and references of the term both point to the necessity of acknowledging these shifts as a part of a naturalistic approach. Harding's strategic naturalism, in accord with critical feminist responses, recognizes the actual scientific practices and theoretical models being used, and values the social/cultural values and forces that have shaped scientific practices and the objects of study. Rejecting the separation between knowing subject and objects of inquiry implies that subjects and objects should be studied such that naturalism is not something that a knowing subject or community applies to passive objects of study. This approach is pluralistic in its orientation, and given its emancipatory goals, is motivated to measure epistemic progress in terms of how accessible it is to marginalized standpoints as well as to how the knowledge produced might improve the lives of marginalized peoples. Naturalistic science would be responsive to marginalized groups and aim to alleviate the problems of marginalized peoples in its projects and research. Beyond the fact that epistemic labor, in its scientific and non-scientific forms, is a social activity, Harding recognizes that epistemic labor is situated in and reinforced by a broader network of social institutions, beliefs, and practices. This approach has several implications. From a scientific standpoint, the underdetermination thesis looms large. Evidence can be explained by any number of seemingly conflicting theories or models. As pointed out by FSE and other feminists, scientists cannot produce culture-free representations and, Harding notes, "intellectuals-- economics or science theorists, ontologists and epistemologists-- occupy social structure positions as intensely as anyone else. We are not floating around outside them."<sup>160</sup> Therefore, analyses of analytic categories like gender, as well as the social, cultural, and political values and interests at play in

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<sup>160</sup> Harding. "Representing Reality." pp. 154-155.

these theories and models would be essential to methodologies and explanatory models. The knowledge produced would offer a candid account of the sphere of inquiry, the condition of the relationship between inquirers and the objects of inquiry, and hopefully, a realistic view of the consequences and outcomes of inquiry. This supports Harding's arguments for strong objectivity and her claim that we should aim not for theories that are true, but for theories that are less false, and less distorted. Quine does grant that there are ideological commitments that are expressed in science—in the broadest way Quine meant it—and in our language. However, he places these commitments outside the purview and investigation of science. The situated self-reflection that characterizes FSE's general approach and application suggest that Harding's strategic naturalism would find Quine's approach lacking.

The third holistic commitment is to the communal character of knowledge. Chapter two describes Quine's critical anti-individualism regarding knowledge claims: individualistic accounts of knowledge that start from the internal mental processes and ideas of individual, knowing subjects are not naturalized. FSE accepts the characterization of knowledge as located in community; however, FSE does not draw restrictions on which elements of that community are to be included in naturalizing the way Quine does. Quine's unwillingness to consider the influence of social and cultural values and interests makes QNE as problematic and unprogressive as non-naturalized epistemologies. By reflecting critically on those social and cultural values, and recognizing their influence on these practices, the relevant characteristics and forces of a knowledge community are vested with explanatory power. Another important implication is that determining who is included in the communities of knowledge would also be revisable. The ideologies that shape communities of knowledge must be recognized and gauged because hypotheses are informed by what these communities want to know and what they want

to do. Science practiced in previous eras reflected aims to “provide solutions to a culturally distinctive set of social projects,”<sup>161</sup> and going forward, scientific and epistemic practices would be no different. What *would* be different would be that given the acknowledgment of culturally distinctive elements of both subjects and objects of inquiry, the knowledge produced and the decisions made based on that knowledge would be less distorted and inclusive. The input of marginalized standpoints would be proportional to the consequences borne by those standpoints; research proposals and decisions about how to use the knowledge produced would reflect that.

In this context, the third of Nelson’s criteria for evaluating an epistemology as naturalized is relevant: a naturalized epistemology would use consistent principles by which to explain consensus and dissent, and progressive and less progressive episodes in science. FSE’s characterization as a critical theory would mean that consensus and dissent, and progressive and less progressive episodes should be determined by noting to what extent marginalized others, from achieved epistemological standpoints, may contribute to scientific progress and the accumulation of knowledge. Harding’s aim is to submit the practices, and conceptual and theoretical assumptions of science to critical assessments that include historical and self-reflective analyses. Critical accounts of past scientific successes would serve as evidence to support recommendations for future research, methods, techniques, and practices that are produced by how scientific success is or has been defined, and the effects of these successes on marginalized peoples.

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<sup>161</sup> Sandra Harding. “Standpoint Epistemology (A Feminist Version): How Social Disadvantage Creates Epistemic Advantage.” In *Social Theory and Sociology: The Classics and Beyond*. Stephen P. Turner, Editor. Cambridge, MA: Blackwell Publishers Limited. 1996. p. 156.

## **Standpoint as a Resource for Epistemology**

My aim has been to look to Harding's FSE and the strategic naturalism it entails in search of guiding principles that might be applied to epistemology to make it more naturalistic, which is to say that it is an epistemology that acknowledges how and what we actually know, and how we use that knowledge to augment further inquiry. Any guiding principle would be offered up for revision based on the result of empirical and historical research from natural and social sciences, analyses of the ideologies concerning gender, social and cultural assumptions described by Schiebinger and Harding, and the evaluation of norms relevant to the inquiry undertaken. The normativity would be focused not merely on beliefs or justifications of beliefs but also on the structure and process of the inquiry itself. The holism at work in FSE requires evaluation of every aspect of epistemological inquiry. This holistic and pluralistic approach would have an impact on the methods and goals of epistemology and the critical evaluation of relevant concepts, categories and kinds at work in inquiry, including the recognition of difference, the recognition and benefit of acknowledging the role values and interests play in inquiry and knowledge, the impact of social, cultural and political structures and institutions on epistemological inquiry. As Harding acknowledges in *Is Science Multicultural?* (1999), standpoint strategies locate resources for knowledge production originating in marginalized contexts rather than contexts of dominant frameworks. Determination of these contexts result from examining and questioning conceptual practices at work in modern science, philosophy of science, and epistemology. Beginning epistemic inquiry in this way helps explain the larger context of political and social relations. Standpoints are not meant to essentialize or universalize, nor to determine the judgment or outlook of a learning community based on its political and social location. Rather, they call for a multiplicity of factors to be considered. Analyses done in

a variety of disciplines becomes a source for one and perhaps the only guiding principle currently available from this perspective: empirical data. This empirical data, however, can and should be used in a myriad of ways. As Harding points out, we should see FSE as “an epistemology, a philosophy of science, a sociology of knowledge, and method of research.”<sup>162</sup> Because the assumptions of each of these projects is indicated in the others, the upshot is that adopting a standpoint methodology will aid in the detection of broad cultural and conceptual frameworks that “limit knowledge-seeking projects.”<sup>163</sup> The standpoint approach could be one way to open up the variety of approaches that have defined epistemology: conceptual analyses that move beyond linguistic conceptions, intuitions, issues of epistemic trust, justification, and agency. It would also provide a space for epistemic progress. Epistemological progress, because it is difficult to define, cannot be predicted or guaranteed. The attempt to find a definitive set of epistemic principles would seem to be a misplaced objective. Any distinguishing marks, epistemological achievements, new epistemic standards or determination of the criteria by which to assess idea as constituting epistemological progress can be broached in broad strokes.

Charges of cognitive relativism that often are attributed to pluralistic epistemologies such as Harding’s are mitigated in several ways. Firstly, Harding makes a crucial distinction between Judgmental (or epistemological) Relativism and Sociological Relativism. Judgmental relativism holds that there can be no way to evaluate the truth or falsity of knowledge claims unless there is prioritizing of epistemic privilege. If there are no objective truth or criteria by which to make evaluations, then there is no way to make judgments. Strong objectivity is Harding’s attempt to move away from the fruitless choice between objectivity traditionally defined in terms of neutrality, and judgmental (epistemic) relativism. FSE is not advocating this kind of relativism.

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<sup>162</sup> Harding, *Is Science Multicultural* pp. 162-163.

<sup>163</sup> *Ibid.*, p. 163.

Sociological relativism holds that people of different cultures and eras will have different beliefs and different sets of criteria by which to evaluate knowledge claims. FSE calls for the recognition that beliefs—including scientific and epistemological—are socially situated and require critical evaluation and analysis already discussed. Another way to respond to the charges is by looking at the history of science familiar to us. We can see both the successes and failures of scientific practices at work have been conducted successfully without conclusive concepts and definitions. A third way to respond is to remember, as Harding notes, that knowledge production always occurs in “disunified and unstable environments,”<sup>164</sup> so acknowledgement of different frameworks and communication of said frameworks becomes an important element of epistemological progress. Disunified and unstable environments have value in the sense that they allow for tensions, which serve as opening spaces for synthesis and novelty. Harding’s acknowledgment of tensions is a familiar idea in philosophy of science. In “The Essential Tension: Tradition and Innovation in Scientific Research” (1977), Thomas Kuhn describes the tension between the desire for innovation and conservative resistance to change that exists in scientific practice. He asserts that the successful scientist begins work by taking up a set of “intellectual and manipulative commitments” and, at some point, must be able to abandon those commitments in order to take up commitments of “[one’s] own invention.”<sup>165</sup> Ultimately, Kuhn claims that new traditions could only result from “investigations firmly rooted in scientific tradition,” and this is why he, like Harding finds this tension “essential.”<sup>166</sup>

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<sup>164</sup> Sandra Harding. “How Many Epistemologies Should Guide the Production of Scientific Knowledge? A response to Maffie, Mendieta, and Wylie.” *Hypatia*. 23(4) (Oct-Dec 2008), pp. 216.

<sup>165</sup> Thomas S. Kuhn. *The Essential Tension. Selected Studies in Scientific Tradition and Change*. Chicago: University of Chicago Press. 1977. p. 227.

<sup>166</sup> *Ibid.*

In the critical feminist responses discussed earlier, one of the underlying assumptions is that epistemology should rely on the empirical evidence provided by the physical sciences. However, feminists also strongly advocate the use of sources, models and analyses that originate in the social sciences. Depending on the goals and objectives of the inquiry, there is always a range of commitment to familiar epistemological concepts, including justification, methodology, and objectivity that have been reconceived to be pluralistic, provisional, and open-ended in order to successfully change and respond to our shifting environments, projects, goals, and understandings. A naturalistic epistemological practice would acknowledge the diverse ways humanity responds, and has responded to environments, to adjustments to the environment, and how the environment responds to human knowers. It would be a holistic position because of the continuity between science and epistemology, which have overlapping goals pertaining to the pursuit of knowledge. Naturalized epistemologies should be receptive to not only empirical data of all the sciences, but to the “organic roots of behavior and of consciousness.”<sup>167</sup> Data from analyses of concepts or kinds at work in knowledge claims such as gender, race, and ethnicity, for example, but also analysis of broader, institutional social and cultural structures would also be included. Harding acknowledges the value of the responses and critiques of the traditional narrative of modern science. Similarly, the value of the responses and critiques of traditional epistemological theories and concepts feminist epistemologies bring to the table does not mean that epistemological practices are completely rejected. What would it mean to include methods and questions garnered from critical analyses and explanations by of epistemological work feminist scholars? Standpoint epistemologies, epistemologies of ignorance

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<sup>167</sup> Sellars, R.W. *Evolutionary Naturalism*. Chicago, IL: The Open Court Publishing Company.1922. p. vii.



(Sullivan and Tuana 2007), and epistemic injustice (Fricker, 2007) have all taken definitive step toward epistemological progress by questioning and analyzing entrenched epistemological concepts. These could contribute positively to our epistemological goals by expanding our critical understanding of ourselves and the world we live in. As I have argued, FSE's pluralistic and critical approach could motivate epistemological progress by shaking up, once again, epistemology's central normative task, its general approach, and the knowledge it has produced.

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