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Feminist Objectivity in  
Philosophy of Science: a  
Crossroad between Politics  
and Epistemology

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## Introduction\*

This thesis is a *feminist* thesis, and its scientific field is feminist epistemology. The dissertation's topic is primarily on scientific objectivity in the philosophy of science and aims to demonstrate the relevance of a feminist gaze in our epistemic practices in scientific communities. I address this purpose in two ways: (1) by presenting my project of a "contextual standpoint theory", originating in the combination of two famous strands in feminist epistemology, standpoint theory by Sandra Harding (1986b; 1991; 1993) and contextual empiricism by Helen Longino (1987; 1990; 2002b). I also address this purpose when (2) I broaden the focus of my research to investigate academic practices more generally through a feminist-political epistemology. I expect two different results in which the epistemic gain emerges: (1) epistemic benefit at local level, within feminist epistemology's own framework; (2) epistemic gain at global level in the investigation of academic settings.

To better explain what I mean with local and global benefit, a clarification of the expression "feminist epistemology" is in order. When I use the expression *feminist epistemology* in the second and third chapters, I am referring to the discipline in knowledge theory that has emerged since the 1970s, generally divided into three categories, and whose area of research usually refers to classical problems in the philosophy of science (justification, validation, objectivity). With the expression *feminist-political epistemology* in chapter one and four I indicate a broader perspective, when I analyze issues that are outside the traditional problems in anglophone philosophy of science. I propose this distinction to show that it is

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\* *In this introduction, I will use laden term such as patriarchy, heteronormativity, gendered category, etc. I assure the reader that every meaning I mention in the introduction will be duly explained in the various chapters. However, for a rapid recap, I suggest using the glossary I compiled at the end of the thesis.*

*I also clarify a matter close to my heart: inclusive language. The English language allows for much easier use if you wish to be inclusive. Nevertheless, I may have fallen back on classic gender binarism or universal masculinity in a few places, and I apologize for that. I have every means to express who I am and how I feel, and I wish everyone had that option.*

*TW: rape, suicide, violence*

possible to expand the focus beyond the classical framework of the discipline. A feminist-political epistemology adds to the strictly speaking discipline, a wider research area for problems. In this thesis, I study academic practices of Western thought according to feminist-political epistemology; however I believe it can be used to explore other topics, such as climate change or social and climate injustice. Feminist-political epistemology shares much with the original discipline, starting from some research methods and tools (intersectionality, marginality, decoloniality), that I will explain throughout the thesis.

In this introduction, to exactly clarify what feminist epistemology is (in both senses) and how I intend to demonstrate its importance, I start by what “feminism” indicates and why this thesis is a *feminist* thesis. After that, I give some historiographic details on feminist epistemology – the discipline. The following section deals with the questions that have inspired this dissertation. Finally, the last section outlines the general structure of my thesis and the methods employed.

## I General Definitions

Feminist philosophy – as a discipline with its own precepts, history, scholars – has been established in universities since the 1970/80s thanks to the academization of movements and intellectual strands that predate this institutionalization.<sup>1</sup> This systematization has brought notoriety to feminism in philosophy, regaining a space that was hostile towards it in the beginning.<sup>2</sup>

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<sup>1</sup> By academization of feminism, I mean the phenomenon that has occurred especially in the anglophone context, in which feminism as a theoretical elaboration enters in universities, establishing chairs, courses, classes with Women’s Studies first and Gender Studies later. Notable philosophers are Judith Butler 1990, Rosi Braidotti 1994; 1995, Donna Haraway 1985; 1988, Teresa de Lauretis 1999. These texts will also be joined by works within Queer Studies, Postcolonial Studies, etc. Subsequently, feminist thought also develops in other fields of knowledge beyond philosophy, for example, history, literature, sociology. This academization has not always been welcomed because it also entailed the sectorization of knowledge or the depoliticization of feminist thought. For more information, see chapter one of this thesis.

<sup>2</sup> Several feminist philosophers document and try to explain the reasons for the marginalization of feminism as a philosophy, see Lorraine Code 2007, Sally Haslanger 2008, Phyllis Rooney 2011.

Feminisms – the plural use will be explained to the reader in the first chapter – are not born initially as theoretical movements but are usually responsive to practical needs and urgings, arise from questions and requests sometimes very specific, and only with time, they come to establish themselves as a theoretical *corpus*, as a discipline. Feminisms’ origins are also disparate. We can list the typically Anglophone and liberal feminist movement (Wollstonecraft 1972, Woolf 1938; 1929, Truth 1851) that started from the demands of civil rights that were not granted to women (the right to vote or to property), or socialist feminism (Kollontai 1921, Zetkin 1972) that combines the fight against gender discrimination with the class struggle, second-wave feminism which reappropriated female (sexual) difference (Koedt 1968, Irigaray 1985, Lonzi 1970). Black feminism (Davis 1981, Lorde 1984, Smith 1978, hooks, (lower case letters are a choice of the author, 1981; 2000) denounces the white-bourgeois feminism for imposing itself as universal and argues for the inclusion and claims of specific needs of BIPOC<sup>3</sup> women. Latinx and decolonial feminism (Lugones 2007; 2010, Morales & Morales 1986, Anzaldúa 1987) restores dignity to Latinx individuals who had been flattened to a unitary group, and studies the intertwining of gender discrimination and colonialism; and still other feminisms.<sup>4</sup> Indeed, it is true that all women are discriminated because of gender, but that does not make us all equal. There are numerous axes of power inherent in the system in which we live, namely the Western Eurocentric<sup>5</sup> one, that structure our experiences and relationships privately and otherwise, besides the gender marker.

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In general, especially in epistemology, feminist thought, like any overtly political thought, is seen as an intrusion into a field of knowledge that is the more accurate the more it is neutral.

<sup>3</sup> Acronym for Black, Indigenous and People of Color.

<sup>4</sup> As you can see, there are different types of feminism, born out of different needs and agents. However, they are not necessarily opposed to each other. Indeed, they are often an improvement of past elaborations and complex stratifications. See chapter one on the various feminist *waves*.

<sup>5</sup> Eurocentrism is the tendency to consider Europe and, more generally, the West as the center of the economic, cultural, political, and social world. Many intellectuals speak critically against Eurocentrism; see Said 1978, Fanon 1952; 1961, Quijano 2000, Amin 1989.

The importance of multiple requests and listening of different individuals is typical of third and fourth wave<sup>6</sup> feminism, which aims to break down other discriminations such as race, class, ableism, sexuality, etc., that are intertwined with gender discrimination. A typical feminism of third and fourth waves is trans-intersectional feminism or just intersectional feminism. It can be said that intersectional feminism is the result of a long historical, practical, and theoretical evolution of the feminisms that preceded it and thus seeks to unite the needs and demands of multiple different marginalized women and individuals accumulated by being discriminated by the masculine and white Western system. One of the most powerful causes of hierarchy between individuals and discriminations, in fact, has a name, and it is patriarchy.<sup>7</sup> Patriarchy is a system that operates through the silencing and inferiorization of entire groups of individuals using social and cultural categories such as gender, race, sexual orientation while placing as *normal* the only non-category: the hetero cis bourgeois white, non-disabled male.<sup>8</sup>

Feminist epistemology is a subfield of the general feminist thought because it is a discipline inspired by successes achieved by women's political feminist movements and, at the same time, by the criticisms that feminist thought actively addressed to science. Feminist epistemology focuses specifically on knowledge and science. The symbolic date of its origin is 1986, the year Sandra Harding, one of the

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<sup>6</sup> Feminist waves refers to the thematic and chronological distinction of the various stages and evolutions of feminist thought. Nowadays there is a debate about the validity of this distinction as it follows the Anglophone and American thought, giving less importance to other types of feminism. I explain this issue further in chapter one.

<sup>7</sup> Patriarchy is certainly one of the most powerful systems of oppression in the world, but it is not the only one. There are other oppressive systems such as racism or classism that operate through the inferiorization of other individuals. What is important to point out, however, is how these systems are often auxiliary to each other since they share the same imposition whereby there is single worthy subject and entire categories of "others" deprived of their agency. It is precisely through the intersection of these systems that we can better understand why a black woman's status is not the same as a white woman's, even though they both share gender discrimination, or why a black man does not have the same privileges as a white man, even though they share the same gender.

<sup>8</sup> The average middle-class hetero and cisgender (gender identity coincides with the sex assigned at birth) white man is the subject of patriarchy; it is the only one in fact that represents the expected norm to be followed. The result is that the only normal and acceptable subject is the cis and hetero bourgeois white man – what all other individuals aspire to be, but never will be. The success of this superiority is given by the fact that the white man does not represent a social group like the others, but is perceived as a non-category, precisely as the normal.



pioneers of this discipline, published the book *The Science Question in Feminism*. In addition to tracing the cornerstones of the discipline, she also offers a first systematization in three strands: standpoint theory, empiricist feminism, and postmodern feminism. In my dissertation, I apply to my project of feminist epistemology the trans-intersectional feminism, to which I politically adhere.

Intersectional feminism is currently among the most popular feminisms, and it is the result of stratification and improvements of various feminisms. At the same time, the growth of intersectional feminism is still ongoing because the process of liberation of marginalized subjects is not yet achieved. This last statement connects with the first intention that prompted me to write this thesis.

## II Questions & Theses

The first intention that animates this thesis is ethical-political: I want to occupy a space in the academy by talking about feminism since my life practice and academic interest coincide. For this reason, it is a feminist thesis; that is, it claims space and critical discussion in the academy to convey political and ethical content to dismantle patriarchy, by fostering a change in theoretical-knowledge thinking.

Among the various themes of feminist philosophy, I have chosen to study feminist epistemology for a few years now. In this dissertation, I will focus mainly on standpoint theory and feminist empiricism; although I recognize the relevance of feminist postmodernism in the current debates, it does not constitute for me a viable solution as it risks sacrificing the normative aspect of feminism. Therefore, I will present to the reader not only with the state-of-the-art of feminist epistemology but also with my position within it.

Focusing on feminist epistemology allows me to combine the second intent, the epistemological one (to say something about the world) to the first one, the ethical-normative aspiration (how the world should be).<sup>9</sup> Feminism is normative

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<sup>9</sup> Epistemic dimension regards what we can legitimately say about the world (Ashton 2020b, 80). Roughly speaking, metaphysical and ontological dimensions refer to the idea of how the world is.

since it studies and proposes methods to improve our epistemic practices. Feminist normativity, however, should never be imposed from above according to a top-down approach but always arises from below, from practical urgings and demands (bottom-up). This combination of ethical and epistemological interest is not unusual for feminism as it has always been a discipline intertwining theory and practice. The union of theory and practice constitutes a form of activism and militancy, whose explanations and use I refer to in chapter one of this thesis.

However, there is also a scientific interest that animates this work of mine, and the scientific questions that serve as a thread throughout the thesis are primarily two.

The first is specifically about feminist epistemology as discipline and the debate on scientific objectivity, a debate that is central to epistemology and society these days. As such, feminist epistemology also provides answers. My thesis aims to show how feminist epistemology contributes to the debate and what we can gain from a non-neutral approach to science.<sup>10</sup> By answering this question, I want to clarify and draw the various positions that have been expressed, including my own, and, secondarily, contribute to ending the marginalization of this very discipline.

In order to answer this question, I have selected two theories – Sandra Harding’s standpoint theory and Helen Longino’s contextual empiricism – which in my opinion, better highlight the contribution that is not only epistemological but also political and social. These two authors offer two ways of amending scientific objectivity.

Harding’s project focuses specifically on the content, the (old and new) questions presented by marginalized groups when they enter epistemic practices. Using what is called the *epistemic privilege thesis*,<sup>11</sup> marginalized groups, due to the social and political positions they occupy, can develop epistemic privilege (they can

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<sup>10</sup> Scientific knowledge is commonly associated with a higher rate of evidence and indubitability than other knowledge because it is assumed to be impartial and neutral with respect to personal values, political, social, etc. I will better address this issue in chapter two of this thesis.

<sup>11</sup> The thesis of epistemic privilege, i.e., the fact that some subjects because of their social location can grasp certain cognitive aspects better than others, is one of the cornerstones of standpoint theory. The topic is addressed throughout the thesis, since it is also the object of confrontation with Longino’s project. In the third chapter I explain how to tackle this contradiction.

better pick up on contradictions, offer new questions and points of view, counter dogmatism) on specific issues. This provides a less biased epistemic framework. However, this epistemic contribution also has an important practical and social implication because it responds to ignored questions since the epistemic communities lacked the people who asked these questions. If a community is made up of homogeneous groups, it is difficult for it to propose worldviews that are too diverse and to ask questions about experiences it has no cognition of.

On the other hand, Longino's project argues for another aspect of objective knowledge: regarding methods, processes, and standards through which knowledge is legitimized; and on what is the justification behind objective knowledge. Methods are also of interest to feminist epistemology since feminist science theories had pointed out that not just epistemic agents were sexist, but the whole institution of science was imbued with androcentric and sexist assumptions.<sup>12</sup> Science itself, reason, objectivity are concepts constructed through traits and characteristics much more similar to the supposed masculine sphere and contrary to the supposed feminine one. Longino tries making epistemic communities more inclusive, by comprising a science that accepts its social character while maintaining its scientific nature.

My contribution is located at the encounter of these two approaches, hence my thesis (to answer the first way in which epistemic gain emerges) is that the epistemic and political contribution of feminist epistemology is graspable through the union of these two perspectives, which are not usually considered together.<sup>13</sup> I call this union "contextual standpoint theory". My intention is to cover through it both sides: content and methods.

However, it is not a simple pairing but a complementary intersection that I have pursued through various strategies, including, first, a recognition of the points

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<sup>12</sup> Androcentrism is the view that places the male point of view at the center. On the other hand, sexism is the attitude of those who judge individuals and behaviors based on their sex. In a world organized hierarchically between males at the top and females at the bottom, being sexist also means discriminating.

<sup>13</sup> In the literature in feminist epistemology, some authors work on a possible inclusion (Wylie 2012 and Intemann 2010; 2016). Nonetheless, the idea remains that there are substantial differences between the two positions. My project also works on smoothing out these differences.

of view in common and the differences to be reconciled. Perhaps the most complex knot was to devise ways so that the thesis of the epistemic privilege of standpoint theory, which prescribes certain preferences to individuals and values, and that of Longino, who instead places less importance on this aspect and focuses on the result of the final dialogue, would not be in contradiction. Secondly, I analyze the most vulnerable points of the two projects, including the fact that by focusing one on the contents and the other on the processes of scientific knowledge, they end up underestimating the other pole, respectively. After resolving these two issues, I theoretically and methodologically present how contextual standpoint theory works. I will add something more when I give the structure of the thesis.

But as I anticipated at the beginning, there are two ways in which the epistemic gain can be seen. The second is less developed in the thesis and is most likely one of the future directions of my research. In my second question, I wonder if, on a more general level, feminist epistemology can contribute to our epistemic practices on how to analyze not only scientific objectivity but also more general issues, for example, our academic settings. My thesis is that in a Western world, organized for as long as we can remember on axes of gender and sex, epistemology must be feminist-political. The word *political* here indicates that we need a study of the political-historical-cultural contexts of the foundations, purposes, and justifications of science and our cognitive practices in general. This is because epistemology is never neutral; indeed, neutrality is also an ideological choice. It is impossible to separate ourselves from what we know, and the location from which I start knowing.

But I would add – and this is why, it is called feminist-political epistemology – that we must also consider the element of gender precisely because of the pervasiveness that the categories of gender, race, class, etc., have. Intersectional feminist is the gaze that we should put on when we study epistemic phenomena. Feminism, by looking at the axes of discrimination around which power is organized, is one of the best tools we have available to read the complicated relationship between knowledge and power. Knowledge in fact is *situated*, that is, linked to the social and political location occupied by the epistemic agent. It is, therefore, also *partial* in two senses: it is *biased* because it is dependent on the social

position and on the agent who produces it, but it is also *partial* in the sense of incomplete. It never has a neutral gaze but is always *knowledge from somewhere*. Our epistemological questions are difficult to frame in epistemologies in which gender and the knowing agent's social situation are generally considered irrelevant to knowledge. But this is not to argue that knowledge can only be judged on its own terms. Feminist epistemology does not rule out the possibility or desirability of objective knowledge, but it does raise new questions about objectivity.

I answer to the first question in chapters two and three and the second in chapters one and four, because in chapter two and three I specifically deal with feminist epistemology discipline and the debate of scientific objectivity. On the other hand, in chapter one and four my focus is broadened beyond the classical range of feminist epistemology. Given this unusual division, I will do my best to accompany the reader through the structure of this thesis and the method employed. Furthermore, this will allow me to go over the salient points of the arguments supporting the two theses mentioned above (epistemic contribution in scientific objectivity and contribution at the macro level in academic settings).

### III Thesis Structure & Methods

I would describe feminist epistemology and its state-of-the-art as two poles that are intricate materially but divisible theoretically for argument's sake and conceptual importance. Both deserve to be represented at length. The first pole is the one that explains the adjective "feminist" next to epistemology and is analyzed in the first chapter, which is divided into five sections. In sections 1.1 and 1.2, I analyze the roots of feminist thought from a thematic point of view, e.g., the deconstruction of the sex/gender pair, and from a historical point of view, the division into waves, as much as they are debated.

Sex/gender deconstruction denounces the naturalization of the biological, anatomical female sex in the social construction of gender, that is, the processes, behaviors, expectations, and relationships expected to be performed and fulfilled for

the female gender. Female sexual differences become a way to justify the inferiority and subjugation of the female gender. Feminism responds instead that there are no natural inferiorities because inferiority between individuals results from historical and social relations of power. Everything is developed within a history; as such, the historical, social, political, and cultural processes give biological differences of sex social implications, which would not have otherwise. The same can be said of the political concept of race, sexual orientation, class, etc. For instance, plural human races do not exist in nature, yet they continue to generate deaths because race is a cultural-historical product that violently organizes and dominates other individuals.

The historical division into waves, on the other hand, traces the most salient phases and characteristic topics of the evolutions of feminist movements and culminates in the presentation of trans-intersectional feminism. This type of feminism is distinguished by its global aspiration to the study of multiple, even intertwined, axes of discrimination in addition to gender discrimination. Often, for women and other minoritized individuals, their discrimination can only be understood by investigating the intersection of multiple markers: gender, race, class, etc. Therefore, in my thesis, when I use the expression *feminist lens*, I will always mean trans-intersectional feminism. In addition, I will also use *intersectional lens*; *situated*; *embodied* as synonyms to make the reading less repetitive.

In sections 1.3, 1.4, and 1.5, I focus on the more specific relationship between feminist thought and science. To shed light on this relationship, I first present the “deconstructive part;” in it, I collect the most important critiques that feminism has made of well-established theories of science. These critiques are the most diverse: some scholars have brought light on female artists and philosophers who were in fact omitted from the philosophical canon, others study the obstacles faced by women to enter and remain in science. Others show how the very concept of science or reason has been endowed with characters opposite to those usually associated with women or femininity.

Section 1.4 is the “constructive part,” where I present broadly what is meant by feminist epistemology (the discipline) and what the leading positions and authors are. I call it the constructive part because it brings together the various solutions and theories proposed by feminist scholars to participate in science

debates. Finally, in the last section, I delve into the feminist methodology that distinguishes my research and this thesis. In this part, I have therefore selected, among the tools proposed by feminist philosophy, those that are, in my opinion, most useful and functional for a feminist-political epistemology and that will return throughout the thesis. The tools are functional both for my project in feminist epistemology on objectivity, and for the general appraisal on epistemic practices (feminist-political epistemology).

These tools characterize my feminist research and aim to enlarge and improve the epistemic frame, answering questions and problems regarding other individuals usually underrepresented in science while also carrying a change in the social conditions of these individuals. These same tools will be used to investigate academic arrangements more generally and reflect on what *inclusion* means, a word often mistreated rather than really understood.<sup>14</sup> I will reflect on this last topic, especially in chapter four, closing the circle initiated in chapter one.

The second chapter focuses on the second pole that forms feminist epistemology: theory of knowledge. If in the first chapter, I studied the feminist roots, in this second chapter, the focus revolves around the relationship that feminist epistemology has with the general debates in epistemology and what positions it takes in this regard, also showing its distinctive features with respect to other epistemological movements (sociology of knowledge, social constructivism, postmodernism, critical theory) that share some assumptions with feminist epistemology. For ease of reading, I have divided Chapter 2 into two parts, the first

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<sup>14</sup> Nowadays, the gender issue seems to be at the center of many debates as well as it is a goal pursued by state and institutions, see, for example, point 5 of the EU 2030 Agenda, which aims to gender equality and self-determination for all women and girls. Nevertheless, this popularization of feminist issues often leads to a trivialization and tokenization. By trivialization, I mean that many complex concepts such as gender identity, sexual orientation, etc., are sweetened, losing the solid political verve and social demands of feminism. Trivialization also entails that feminist issues are incorporated and capitalized by the market system, but only in those aspects that are easily adaptable to the neoliberal capitalist system. For example, the idea of female empowerment is well suited to a competitive and individualistic approach such as the neoliberal one. By tokenization I mean the (malicious) intention of appropriating feminist themes in order to “ride the current wave”, but without actually instituting changes in the status quo. It is not enough to put a single woman in power to make people believe that times have changed. See chapter one for an in-depth discussion.

entitled “Assumptions on Objectivity” and the second “Two Projects in Feminist Epistemology.”

In the first part, which runs from 2.1 to 2.3, I define the epistemological assumptions that feminist epistemology shares or adheres to. This also allows me to shed light on extra-feminist references. The two most impactful assumptions for feminist epistemology are the historical turn by Thomas Kuhn (1962), Norwood Russell Hanson (1958), etc., and the underdetermination thesis in the formulation of first Pierre Duhem (1906) and then Willard Van Orman Quine (1951). Kuhn emphasizes extra-scientific factors in the advancement and the very idea of scientific progress, while the Duhem-Quine cast doubt on the direct link between theory and observations. From the adherence to these assumptions, however, arise also problems to which scholars, including those in feminist epistemology, try to respond, such as the famous debate between epistemic and non-epistemic values and the different uses that can be made of non-epistemic values within all phases of the production of scientific knowledge, so not only the external phases (discovery) but also the internal ones (validation, justification). Feminist epistemology argues not only that these non-epistemic values enter the production of knowledge – whether we want them to or not – but that they can play a positive role in our epistemic practices, as in the case of feminist political values.

However, such a position can only result in a revolutionized image of the traditional scientific practice, that is, of neutral, detached, impartial knowledge. In the debate between value-free knowledge (knowledge exempted from any extra-scientific perspective, value, bias) and value-laden (knowledge not exempted from extra-scientific perspectives), feminist epistemology cannot but side with the latter. In section 2.3.3, I also review some of the strategies used by those who argue in favor of this idea, including strategies used by feminist philosophers.

If knowledge is value-laden, we must also rethink how we understand scientific objectivity, and thus considering its situated, biased, and partial nature. Indeed, knowledge is always produced from somewhere and by someone. It is impossible to separate these auxiliary and background elements in observations, formulations of theories, or even in their justification.



That said, however, knowledge is not doomed. Feminist epistemology focuses precisely on offering a viable way forward for knowledge while maintaining its social, situated, and partial character. In the second part of the second chapter (2.4 to 2.6), I explore in detail the solutions proposed by Harding and Longino on this specific problem, highlighting distinctive features and substantial differences. The two projects taken individually serve as the opener to the third chapter in which I discuss their union. These two authors revolutionize the concept of scientific objectivity, but without condemning science to pure arbitrariness. As I mentioned earlier, Harding and Longino focus on two different aspects of objective knowledge: the “contents” and “methods” of a feminist science.

In the third chapter, I present the contextual standpoint theory, my project born from the union of the two perspectives, i.e., standpoint theory and contextual empiricism. This chapter constitutes the longest part of the thesis and the most original and personal part. It covers both sides of the contents and methods addressed by the two authors, not by simply placing them in parallel but by working on their intersection and modifying some aspects that I believe should be strengthened.

To present my idea, I divide the chapter into three parts. Each part is self-contained, albeit functional to the project of contextual standpoint theory. In section 3.1, I analyze the shared commonalities, reviewing the classic three thesis formulation attributed to standpoint theory and extending it to Longino. The last paragraph of section 3.1 addresses perhaps the most complex issue, as it is also often brought up for maintaining the difference between standpoint theory and contextual empiricism. The issue revolves around Harding’s stated preference for certain values, most likely shared by certain individuals, and an almost indifferent position concerning what kind of values to prefer on Longino’s part. This contrast between what I call Harding’s “value perspectivism” and Longino’s “value pluralism” is one of the theoretical knots I have worked on most, as I believe that smoothing out this contrast makes the existence and legitimacy of my project more evident.

I have therefore isolated some of the authors’ textual and theoretical passages and argued how it is possible to see elements of one and the other in both perspectives. In other words, I show some passages tending towards a *mild*

relativism in Harding. She often argues in her texts against relativism. To overcome this, I will show that in Harding, one can trace a form of relativism that I call *mild* that allows one to save epistemic privilege without falling into a justification that is either too essentialist or too relativist. As far as Longino, I show some statements leaning towards a preference, albeit implicit, for certain values. Thus, both positions appear much less rigid.

In section 3.2, I describe and motivate what, in my opinion, are the weak points of each theory in order to show how my project can solve these problems too. Harding's problem is that she does not offer normative force strong enough to justify the contents carried by marginal groups. It is true that the normative force of standpoint theory lies in the dialectic between dominant and dominated positions, but in my view this idea needs to be strengthened and to clarify how we move from dialectic and discourse to epistemic justification. Longino's problem, on the other hand, is the limited explanation and inclusion of feminist values and insufficient discussion of how to include epistemic subjects that are usually discriminated. Including heterogeneous values different from dominant framework (for instance marginalized position) is imperative because they serve as counterevidence for positions or perspectives that otherwise will go undetected. Since extra-epistemic values cannot be eliminated, we might as well have the most varied pool of ideas to evaluate subjective preferences in the most accurate way. Therefore, in section 3.2, I propose a way to solve the lack of normativity in Harding and to specify some methodological points that need improvement and clarity in Longino.

Finally, in section 3.3, I expose how contextual standpoint theory ensue from a theoretical and methodological point of view. From a theoretical point of view, Longino's idea is improved by the marginal perspectives of standpoint theory,<sup>15</sup> which, due to their heuristic value, ensure the most varied and heterogeneous diversity of views. Diversity is the key ingredient on which the transition from subjective to objective, socially legitimized knowledge is based. But even standpoint theory is enriched with this union since it is only when marginal perspectives are

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<sup>15</sup> This principle in standpoint theory is also called "starting from below" or "starting from marginal perspectives".

included and grounded through the execution of Longino's criteria that we can be truly sure that 1) the perspectives are not rejected on an arbitrary basis and 2) the contents brought by these perspectives are endowed with plausibility and epistemic validation. The justification of these perspectives is dependent on and relative to the system organized according to Longino's criteria, which, while not fixed or absolute, are democratic criteria that make possible the formation of shared, shareable, and legitimized knowledge that we can therefore call objective. This reinforces the initial idea that it is possible not to fall into totally arbitrary knowledge even in a value-laden image of science.

From the methodological point of view, I affirm that the principle of "starting from marginalized lives" of standpoint theory can be understood in two ways, depending on the function and the epistemic phase. The first way is to understand it as a prerequisite to consider before executing Longino's criteria. Hence, the marginalized points of view must be collected (through quotas, through external surveys, through reports entrusted to other epistemic communities) before the scientific dialogue begins. This means that not only many viewpoints required to be heard in order to form the dialogue, but this number must also be heterogeneous. It must consist of different viewpoints, in which marginalized perspectives have a preferential channel for their heuristic input and historical motivation that having ignored certain viewpoints has led to the assertion of poorly inclusive theories, incomplete explanations, or even wrong ones in the past.<sup>16</sup>

For these same reasons, therefore, it remains the principle that they are privileged as prescribed by standpoint theory, yet without collapsing into essentialist or overly relativistic justifications. Only when we are certain they are present can the discursive and dialogic exchange begin with Longino's criteria. These regulate this dialogue, and they prescribe to take charge and change theories according to the different points of view that are heard, especially in case of criticisms. The marginalized points of view precisely because they are better able to grasp aspects that the dominant frame is not used to or does not want to see are usually in contrast to the dominant ones and are most likely the most critical.

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<sup>16</sup> See chapters one and two of this dissertation for examples.

The second way of understanding the imperative of “starting from marginalized lives” is a standard to integrate Longino’s third criterion. In the third criterion, Longino speaks of guidelines to which the epistemic community decides to adhere so that members can understand each other on language, topic, and relevance. It serves to prevent the epistemic community from being forced to accept the most disparate perspectives, even those that are not relevant to the issue, while at the same time making sure that those that are relevant are not cast away except for purely rational and argumentative reasons. To these guidelines, I suggest adding the one of “duty to inclusion” that is a way to ensure that one’s research or point of view does not harm marginalized communities, a way to remember to consider them, given the invisibility they suffer daily. In order to make sure that one is not insensitive or not inclusive, one way is to use areas such as feminist studies, but also decolonial, subaltern, queer theory, Marxism and critical theory which have always studied the dialectic between exploitation and subjugation, from a systemic point of view and not on a case-by-case basis.

In summary, the idea of focusing on two approaches makes it possible to have a more complete framework; it provides at a content level what the epistemic gain is, but it also does so at a methodological level, always taking into account the feminist perspective, but without flowing into either inconclusive political disputes or the overturning of stereotypes. Contextual standpoint theory, then, supports standards of objectivity, even if not value-free, while at the same time supporting a science informed by feminist values. Hence, this third chapter is specifically designed to prove the first thesis, namely, the epistemic-political contribution of feminist epistemology to the debate on scientific objectivity in the philosophy of science.

The fourth chapter, on the other hand, entitled “Feminist-political epistemology: Broadening the Scope of the Analysis,” employs a broader look at epistemic practices and reconnects with the general topics presented in chapter one. This wider assessment is obtained thanks to the feminist-political intersectional gaze, attentive to how power relations and social and political relations are built on a white supremacist system imbued with discriminatory categories. This fourth chapter is a broader study of the academic system, moving from the reflection on

expertise to the general investigation of the academic-epistemic fabric, helped by recent reflections in the field of epistemology as political epistemology.<sup>17</sup>

On the complex relationship between expertise and knowledge, feminist epistemology enters at arm's length with the study of epistemic injustice, the phenomenon whereby an epistemic agent is harmed in the ability to be recognized as a reliable epistemic agent, and the epistemology of ignorance that is, the active construction of states of ignorance.

In the last part of the chapter, I analyze the academic system and feminist precepts that can help improve it, by also addressing the topic of how diversifying the image of expert. I propose to follow three different principles: democratization, inclusion, and collaboration. This part should be understood more globally, but some of the examples I will provide can be applied to the methods and principles I described in the third chapter. Thus, they are practical examples of how feminist methods in scientific objectivity can also be translated into general guidelines in academic settings.

The first aspect I study is the organization of our epistemic practices according to democratic principles, that is, regulations that allow for the entry of diverse voices and thus allow for cognitive and social diversity development. Following the feminist precept of margin and pluri-diversity, the more viewpoints we select and listen to, the less biased our knowledge will be. The only way to secure this admission is to take advantage of democratic projects that listen to everyone.

The second aspect concerns ensuring effective inclusion to knowledge, especially in academia. If diverse voices are not simply exploited without changing the status quo, we need to create the conditions for them to grow and participate equally in the epistemic discussion. Doing so requires actions at both the macro and micro levels. On the one hand, it is necessary to work on targeted interventions at the employment level and a more differentiated allocation of funds. On the other hand, we must study the cultural obstacles and general ideology that march against

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<sup>17</sup> The expression political epistemology is an extensive label that collects various positions which, albeit in a differentiated way, support the importance of political factors in scientific production, also at the level of justification, foundation, and objectives of science. For a comprehensive compendium, see Hannon & Ridder 2021; see also Omodeo 2019; 2021.

inclusiveness. For this reason, in this part, I address the supposed meritocratic system in the academy, the scholastic and university canon, bearing witness to data on the representation of minorities in academia. We are not yet close to *effective* inclusion, rather a *disguised* one.

The third aspect analyzes the collaborative practices between different members and different points of view that will culminate in legitimated knowledge. Collaborative practices are reminiscent of those mentioned in chapter three, such as quotas or reports and surveys from different epistemic communities. All these aspects are sensitive from an ethical-social point of view. From an epistemic point of view, they point to the production of knowledge – that is why the democratic, inclusive, and collaborative phase aims anyway to move from friction and dissent to a shared and legitimized knowledge. Paradoxically, then, obtaining a superior epistemic contribution from feminism is possible thanks to the overlapping of more partial knowledge, which, united and compared, leads to an increasingly all-encompassing vision. In the general conclusions of this dissertation, the reader will find the attributes that scientific objectivity shall gather based on the *essence* of objectivity, on the methods of objectivity, and the attitude of the epistemic agent.

To sum up, the response of feminist (political) epistemology (in both senses) is to evaluate the relationship between science and feminism and show that correcting past mistakes that were made can bring potential enfranchisement from accusations of bias, incorrectness, and inaccuracy for science and social justice. The real goal is to shed light on the role of political power and context on epistemic practices hitherto taken for granted, but with the specific intention of making them more accurate and precise. Just as situated knowledge can be a challenging terrain, it can also become the solution. This is not to give rise to anti-science sentiments, but precisely the opposite: when one is aware of the limitations of science, one can reason about them and discover new directions and new pluralistic approaches in research. This is why feminist-political epistemology's reflections deserve a place in the diverse tapestry of 21st century postmodern society.

# Chapter One: Historical Figures and Political Roots of Feminist Epistemology

Science it could seem is not sexless; he is a man, a father, and infected too.

Woolf 1938, 127

## Introduction

The object of this doctoral dissertation is feminist epistemology, particularly the contribution this discipline makes to the debate on scientific objectivity and, more generally, epistemic practices. I believe that to analyze feminist epistemology is useful to conceptually separate the two main poles that form this discipline: feminist thought and theory of knowledge, to give them their proper attention. In this chapter, I present the central tenets of feminist thought and its connection with scientific theories.

Two fundamental *urges* cross the soul of feminism. On the one hand, it was born as a practice, as a political movement by women<sup>1</sup> to dismantle the sociopolitical mechanisms of the system that discriminates them. Feminism identifies patriarchy as this system of social discrimination. Over time, however, this militancy was accompanied by the theoretical and philosophical study of cultural methods and tools, including philosophy, which had a role in maintaining this patriarchal domination. Thus, feminism has developed a proper theoretical framework and philosophical apparatus. If, until thirty years ago, feminist literature and texts were not well-known in the general philosophical debate,<sup>2</sup> in a few

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<sup>1</sup> The US and European political movement of emancipation were initially formed by women only, primarily white and bourgeois. Only later, the movement will expand and gather other causes and marginalized identities.

<sup>2</sup> Feminism and its themes, especially from 1970/1980, in conjunction with the academization of feminism that took place thanks to theoretical, sociological, and scientific work in almost all fields of knowledge, came to the fore with Women's Studies and, later, Gender Studies. In addition, gender balance and inclusivity are now eligibility criteria to be respected in

decades, feminist literature and philosophy gained popularity and success, so much so to become a distinctive field in academia, with teaching posts and with a specific forum of publication.<sup>3</sup> Feminist concepts are taught to both undergraduate and graduate students and are subject for doctoral theses. It is recognized as an area of specialization in job descriptions and has extended to several fields: political philosophy, ethics, epistemology, aesthetics, history<sup>4</sup> and more. Specifically, this dissertation focuses on feminist epistemology and the problem of scientific objectivity, but as I mentioned earlier, I believe it is important to describe the political and historical roots that led to the birth of feminist thought in the first place.

In the first paragraph, I describe the key concepts of feminism and the theoretical framework of feminist philosophy. Afterwards, I will explain the historical structure of feminist thought, usually often divided into *waves*.<sup>5</sup> Next, I will move to the analysis of the feminist lens in epistemology and philosophy of science, or in other words, addressing the question of why feminist epistemology is an

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administrative places, in workplaces, and access projects funded by the State or the European Union. Moreover, these same themes have also begun to have popular interest, so much so that nowadays, we witness the so-called “pinkwashing”, namely the process whereby feminist topics are incorporated and sweetened in their most socially acceptable form. Unfortunately, this popularization of feminism has not always been followed by an effective understanding and taking seriously of these issues. On popularization of feminism see also Putignano 2021b.

<sup>3</sup> Some examples are *Feminist Studies*, *Hypatia: A Journal of Feminist Philosophy*, *European Journal of Women’s Studies*, *Asian Journal of Women’s Studies*, *Feminist Review*, *Gender & Society*, *Indian Journal of Women’s Studies*, *Journal of Gender Studies*, *Journal of Lesbian Studies*, *Journal of Women’s History*, *Women’s Studies International Forum*. This list is not complete. These are just a few names of academic journals on feminism that can be found.

<sup>4</sup> Feminist history of science has retrieved examples of women in ancient and modern times whose contributions have long been downplayed or even hidden by the traditional canon. For instance, in ancient history, notable figures are poet Sappho and the philosophers Diotima and Hypatia (Garavaso & Vassallo 2007). In the medieval and modern ages, Heloise of Paraclete, Hildegard of Bingen, Victoria Colonna, Christina of Lorraine, Elizabeth of Bohemia, etc. For more details see Waithe 1987; Ménage & Zedler 1984; Hagenruber 2015. See also online encyclopedia on <https://historyofwomenphilosophers.org/ecc/#hwps> edited by History of Women Philosophers and Scientists Center in Paderborn University (DE).

<sup>5</sup> The division into waves has been the object of discussion within the feminist movement (cf. Vergès 2020). For some scholars, these waves follow only the US historical point of view.”. The wave metaphor is also criticized for not allowing or focusing on elements of continuity among different phases. For more on the question of ‘feminist waves’ see also Hogeland 2001, Laughlin et al. 2010.

For me, the waves only serve to keep track of the macro-evolutions of the movements, without any intention of flattening the different and geopolitical positions. In this regard, Spivak’s concept of strategic essentialism, according to which “several people can speak in the name of a single group to emphasize a common cause”, is especially fruitful (Spivak & Harasym 1990).



essential tool for reading not only contemporary political events but also epistemological “facts.” This inquiry is divided into three parts: the first one discusses the deconstructive part of feminist theory on science, the most important critiques that have led to reconsidering established scientific views and positions. The second one is the constructive part: it examines the original contributions made on typical epistemological issues and scientific discourses, such as scientific objectivity and the role of epistemic and non-epistemic values. Given the vast range of this part, I decided only to list here a brief description of the most important strands in feminist epistemology. The epistemological discussion and the relationships between feminist epistemology and mainstream theory of knowledge and philosophy of science will be presented in the second chapter.

Finally, the third part of this chapter is focused on the methodology. Here, I present the feminist-political lens and its methodological tools to analyze phenomena. Feminist-political epistemology will return especially in the four chapter when I address the analysis of academic communities. The precepts listed in chapter one result from my personal choice among the possible guidelines used by feminist scholars. Hence, they are not intended as exhaustive or univocal. In the last section, I shall outline the outcomes we can expect if we do epistemology in a feminist-political way and list my conclusions.

## 1.1 Feminism Against Dualisms: The Sex/Gender Pair

“Men and women are, of course, different. But they are not so different as day and night, earth and sky, yin and yang, life and death. In fact, from the standpoint of nature, men and women are closer to each other than either is to anything else – for instance, mountains, kangaroos, or coconut palms. The idea that men and women are more different from one another than either is from anything else must come from somewhere other than nature”.

One of the first issues to clarify when it comes to feminism is that there is not just one feminism, but many feminisms. The root of the word “feminism” traces back to the terms ‘feminine’ or ‘female’, i.e., the gender connotation since Western<sup>6</sup> society indeed has a problem with the feminine and what is associated with it. Hence, in very general terms, feminism is defined as the contestation of patriarchy: the social, cultural, economic, symbolic order based on hierarchical distinction and the domination of the masculine over the feminine (Missana 2014, 9).

But feminism does not do nor function only for women but also appeals to other marginalized<sup>7</sup> categories affected by other discriminations. Furthermore, even though it puts males at the top of the social pyramid, the patriarchal system still constrains them in a very toxic and specific pattern.<sup>8</sup> Feminism is therefore

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<sup>6</sup> Having been born white and in a Western country, I will mainly discuss situations where I have had direct experience and knowledge. There are other societies and cultural systems organized according to a patriarchal system. For a study of universal rights and cultural relativism, see, for example, Okin 1999. Moreover, Subaltern Studies have been dealing with this question for years; I recommend starting from them.

<sup>7</sup> The use of the adjective marginalized in this thesis does not indicate marginality in numerical terms, not least because women make up about 50% of the world’s population. The adjective marginal refers to the exclusion, erasure and subalternation suffered by subjects who do not correspond to the dominant one, the cis and hetero bourgeois white man. This is why I prefer the term “marginalized” over “marginal”. I thank my friend and colleague Dr. Bortolami for this input.

<sup>8</sup> TW: suicide, violence, rape.

The concepts of toxic masculinity and rape culture are well-known concepts in the feminist universe. Toxic masculinity refers to the type of education imparted to men in Western society that shuns the characteristics linked to sensitivity, intuitiveness, and empathy (not surprisingly, characteristics usually attributed to the female universe). Males are educated to strength and overwhelming and the inability to express their feelings and weaknesses (Gasparrini 2016; 2020, Bourdieu 1998, hooks 2005, Kimmel 2017). This social pressure for success causes more depression and suicide in men than in women (8 out of 10 suicides are men). Furthermore, the fact that men are “predators by nature” also leads many men not to report rapes because men are also raped, often by other men, but they do not say it. Unfortunately, there is very little research due to the lack of reliable data.

The concept of rape culture, on the other hand, indicates the fact that rape has become so normalized over the centuries that it has almost become an integral part of Western culture. One of the first scholars to whom the concept is traced is Susan Brownwille (1975) with *Against Our Will: Men, Women, and Rape*. The phenomenon of rape has nothing to do with immoral men seeking sexual gratification; instead, rape is used to maintain a system of psychological (and physical) domination over women; it is always an act of power. Rape culture is perpetuated through misogynistic language, reducing the female body to an object, and the romanticization of sexual violence. The impact of rape culture affects all women; most of these women limit their behaviors because of the existence of rape; they live in fear of being raped. For men, this is not

concerned with equality<sup>9</sup> for all human beings and argues that neither sex nor gender (as well as other characteristics) cannot be used to create discrimination.

Although in Western philosophical history we find examples of female figures<sup>10</sup> who have distinguished themselves for thinking critically against patriarchal control, at least until the beginning of '900, the subordinate role of women was taken for granted.<sup>11</sup> Women were excluded from public life, social and political activity, education, and artistic creation. Myth, culture, and Western philosophy have played a founding role in this exclusion. Hence, the analysis of women's relationship with knowledge is essential since it represents until the 20th century an almost male and exclusive domain, and it was an accomplice venue from which to exercise this control. Feminism shows, among other things, that liberation from patriarchy is played out in the control of knowledge (Recchia Luciani & Masi 2017).

The main object of feminist theoretical apparatus is the criticism against binarism: nature and culture, human and animal, immanence, and transcendence, male and female (Plumwood 1993).<sup>12</sup> Since the very beginning of the feminist movement, feminist theories have subjected Western dualisms to severe and continuous criticism. One of the essential pairs to consider when discussing

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the case, even though they can experience violence too. In this way, rape acts as a powerful tool to ensure that the entire female population remains subordinate to the male population, even though many men are not rapists and many women never become actual victims of sexual assault. Furthermore, gender-based violence is so normalized that the majority of sexual violence takes place within love and intimate relationships. In Italy, rape was a crime against honor and not against the person until 1996. For general literature on the theme of gender-based violence cf. Palladino 2020, Levine & Meiners 2020, Romito 2005, Priulla 2020.

<sup>9</sup> Equality is a loaded term; it does not imply the erasure of specific characteristics of each human being because there is no intention to forget the differences between men and women. The purpose of feminism is that the possible differences will never justify inferiority, inequality, injustice, and discrimination of any kind.

<sup>10</sup> I will mention these women in more detail in the next paragraph, where I will address the historical division of feminism. Here, I would like to point out that the women who have distinguished themselves in the history of Western philosophical thought, have managed to assume a public role or be socially recognized, not because they were exceptionally superior to other women, but because of specific and rare social-historical circumstances.

<sup>11</sup> For inquiry on the conditions of women in Modernity cf. Federici 2014; 2015; 2020.

<sup>12</sup> As far as the relationship between nature and women, ecofeminist positions place at the center of their reflections how this relationship has been constructed in Western philosophical thought (Merchant 1990). Precisely because of this focus on nature, nowadays ecofeminists are often called on to discuss the environmental crisis in which we are (Barca 2020).

feminism is the binomial sex/gender. Piccone & Saraceno (1996) indicated that while the previous pairs all represent dichotomies, the sex/gender pair has a more complex relationship between terms. Sex and gender, in fact, link nature to culture, that is, the question of how, from the female sexed body, we arrive at the historical and social construction of women. Feminism poses the question of the social construction of gender and sex belonging. Generally, the term gender refers to the social and, therefore – cultural, and not biological – construction of the concepts of woman and man. Sex indicates the biological, anatomical, and chromosomal characteristics of individuals. However, as I will clarify later, feminist authors like Butler will explain that even sex is not fully or merely ‘biological’.

Gayle Rubin<sup>13</sup> (1975) in *The Traffic in Women* is the first feminist author to introduce the term gender, incorporated in the expression sex-gender system, i.e., the set of processes, adaptations, modes of behavior, and relationships by which each society transforms biological sexuality into products of human activity and organizes the division of tasks and roles between men and women, differentiating them from one another and creating gender categories.<sup>14</sup> The division of sex and gender roles is a division between men and women codified culturally but so ingrained that it is perceived as natural, that is, inherent to a biological and natural condition. This naturalization<sup>15</sup> of gender is at the basis of male domination, which then consolidated structures of oppression and social subjugation for the female condition, delegating certain spaces, roles, and tasks to men and others to women. Hence, the biological difference between the sexes appears as the natural justification for the socially perceived and constructed difference between genders and the sexual division of labor.

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<sup>13</sup> Although it was Rubin who was the first author to openly conceptualize the concept of gender as opposed to sex. In the 400s, librarian and scholar Christine de Pizan highlighted the issue of women and how women’s nature was culturally conceptualized (Recchia Luciani & Masi 2017).

<sup>14</sup> It should be specified that like all concepts loaded with meaning - gender - is not used univocally even by feminist theorists (see, for example, Butler 1990, Garbagnoli 2013); in non-feminist literature is sometimes used in a derogatory sense with “gender ideology” to refer critically to gender studies (Garbagnoli & Prearo 2018). Moreover, even before we had a lexicon to talk about the difference between gender and sex, de Beauvoir’s famous statement on “one is not a woman, but she became” hints to this point. I thank professor Garavaso for this input.

<sup>15</sup> Naturalization can be seen as the most effective form of ideology, that is, a socially constructed worldview that has become common sense and, as such, is not cast into doubt (Gramsci, NB XI).

But it is not only a matter of taking note of a gendered culture but that this culture is also unbalanced since gender is the first ground on which power manifests itself (Scott, 1988, 42). This division between material-symbolic spheres (masculine and feminine) follows a profound asymmetry. They are oppositional and organized in a hierarchical order (Plumwood 1993). To the male sphere, it is given more critical and transcendent tasks; to the female is given the role of private and bodily matter, maintaining a strict distinction between mind and body. Ultimately, gender has come to include and exceed biological sex. Feminism then emphasized this imbalance and submission, challenging the legitimacy of historical advantage and supremacy of men and offering analysis and hypotheses of theoretical and historical inquiry to the social and cultural construction of gender category.

In summary, gender studies do not deny biological data but rather ponder about the interrelation of nature and culture, that is, how difficult it is to distinguish between the two dimensions and how it is important to understand their nexus correctly. The problem arises when nature is constructed from culture: how social, cultural, symbolic, and ultimately artificial customs are signed off as natural. This overlap of culture and nature explains the consolidation of gender roles and female submission.

“Nature/culture and sex/gender are not loosely related pairs of terms; their specific form of relation is hierarchical appropriation, connected as Aristotle taught by the logic of active/passive, form/matter, achieved form/resource, man/ animal, final/material cause. Symbolically, nature and culture, as well as sex and gender, mutually (but not equally) construct each other; one pole of a dualism cannot exist without the other”.

Haraway 1989, 52

But on the other hand, feminism never wanted to cancel the female experience,<sup>16</sup> which relates to the body dimension, a topic challenging to address. On the one hand, a different body affects different individuals (trans body, man body, woman body, disabled body, etc.), but for this reason, some types of body (and the persons who belong to) are subdued precisely because of how these bodies look.

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<sup>16</sup> In feminism, experience is never given as simple datum. Experience and the body's materiality are complex and never naturalized, as I hope will become clearer later on, at the end of this chapter.

Hence, feminism has also analyzed the other pole, namely bodily experience, and focused on the sexed and material experience.

The more women's historical, social, and cultural awareness increased, the more feminist thought grew into more elaborate and complex reflections. For instance, feminists also studied the role of sexual reproduction<sup>17</sup> in the subordination of women to reappropriate bodies and sexuality at the expense of dominant paradigms such as compulsory heterosexuality, monogamy, and nuclear family (Rich 1980, Wittig 1991). In the next paragraphs, I will explain the evolution of these feminist concepts throughout the historical changes of the various feminist movements.

## 1.2 Feminist Waves<sup>18</sup>

### *The First Wave: 1848 to 1918*

From a historical analysis, the first works that testify to the irreversible beginning of the emancipationist movement of women<sup>19</sup> are the *Declaration des droits de la femme e de la citoyenne* (1789) by Olympe de Gouges, which advocates the recognition of inalienable and sacred natural rights for women (and not only men),<sup>20</sup>

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<sup>17</sup> One of the most famous scholars is Shulamith Firestone in *The Dialectic of Sex: The Case for Feminist Revolution* (1970). For Firestone, once women control means of reproduction, they will free themselves from male domination. The role of reproduction will also inspire Marxist theorists and re-readings of Marxian theory to explain domination and subsequent patriarchal liberation. Finally, another author who studied sexual reproduction, yet in the primate kingdom, is Haraway (1984;1989).

<sup>18</sup> For a general literature on feminisms cf. Recchia Luciani & Masi 2017, Cavarero and Restaino 2002, Curcio 2008, Missana 2014, Cudd & Andreasen 2005, Aruzza & Cirrillo 2017.

<sup>19</sup> Although these two authors are historically considered to be the first initiators of feminism; forerunner figures can be found in earlier centuries, such as Christine de Pizan [Cristina da Pizzano], who wrote *La città delle dame* in 1405, a book in which she encouraged women to obtain an open and accessible education. It is precisely the domestic life to which women are relegated that prevents them from being creative. The most interesting aspect of de Pizan is that she understands this domestic subordination not as essentialist but as historical-social, determined by concrete material and social situations (Recchia Luciani & Masi 2017, 9 -10). Other notable figures are Moderata Fonte, Lucrezia Marinella and M.lle de Gournay, the first feminist to write a treatise in history (1622).

<sup>20</sup> Olympe de Gouges was a playwright who lived during the French Revolution. She composed

Mary Wollstonecraft's<sup>21</sup> *Vindication of Women's Rights* (1792), and Sojourner Truth *Ain't I A Woman* (1851).<sup>22</sup> Nevertheless, the first feminist wave is usually dated between 1848 and 1918 (the word feminism will appear for the first time in 1895) because it is only at the beginning of this century that the collective, political, and social movement for women's rights will begin to form. This first wave's movement is articulated around two sides, one liberal and one socialist. Both movements aimed to eliminate a political and legal inequality, claiming the right to vote, the ability to manage their property, hence the "basic" rights that did not yet belong to women. On the liberal side, important names are Elizabeth Stanton, Lucretia Mott,<sup>23</sup> and Harriet Taylor. The assumptions of liberal reflections start from the common liberal Enlightenment tradition. The idea of liberal feminism is that women are equal to men based on natural rights regardless of their sexual or gender characteristics. Every human being is autonomous, rational, moral, and therefore free to exercise the rights derived from those natural characteristics.

Among the most important figures of the socialist current are Flora Tristan (utopian socialist), Alexandra Kollontaj (Russian revolutionary, first woman to ever be minister and ambassador in Russia), Clara Zetkin (feminist socialist who proposes the International Women's Day, celebrated the first time the 8<sup>th</sup> March of 1911). In Italy, the influence of Anna Kuliscioff<sup>24</sup> was important to allowing the vote for women.

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the female version of the written *Declaration* in 1789.

<sup>21</sup> For a more detailed study of Wollstonecraft and the role of education for women, see Cossutta 2021.

<sup>22</sup> Sojourner Truth was an essential figure in abolishing slavery in the US. She is best remembered for her 1851 speech at the Ohio Women's Rights Convention, later known as "Ain't I A Woman". This speech marks the origins of intersectionality, loosely defined as the overlapping of different social identities and their possible particular discriminations and oppressions. Intersectionality is a paradigm that will become central only many years later in feminism. The title of the book *Ain't I A Woman* (1981) by black feminist author, bell hooks recalls Sojourner's speech.

<sup>23</sup> These two feminists are remembered because they led the first U.S. women's rights claim at Seneca Falls in 1848. It must be remembered that at that time, feminism was still white and Eurocentric, and not too veiledly racist as Angela Davis (1981) rightly points out. This does not diminish the importance they had in starting the women's movement.

<sup>24</sup> Anna Kuliševa, Italianized Kuliscioff, journalist and revolutionary, helped with the foundation of the Italian Socialist Party. For Kuliscioff, equal wages (i.e., the same pay for jobs of equal value regardless of gender) and improved working conditions were the starting point for solving the "women's question". In 1911 she founded the Socialist Committee for women's suffrage, but she

What marks the socialist wake is the consideration that legal achievements of formal equality between men and women do not change the material conditions of women's subordination, especially those forced to sell their labor-power. Therefore, socialist feminists believe a socialist revolution that erases all forms of subordination from the capitalist to the patriarchal one is necessary. It must be said that in later years, Marxist feminism has reinterpreted Marx's theory, highlighting how we must consider an indispensable force, albeit invisible, which explains the success of capitalism: the gratuitous reproductive force of women. One of the first to find these critical issues in Marxian thought would be Juliet Mitchell (1971). Subsequent and important scholars are Mariarosa Dalla Costa (1972), Selma James (1972), and Silvia Federici (2014), who led the "Wage for housework" movement.<sup>25</sup>

*Simone de Beauvoir and Virginia Woolf: two eclectic thinkers*

Virginia Woolf (1882-1941) and Simone de Beauvoir (1908-1986) are not perfectly ascribable to the liberal nor socialist sides. But both are fundamental authors because they opened the theoretical rethinking of the first feminism. Woolf and de Beauvoir reflect on the very goal of equality and on the identification of a possible new path: considering the difference between women and men in a society but guaranteeing equal rights and material conditions for each individual, regardless of their gender (Cavarero & Restaino 2002, 20). The topic of *difference* will be at the center of the second wave of feminism.

Woolf's reflections are contained in her literary works *A Room of One's Own* (1929) and *Three Guineas* (1938), considered true classics of feminism in literature. In the first book, the difference between men and women for being able to devote themselves to writing is placed at the center. Woolf imagines a hypothetical sister of Shakespeare who would not dedicate herself exclusively to writing because first, she would have to worry about avoiding rape, a concern to which Shakespeare as a man

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was defeated by Giolitti's law, which instituted universal suffrage even for the illiterate but only for male citizens. Women in Italy will vote for the first time in 1946.

<sup>25</sup> James and Dalla Costa (1975) advocated for recognizing women's domestic work at home and outside home. In 1974 a domestic work campaign was also started in Italy (mainly in Padua) thanks to the work of Dalla Costa, Picchio (1992).



is dispensed. In addition, women lack the material conditions (a room for them and the economic means – hence the title) to lead an independent life and devote themselves to writing. Woolf points out how patriarchy grants specific availability to men and hinders them for women. In *Three Guineas*, on the other hand, Woolf faces the issue of economic availability so that women can emancipate themselves through education. Women, however, should not be given the same education as men, which is connected with military craft. Women's education should produce a peaceful type of society, and this will free women from the subordinate role imparted to them by male education.

“the best way to help you [men] prevent war is not to repeat your words and follow your methods, but to find new words and invent new methods.”

Woolf 2014, 327

In summary, Woolf claimed the importance of economic independence and the ability for women to act independently through increasing opportunities to study, read, educate themselves.

On the other hand, Simone de Beauvoir proposed the emergence of a new female subjectivity in her monumental work *The Second Sex* (1949). De Beauvoir's book is divided into two parts: the first analyses the causes of the subordination of women, while the second part studies the various stages of subordination that a woman may go through, also indicating collective paths to follow. The assumption from which de Beauvoir starts is that the individual, whether male or female, is “free”, and therefore is potentially free to choose the path of transcendence, defined as the path of planning and changing the world, or immanence, that is accepting things as they are. The basic problem, de Beauvoir notes, is that women's situation presents itself differently from this condition, because despite being a free individuals like men, a woman

“discovers and chooses herself in a world in which men impose on her to take the part of the Other, in other words, they claim to stiffen her in an object function and to vote her into immanence because her transcendence must be perpetually transcended by another essential and sovereign consciousness.”

de Beauvoir 2012, 37

Thus, de Beauvoir's work aims at studying how the conditions of women's inferiority are determined by the hierarchies of power and strength that must be deconstructed. For example, de Beauvoir criticizes the biological explanation placed at the basis of women's subalternity: for her, women's biology does not imply their inferiority at all; she also refutes the Marxist explanation that reduced women's oppression to class oppression. Instead, the unique character of women's inferiority is to be found due to their being considered *Other*. Although they are (potentially) free, women have found themselves in different conditions from men and have chosen to be the *Other*, namely the second sex. Women have therefore accepted their destiny of inferiority:

"One is not born, but rather becomes a woman. No biological, psychological, or economic destiny defines the figure that the human female acquires in society; it is civilization as a whole that develops this product, intermediate between female and eunuch, which one calls feminine".

de Beauvoir 2012, 325

Feminist theory then will have the task of emancipating women, making them other, finally recognizing that they can become subjects and be *other* (with low capital this time). To do this, women must build themselves autonomously, freeing themselves from the sphere where male domination has condemned them.<sup>26</sup> So far, women have been the second sex, the *Other*, a category subordinate to men. But since they were not born women but became ones, they may cease to be such and be *other*.

### *The second wave: 1968 to 1980*

The second feminist wave goes from 1968 to 1980. Feminists of the second wave highlighted how women continue to be subordinate despite having achieved formal

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<sup>26</sup> Without diminishing de Beauvoir's importance, one can reflect on this idea of being able to liberate oneself autonomously from the patriarchal yoke by emphasizing the different starting conditions of women. It is relatively easier for some of them, who have all the economic, material means to educate and emancipate themselves. For other women, who start from much more complicated conditions, to say the least, the path to liberation is more complicated. In my opinion, therefore, we must be careful not to fall into victim-blaming (blaming the victim for what happens, even if she is not), which is a strategy much loved by patriarchal thinking to keep women in their place.

equality, at least in some countries. According to second-wave feminists, the reason for this subordination is to be found in the supremacy over the sphere of sexuality and reproduction. This is because the sexual difference of women is transformed and used by men to justify a difference in social, political, cultural, and family roles that require women to be subordinate to men. Therefore, one of the answers to overthrow the subjection will be precisely in claiming positively this sexual difference.<sup>27</sup> Among the most important thinkers of this period, we find Anne Koedt 1968, Shulamith Firestone 1970, Kate Millet 1969, Adrienne Rich 1980, Luce Irigaray 1985, Carla Lonzi 1970, whose aim is precisely to eliminate sexual domination of men that leads to using women as only sexual objects and for their own pleasure. How to claim this sexual difference will determine the methodological and theoretical differences between these authors.

For instance, Millet argued a far more archaic form before class domination, namely patriarchal subjugation (Millet 1969). Marxist feminism and then Marxist feminism of rupture [*femminismo della rottura*] blames Marxian thought for not being able to analyze women's domestic work, which involves not just a manual and productive degree, but also emotional work<sup>28</sup> (giving something of oneself to another) (Rose 1994, 29).<sup>29</sup> Firestone, on the other hand, represents an exception

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<sup>27</sup> The preferred mode will be self-awareness groups [*autocoscienza*] in which women's experiences and their relationship with men are analyzed.

<sup>28</sup> Emotional labor refers to the work employed by women to suppress those emotions that they are not supposed to have, e.g., anger, assertiveness, aggression - even in those conditions where they are justified. However, emotional labor is also employed in care and family support of family members, from spouses to children to aging parents. The emotional work and emotional cost of this kind of employment can be immense, which is again skewed toward women (Chemaly 2019). Alisa Del Re also delves into the distinction within the free labor women provide, dividing it into three groups whose activities often overlap: domestic work, reproductive work, and care work. Domestic work involves tasks such as cleaning, washing, cooking, shopping etc. Reproduction work serves to reproduce "the species": having children and raising them, creating the conditions necessary for the continuity of life, and taking care of dependent persons. Care work has to do with relationships, with the continuity of relationships, with affection, with sex (Del Re 2012, 154).

<sup>29</sup> Marxist Feminist of rupture arises from the encounter between Marxism and radical feminism, whose initial author was Mariarosa Dalla Costa (1972), intending to criticize the Marxian analysis of work and put the focus on the reproduction of the workforce by women and of domestic and emotional work. Another expert is Silvia Federici, who studies the gaps in Marx's original accumulation paradigm. What distinguishes these approaches from Marxist feminists such as Rosa Luxembour and Kollontaj, who also radically discussed social relations in the Marxian universe, is that domestic work is not ascribable to one's own value [*valore d'uso*]

regarding the reproductive function of women and the relationship between technology and women. The former will save women from the “weakness” of motherhood, which cages women to their only reproductive function (Recchia Luciani & Masi 2017). Anne Koedt 1968, Monique Wittig 1991, Adrienne Rich 1980, and Audre Lorde 1984 inaugurated the strand of lesbian feminism thought, which sharply criticizes heteronormativity as it is not a natural behavior of relationship between man and woman, but it is a form imposed and naturalized for millennia.<sup>30</sup>

Another strand of feminism labelled as French feminism also studies sexual difference (Cixous 1976, Irigaray 1985, Kristeva 1980).<sup>31</sup> According to it, sexual difference is seen as the origin of the symbolic dimension. Male thought has imposed itself as the only universal symbolic agent, leaving women the only way to participate in the symbolic order of accepting themselves as sexed objects. For these French psychoanalytic feminists, the “solution” is to deconstruct the masculine symbolic order to open the possibility of a feminine otherness that is not mimetic nor specular to the masculine one (Irigaray 1985).<sup>32</sup> This line of thought would be reworked by French materialist feminists<sup>33</sup> around the 1980s, for instance, with

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but is also exchange value [*valore di scambio*]. Therefore, it is not separated from the production of value (Curcio 2008). Cf. also Federici 2014 e 2020, Dalla Costa 1972, James 1975.

<sup>30</sup> Wittig (1991) understands heterosexuality not as a sexual orientation but as a political regime based on the subjugation and appropriation of women by men. Lesbians, on the other hand, as women who love women, open a crack in this system.

Rich (1980) denounces heterosexuality as a system imposed and organized by force. Lesbian existence is constituted as an act of resistance to this system.

<sup>31</sup> A contribution concerning the male-female difference is that of Carol Gilligan *In a Different Voice* 1982, who found a different ethic for males and females. Her studies will inaugurate an interest in the definition and problem of care and of domestic and emotional work usually relegated to women. Contemporary studies reflect how we can redefine sexual and gender roles through the practice of care, in a non-essential way. See Tronto 2013, Fraser 2016, in Italy, Pulcini 2009 and Serughetti 2020.

<sup>32</sup> The French Feminism Difference will have an important following in Italy, with the circle of Diotima in Verona thanks to Luisa Muraro and Adriana Cavarero, who will elaborate their own Italian Feminism Difference.

<sup>33</sup> The contemporary strand of the New (Feminist) Materialism includes scholars such as Braidotti 2019, Haraway 1988, and Barad 2017. This materialist wave was animated by the productive friction between the linguistic turn and the framework of social constructivism, precisely questioning the limits given by prominence to language, culture, and representation that erased the material and somatic exploration of realities, beyond their ideological and discursive articulations. Discourse about the body and nature was reduced to the sphere of socio-cultural mediation, and thus the nature-culture dualism that social constructivism wanted to eliminate was rewritten. The new materialism then focuses on the matter as an unexplored question in which its relationship to the dynamics of materialization and discursive practices is

Delphy & Leonard (1984) advocating a position of separatist feminism, placing the distinction between women and men not on a biological-symbolic level, but a materialist-economic level, arguing for the domestic mode of production as a specific mode of exploitation.<sup>34</sup>

One of the central strategies of second-wave feminism is the practice of collective self-consciousness, but unlike the usual Western meaning of self-reflective thinking,<sup>35</sup> women's self-consciousness is a political practice that focuses on women's experiences, needs, and narratives, whose most famous slogan is "the personal is political."<sup>36</sup> This practice will be particularly appreciated by the Italian separatist feminism of Carla Lonzi, Elvira Banotti, Carla Accardi. In Italy, starting from 1968 and the student protest, feminist activist groups will animate the historical struggles regarding the legalization of abortion, divorce, equal opportunities, leading to a renewal of Italian society.<sup>37</sup>

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studied.

<sup>34</sup> The most severe limitation of Marx's theory, according to Delphy (1993), is that it failed to consider the kind of labor that does not produce exchange value. This is a type of work that constitutes a large part of the work done; this work is especially done by women and people from the "south" of the World.

<sup>35</sup> Feminist collective self-consciousness practice differs from existing forms of self-consciousness in Western philosophical thought. The fundamental difference is that the latter is usually considered an individual, solitary and self-reflective activity for the self to become aware of itself. It is an ancient practice whose roots can be found in Ancient Greece with Socrates and later in Christian philosophy with St. Augustine until it was developed in modern and contemporary philosophy. Feminist self-consciousness is an essentially political and collective practice that focuses on women's experiences, needs, and demands (Recchia Luciani & Masi 2017).

<sup>36</sup> This slogan (1970) is connected to Carol Hanisch, a US feminist of the second wave. This sentence draws attention to the fact that themes and experiences claimed by women were politicized; that is, women understood that their experiences were not strictly private but concerned wider phenomena, also linked to the public sphere. Therefore, reflections on abortion or domestic violence on women are not experiences that privately concern the women who experience them, but political and social phenomena to reflect and use for profound change in the way society is organized. It is a political issue that women can have control of their bodies in the event of abortion or that violence against women can be stopped only through gender education and cultural change.

<sup>37</sup> For a more detailed and specific study of Italian feminism, cf. Lussana 2012, Di Cori 2003, Marcuzzo & Rossi-Doria 1987, Boccia 1990, Lonzi, Accardi & Banotti 1970.

### *Third waves: starting from the '80s*

Starting from the 80s and 90s, with the emergence of cultural-philosophical perspectives such as postmodernism, poststructuralism, deconstructionism, and the academicization of feminism, feminism experienced a renewal with the third wave. In conjunction, the birth of queer theories<sup>38</sup> and sex positive theories (later called postporn theories)<sup>39</sup> also took place. Among the best-known figures of the third wave is Donna Haraway, who studies the relationship between women and science in the light of the recent technological-informatics revolution. Haraway's most renowned text is *A Cyborg Manifesto* (1985), in which she imagines a utopic society whose protagonist is the cyborg, a hybrid individual between machine and organism. In this society, the boundaries between animal and human, organism and machine, matter and information disappear; consequently, the gnoseological

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<sup>38</sup> The term queer is an umbrella term that was initially used in a derogatory sense and then was reappropriated by U.S. activists. It now denotes a broad spectrum of subjectivities whose sexual orientation, gender expression, gender identity, and sexual identity differ from cisgender and heterosexual. Nowadays, Paul B. Preciado (2011, 2015, 2019), a transgender scholar and activist, is one of the most famous scholars of queer and post-gender thought. Preciado works on the very deconstruction of the concept of gender and sexual identity since femininity and masculinity cannot be the only two possible alternatives. Moreover, he argues that the binary notion of sex is not anatomical but always political, useful to maintain the social structures of the family and the heterosexual model. Preciado also explores studies in biology on the sexed body, post-porn studies and intersexuality. For a complete survey of intersexuality, see also Fausto-Sterling (1993; 2000). For an Italian study of historical and contemporary queer theories, see Zappino (2019) and Bernini (2017, 2019). Bernini defines queer theories as critical political philosophies that question the relationship between power and sexuality from the point of view of sexual minorities (Bernini 2017, 185). He also divides them into three groups: revolutionary Freudo-Marxist theories, radical constructivists, and anti-social theories.

<sup>39</sup> The relationship between pornography and feminism is an old debate that has seen several reconsiderations. In general terms, scholars such as Catharine MacKinnon (1989) and Andrea Dworkin (1981) are critical of exploiting bodies (female and non-female) by pornography, as they re-propose the objectification of bodies and sexual exploitation today. But we also find other sides within feminism (Willis 1982) that do not entirely criticize pornography. This latter is seen as mean to regain control of one's female sexuality for a long time, subjected to male gaze and pleasure. Postporn then becomes an approach that makes women's bodies and pleasure public platforms of political resistance to the control and normalization of sexuality (Braconcini 2020, 16). The intent is to expose the codes of traditional masculinist, racist, and ableist pornography, giving voice and sexual dignity to those systematically excluded, marginalized, or humiliated by it: bodies that are not usually considered attractive for pornography now become the main subject of pornography. The debate also concerns sex work. In the case of the self-determined choices of sex workers, feminism postporn recognizes the potential of sex work as a form of personal recognition and sustenance. Abroad, especially in Spain with Preciado 2011, 2015, 2019, Despentes 2019, Bourcier 2005, porn studies have more credit, while in Italy, they struggle to find space in academy (for Italian collection, Staderini 1983 Braconcini 2020). However, the prominent space for postporn is activism and militancy, cf. Borghi 2020.

dichotomies that have consistently placed women on the qualitatively inferior side will disappear. Always in this utopia, women do not fear technology and science but rather are invited to make use of them as an instrument of liberation.

On the recodification of the female subject, Braidotti (1991; 1995) speaks of nomadic subjectivities. This subjectivity restores the multiplicity of identities that a subject can have while remaining embodied and situated. Finally, Judith Butler rewrites the terms of sex and gender as purely discursive and performative constructions (see Butler 1990). In these new studies, gender is seen as exclusively symbolically constructed: it is realized through the combined effect of repetitions and social and cultural practices that are due to a certain gender. According to Butler (1990), our actions and behaviors are repetitive to the point that they confirm the correspondence between genders and behaviors expected. In this way, we produce the gender or the supposed naturalness of the sexual gender that distinguishes us. Butler calls this phenomenon “performativity of gender.” She means that gender is performative because it constructs the gender identity that is constituted. It is the repeated stylization of the body, a sequence of repeated acts within a strict regulation that produces the appearance of a substance, of a natural way of being (Butler 1990, 45). But if gender is done, it can also be undone: the queer subject represents the deviant from the norm, which, however, for this very reason, can imply performativity in a subversive way and allow new gender redefinitions against the normative logic of power.

Concurrently, postcolonial, subaltern theses and Black and Chicano Feminism appeared and intercepted the demands of black feminism and other ethnic minorities<sup>40</sup> that have not been adequately recognized by heterosexual, white, bourgeois, and Eurocentric feminism.<sup>41</sup> These feminist authors are actively engaged in reinterpreting the category of women to emphasize its immense

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<sup>40</sup> These minorities grouped together under the acronym of BIPOC: Black, Indigenous and People of Color. This umbrella term is used to refer to non-white individuals who suffer discrimination in the white supremacist system. Nevertheless, it should be used advisedly so as not to flatten the differences.

<sup>41</sup> Some of these feminists who study the interconnections between gender, race, and subalternity prefer the word “decolonial” over “postcolonial” as they thus emphasize the need and action to decolonize culture, education, and training from the Eurocentric imprint, see for example Vergès 2020.

diversity while at the same time trying to find a communal point. Notable philosophers include Gayatri Spivak (2011), Angela Davis (1981), Barbara Smith (1978), bell hooks (1981; 2000), Rosario Morales (1986), María Lugones (2007; 2010), and Anzaldúa (1987), to name a few. Their composite and heterogeneous ideas have two common points of departure, namely the concepts of margin and intersection. Gloria Anzaldúa (1987), with her meaning of *frontier* in which the overlapping of multiple identities gives rise to a new consciousness – called *mestiza* – creates other ways of seeing, living, and coexisting for subaltern identities. The *mestiza* is a conscious break with traditions to rethink, transform, reinvent new identities and differences.

María Lugones, a Latinx feminist philosopher, leads an important reflection on the nexus between racism and gender, calling it “coloniality of gender” (2007 and 2010). The coloniality of gender allows us to analyze how colonialism and patriarchy are intertwined and how they articulate the world (especially the colonized world). Lugones asserts how colonialism organizes the sex/gender system on a rigid male/female sexual binarism (effectively erasing all individuals who do not recognize themselves in this category or do not fit anatomically in the standard definitions of male and female).<sup>42</sup> This sexual binarism is also imposed thanks to heterosexuality, which subordinates one of the two sexes (the female) to the other. Gender, just like race, is a colonial imposition that serves to hierarchize and place women in a position of subordination.<sup>43</sup> It is extremely interesting to note that thanks to these studies the term *colonization* has a layered meaning, as it does

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<sup>42</sup> Intersexuality concerns the biological condition of those individuals not perfectly ascribable to one of the two sexes M/F. Intersexuality can show itself in various forms: in external genitalia, internal genitalia, hormones, chromosomes. I point out that not recognizing oneself in one of the two genders does not depend on the condition of intersexuality and vice versa.

<sup>43</sup> Lugones’ (2007) reflection is extensive, and for obvious reasons, it is not possible to exhaust it here. The sources she refers to are scholars (e.g., Oyèwùmí 1997) who deal with pre-colonized societies. In addition, her thought is intertwined with the concepts of coloniality of knowledge, power, and being developed in the postcolonial context. The coloniality of knowledge (Lander 2000 and Grosfoguel 2002) concerns the erasure of entire knowledge that does not meet Eurocentric standards or the cultural appropriation of these concepts without obviously quoting them. To explore this concept, I refer to the paragraph “margin” of this chapter. On the other hand, the coloniality of power (Aníbal Quijano 2000) concerns the plundering of raw materials, territories, and the political domination of colonized populations. Finally, the coloniality of being (Nelson Maldonado-Torres 2007 and Fanon 1952 and 1961) analyses the experience of those who undergo colonization. Coloniality of gender is included in this last strand.



not only indicate invasion by foreign powers, but is also a cultural and ideological imposition made on individuals.

Thus, BIPOC scholars analyze the role of race as a category in Western society.<sup>44</sup> Even though scientifically, races do not exist, they exist culturally. Race is then a cultural concept used to naturalize the inferiority of the non-white persona. For this reason, feminist scholar Vergès also talks about “people racialized”.<sup>45</sup> BIPOC women highlight aspects of their oppression as not immediately comparable to the oppression of racialized men or white women.

Postcolonial, Black, latinx feminisms are part of a strand of other feminisms, which rewrite the grand narrative of heterosexual white feminism and question the concept of global sisterhood, emphasizing that it is not enough to investigate existing relationships between men and women, but it is necessary to examine inequalities between women who come from different geopolitical contexts.<sup>46</sup> In particular, white feminism is accused of having tried to remedy the marginalization of non-white women by creating the monolithic category of *third world women*,

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<sup>44</sup> For a study on Italian colonialism and responsibility, see Day Obasuyi 2020.

<sup>45</sup> Race is a discriminatory social construction involving various legal, cultural, social, and political devices by which people are labeled and stigmatized. Race, combined with gender, class, and other markers, produces specific forms of exclusion (Vergès 2020). The deconstruction of the cultural concept of race is especially due to Frantz Fanon (1952, 1961) and postcolonial studies. Colette Guillaumin (1977) explains how racism is not the cause of oppression and slavery; it is instead the consequence, the mark that the white oppressor imposes on the oppressed to justify their actions. Furthermore, there is a big debate on the biological basis of race in analytic philosophy, cf. Appiah 1994. The chromosome basis is denied, but this debate has brought to light also the notion of ethnic identity as based on lineage, place, and tradition.

<sup>46</sup> To distance itself from a white, bourgeois type of feminism that is exclusionary of other identities, decolonial and intersectional feminists denounce how *pink* feminism is used as a weapon to exasperate the prevailing Islamophobia (cf. Pepicelli 2012, Arruzza et al. 2019, Vergès 2020). The observance of the covered head and/or face are quite a minority phenomenon; a problem that deserves to be studied instead is the poor integration policies for the children of migrations, inequalities, discrimination, and racism suffered by Muslims on European territory (D’Elia & Serughetti 2017, 179-180). The much greater risk is that Muslim women will be crushed by both systems without solutions, from the West that sees them only as victims and makes them a tool against the foreigner and on the other hand from Islamic fundamentalism that condemns them to subordination (Declich 2016, 183). Moreover, decolonial feminists also denounce the attitude of false interest towards the feminist question, appropriating socially acceptable and integrable concepts (for example, individual female empowerment combines well in an individual system such as the current neoliberal one). Hence, to the word empowerment, it is preferred the Spanish word of *impoteramento* to distinguish itself from the limitations of neoliberal feminism, which, by not taking on collective struggle and diverse identities, only allows upper-class women to gain rights and power seats, leaving out all the rest of the vast female population (Arruzza & Cirillo 2017, Borghi 2020).

effectively cancelling the historical and geographical differences between them and thus reinforcing the marginality of their position and their condition of subalternity.<sup>47</sup> These authors argued that sexism and racism are never isolated conditions but represent systems. Therefore, they are supporting structures conniving to the supremacy of a certain social group, the white male western one.

### *Intersectional feminism or a fourth wave?*<sup>48</sup>

From the third wave and postcolonial and subaltern studies originate trans-intersectional feminism.<sup>49</sup> This latter analyses the various intersections of power between markers (race, ethnicity, sexuality, etc.) and is aware of the embedded condition of each body. The precepts of transfeminism are collected in the *Transfeminist Manifesto* written by Emy Koyama (2020).

Intersectional feminism insists on the linkage and overlap of multiple power devices that reinforce inequalities or create new ones. Intersectionality is then the tool to study all intersections of human experience and dismantle discriminatory practices and inequalities. The goal is to make people understand that violence towards non-white women is at the intersection of racism and sexism, just as

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<sup>47</sup> Spivak (2011) focuses on the possibility of a discourse that the subalterns of the Indian subcontinent have in a context created to satisfy the economic needs of the West. Regarding, for example, the immolation of widows, whether it is imposed on them by patriarchal Indian society as an anti-colonialist practice that appeals to principles of tradition and nationalism or whether it is outlawed by whites who save women from black men, in both cases, women are deprived of the right to Agency and access to discourse.

<sup>48</sup> Jennifer Baumgardner in *F'em! Goo Goo, Gaga, and Some Thoughts on Balls* (2011) wonders if it makes sense to talk about the fourth wave, given the limits of these divisions. One of the aspects about the fourth wave is to consider the role of social media today in feminist dissemination and activism through forms of digital militancy.

<sup>49</sup> Indeed, the overlap between racism and sexism was raised as early as 1977 by the Combahee River Collective. But only years later, in 1989 with the elaboration of Kimberlé Crenshaw was finalized and recognized. Crenshaw's example to show intersectionality is quite simple. The case is a collective dismissal of all Black women from a company. Because of this, the women, united in a class action, had sued the company for discrimination. The judge had dismissed the lawsuit because the company employed black men and white women. Crenshaw showed how black men were employed as laborers, and white women were employed as secretaries. Being a black woman then excluded them from employment as laborers because they were black but not a man, and as a secretary because they were women but not white. It is only through the intersection of the two axes of racism and sexism that the discrimination in question can be revealed and understood.

poverty is a material condition that fosters other forms of exclusion related to gender, disability, etc. Intersectional feminism refers to the fact that it is a feminist responsibility to keep in mind inclusivity rather than universalizing a unique experience. Bell hooks states that we must take responsibility for uniting women in political solidarity. This involves taking responsibility for eliminating forces that divide women, and racism is one of them. Women are not a monolithic essence but a set of multiple, complex, and potentially contradictory experiences, defined by the overlapping of variables such as social class, race, age, and lifestyle (Braidotti 1995). In this matter, definitions by hooks (2000) and Anzaldúa (1987) on the marginal, hybrid, mixed, boundary, subject are very important in order to understand how social class, race, gender, and age are the axes of differentiation that, intersecting and interacting, constitute subjectivity; their notions refer to the simultaneous presence of some or many of these traits in the same subject.

The word *trans*, on the other hand, means going beyond (the characteristics) and (differences) as an end to cease all discrimination. Therefore, the trans-intersectional body is a political body that does not respond to a precise identity but places itself at the intersection of different categories, capable of creating alliances with different groups and movements. Trans-intersectional feminism is the ground of my feminist epistemology project, and it involves a precise way of taking position that I will explain in the next paragraphs.

I want to clarify that I decided to use these pages to talk about the main approaches and issues of feminism and its various evolutions to draw attention to how the achievements of feminist movements have first of all a collective character, and secondly, I wanted to give an idea of the long march of emancipation and liberation of women. This march is not over yet, and forgetting the previous conditions that women lived in is a luxury we cannot afford. If one did not know that the struggle for equal civil rights (e.g., the right to vote) did not coincide with the complete liberation of women or knowing that in Italy, the crime of honor was abolished in 1981, but the testimonies of women in anti-violence centers tell a different story,<sup>50</sup> it would make being a feminist anachronistic.

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<sup>50</sup> <https://www.istat.it/it/files//2020/10/Report-centri-antiviolenza-28102020-1.pdf>

The path to liberation is still long,<sup>51</sup> and the importance of retracing the various feminist waves lies right here: every collective practice, every achievement, every consolidated academic reflection constitutes a layer that goes to influence the theoretical and militant framework we use today.<sup>52</sup> Each author, each viewpoint, responds to an investigative question of the time; in the beginning, there was equality, now we realize that we cannot talk about equality until we also consider the other systems of power in place. For example, Black feminism and Latinx feminism have illuminated past feminisms about the pervasiveness and interrelationship between racism and sexism and between class struggle and patriarchy. Trans intersectional feminism is such because of the feminisms that preceded it. Trans-intersectional feminism is the spokesperson for many feminisms, tracing the various stages of thought and avoiding a big limitation of first and partially second feminism. Every lesson and tool learned enriches the new forms of the political practice of transfeminism, this time with the specific purpose of creating a shared and transversal front against patriarchal, racist, classist oppression.

Trans-intersectional feminism is feminism capable of collecting different disparate reflections (from multiple authors and exponents), it is a complex feminism, but complex is the world in which we live, and therefore, we can only use a tool that can account for this complexity. To make discourse of liberation for women, the feminist movement must be able to make a broad and complex discourse on the intertwining and accountability of patriarchy, racism, colonialism, and neoliberalism: transfeminism has precisely this purpose at the origin, giving voice to all the invisible, silent, forgotten and sometimes silenced by male violence. To quote transfeminism's slogan *#somosmarea*, a clear attack against global gender

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<sup>51</sup> Even in the so-called developed world, women are paid less than their white male colleagues, cf. ISTAT and EUROSTAT report on Gender Pay Gap and chapter four of this dissertation for more data.

<sup>52</sup> The aim is not to give an evolutionary or progressive reading of feminist thought; I have used the traditional distinction into waves because they do, in my opinion, allow us to mark out and make a substantial difference to the issues that feminists and the new generations are gradually addressing. However, I do not mean to say that the topics touched upon by the first feminists are "resolved", nor "elementary" than those tackled now; and vice versa, that the themes tackled now are the only ones that define the "one true feminism".

violence, with a destitute political plan: *No volveremos a la normalidad porque la normalidad era el problema.*

The intersectionality of the struggles and the internationalist intent of the movement allows for embracing and representing the most disparate, hybrid, marginalized subjectivities to overcome dualisms, building coalitions and alliances collectively. And with the hope that the feminist lens will guide the following political changes, for a redistribution of wealth and reappropriation of the common goods, for free access to health, culture, and education (Costelación Feminista 2020, 19).

As a final note, retracing the path of feminisms in this dissertation is also a political choice. I think it is still important not to take for granted the history of feminisms and its concepts, so whenever I can give space to it, it is essential to take this space so that the message can be transmitted as much as possible.

### 1.3 Science and feminism: what is exactly the relationship?

#### *Deconstructive Part*

The previous paragraphs introduced the so-called waves of feminism and the central topics for this discipline movement. Once feminism became an academic discipline, it specialized in various fields. The subject of these next two paragraphs is an analysis of feminist theories on science and then of the subsequent birth of a proper feminist epistemology, with strands, methodologies, and research projects. The fundamental distinctions between feminist views on science and feminist epistemology are given primarily by distinctive intentions and their chronological appearance in the debate.<sup>53</sup>

I argue that in the first group (feminist critiques on science), a critical and deconstructive intent of theories about science is evident (depending on what the critique affects, I differentiate the various groups of studies), while in the second group (feminist epistemology), we witness the emergence of constructive solutions

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<sup>53</sup> For an Italian introduction to the topics see also Garavaso and Vassallo 2007.

about science. The two groups are complementary; it is only with critical and deconstructive reasoning that we can understand what we need to revise, and it is only with constructive intent that we can move forward, and not be immobilized negatively. Chronologically speaking, finally, theories about science made their entrance (and continue to do so) from the 1970s onwards. Feminist epistemology would receive an official endorsement in 1986 with Sandra Harding. To these two groups, I add a third part, which I called methodological, where I explain the tools of my feminist-political epistemology.

Thus, the first part (this particular section) will be dedicated to the four lines of studies, indicated in Londa Schiebinger's division (1987).<sup>54</sup> This first constitutes the deconstructive part, which brought out how prejudices were inserted in science, both at the level of science's material conditions and concepts belonging to science. From its inception, the feminist critique addressed science and how the constitutive power of race, gender, sexuality, and other forms of social identity influence all aspects of our research (Alcoff & Kittay 2006). Indeed, feminism reveals how it is not only people who may share sexist, racist, misogynistic values, but the whole situation of gender relations that affects and structure science. In a much clearer words Haraway states:

"Sex and gender structure knowledge: they are the object of knowledge and the condition of knowing."

Donna Haraway 1984, 497<sup>55</sup>

Schiebinger's classification recognizes four different fields for feminist analyses of science:<sup>56</sup>

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<sup>54</sup> In the feminist context of science studies, there are also other types for classification of these studies, cf. Keller (1995) or Keller & Longino (1996), Kohlstead & Longino (1997), Subramaniam (2009).

<sup>55</sup> The quote in question is taken from a text by Haraway in which she discusses the evolution of studies in primatology, especially after the entry of women into the discipline. Primatology is a field of study in which animal sexuality, sex and gender are central to developing scientific (e.g., socio-biological) theories and explanations. For a contribution in Italian on Haraway and primatology see Timeto (2020). For an Italian translation of Haraway's article *Primatology by Other Means* see Putignano & Barrettoni forthcoming in *Mimesis*.

<sup>56</sup> In another article, Schiebinger (2004; 2007) will add a fifth field: history of coloniality of science. I will deal with this category in the fourth chapter of this dissertation.

- **Lack of acknowledgements**

The first field regards the literature inaugurated by Christine de Pizan up to Margaret Rossiter (1992), who seek to recover the contributions of women who were ignored or downsized in the history of science. The thesis of these studies is that the contribution of women was more significant than what was recognized. Thus, the literature feeds on biographies that trace the contributions of women. The favorite type of document to prove the participation of women in science was encyclopedias since the number of women in these collections showed that women were capable of doing science and therefore should have been admitted to academies, science institutions, etc. By the end of the 19th century, however, these biographies seemed incomplete because they were still perpetuating the idea of few women as exceptional, hence the lucky woman elected among male scientists, retaining “the male norm as the measure of excellence” (Schiebinger 1987, 314). This shows that to truly understand and appreciate women’s contributions in science, our own definition of science needs to be expanded.

- **Invisible obstacles**

The thesis of the second field of studies is that even when women entered scientific institutions, they still held a peripheral position. There were also exceptions here; for example, in Italy, Laura Bassi (1711-78) had the chair of physics at the University of Bologna, and sometimes women were able to participate in the development of knowledge through other channels, like convents in the Middle Ages, or courts in the Renaissance. However, in the 18th century, with the official birth of scientific academies, women’s participation suffered a setback so far that even the two times Nobel Prize winner, Marie Curie, was not admitted to the Académie française (Noordenbos 2002, 127).

The Royal Society of London admitted the first women only in 1945 with Marjory Stephenson and Kathleen Lonsdale. By the end of the 19th century,

women will slowly become part of the university and academic fabric; however, even though gender discrimination is now illegal, women still do not make careers at the same speed as their male peers. Currently, women generally occupy less prestigious positions, and the gender pay gap is not close to being bridged. Feminist scholars question the reasons by identifying barriers in the cultural system that assigns duties and spaces to women and men (Rossi 1988); other barriers concern the exclusion from informal circles of scholars, crucial in developing scientific ideas (Reskin 1988). These authors noted how the academic system is not organized with maternity and paternity policies that allow parenting and scientific productivity and left intact for the most part, the system of division of gendered roles as mostly unbalanced on women.

● **Medicalization**<sup>57</sup>

The third field regards studies on how the medical and biological sciences (mostly) have defined the *nature* of women. The fundamental problem is that physical differences have been used to justify intellectual differences (among all). Generally speaking, this line of thinking argues that women are naturally incapable of doing science.<sup>58</sup> Things do not improve even through time; in the 19th and 20th centuries, we still find theories that justify the inferiority of

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<sup>57</sup> The female body has been particularly exposed to phenomena of medicalization, and among the most subjected processes are certainly the experience of childbirth, menstruation, menopause (Cozzi 2012, 68). What feminists denounce, however, is that on the one hand, there is far too much control and attention on female phenomena; on the other hand, however, there is also invisibility and little research on strictly female pathologies, such as vulvodynia and endometriosis. These are chronic and excruciating diseases, but medicine knows little about. On average, in Italy, it takes between 7 and 10 years for a woman to receive a diagnosis of endometriosis, as there is a tendency to underestimate the pain experienced by women affected by these diseases. Yet, they are not few: 1 woman out of 10 suffers from endometriosis (Brochmann et al. 2018). In this regard, feminist scholars invite women to become aware of the possible control exercised over their bodies and health and inform themselves about their choices. One such example is *Our Body, Ourselves* by the Boston Women's Health Collective (1971). Balzano (2021) offers an excursus on the history of abortion, which has not always been seen as a drama or a crime; the figure of Trotula, the first woman doctor, serves to show how there was a time in history when women could have control over their own bodies, they gave birth and aborted without medicalization. See also Timeto 2019 on <http://www.technoculture.it/speculum-le-altre-storie/>.

<sup>58</sup> The first supporters of this idea date back to ancient philosophy with Aristotle, Hippocrates, and Galen (Lyod 1995).



women on biological grounds.<sup>59</sup> But with the emergence of the feminist movement and the access of more and more women in science, many female scientists and biologists (to mention a few Ruth Bleier 1984, Ruth Hubbard 1982, Anne Fausto-Sterling 2000) strove to demonstrate how these descriptions were false and how the biologists who had produced these theories were affected by cultural influences, placing science for the first time in the social context and exposing the myth of neutral science.<sup>60</sup> Science has also been driven by political interests to affirm certain beliefs about, for instance, race and gender (Sayers 1982). Scientific knowledge cannot be purely neutral since it is structured according to inherent cultural aspects.

### ● Gendered Knowledge

The basic thesis of the fourth field is that *gendered* ideas based on exclusion and sexism have entered (and constitute) scientific ideas and methods. For example, one of the most famous criticisms precisely regards how reason has been conceptualized, whose traits are more like those (supposedly) inherent of men than those of women: transcendence, control, abstractness versus emotion, concreteness, passivity.<sup>61</sup> Genevieve Lloyd (1995) has historically reconstructed these dichotomies between male and female significations, discussing philosophical theories of rationality in detail concluding the analysis of the attributes of reason and the idea of knowledge seen as disinterested and impartial shows us how the idea of characterizing science as objective is also *gendered*. On the one hand, we have the knower, and on the other, there is the knowable. Thus, the relationship between the two is one of distinction and separation. In this matter, characterizing both the scientific mind and modes of access to knowledge as masculine is significant. To the male world, attributes such as the capability of creating distance,

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<sup>59</sup> A doctor, Edward Clarke, discouraged women from entering science because women's intellectual development only increased at the cost of losing "reproductive development" (the more intelligent they became, the more the ovaries shrivel) (Schiebinger 1987, 325).

<sup>60</sup> See also Haraway 1984, Longino & Doell 1983, E. Lloyd 1995, Martin 1991.

<sup>61</sup> Monique Wittig (1990) in her essay *Homo sum* proposes a generalized critique of the word "human", usually used to refer to only a minimal part of humanity, that consisting of white men, the owners of the means of production and "philosophers who have theorized their point of view as if it were the only one possible" (Wittig 2019, 68).

separation, abstraction, and rationality have been assigned. It must be noted that not all male scientists embrace a concept of masculinity that involves detachment and domination, but it is true that the general relationship between reason and nature is not the same between men and women, and that is precisely the point (Keller 1995). In a science defined around the object (nature) usually as feminine and the subject (reason) as masculine, being a woman means confronting this contradiction. It does not mean that men cannot experience contradiction, but it does mean that their identity does not require them to go through that.

The analysis on reason is also linked to another critical dichotomy, that is, between public and private: reason and objectivity were required to be part of the public, while subjectivity and sentiment could remain in the private sphere (Schiebinger 1987, 330). Hartsock points out that the fact science has “male traits” is not so strange, considering that the underlying concepts were primarily built by men and reflected those cultural experiences and inquiries. Western philosophy has typically asked only general and universal questions about good, bad, truth, without ever asking whose good was in question and what and whose knowledge we are talking about (Kittay & Alcoff 2007, 6). This would not be a problem if only this knowledge were not imposed as universal.

Finally, Longino and Keller (1996) also report feminist studies that focus on the role of sexist metaphor and sexist language in constructing scientific accounts.<sup>62</sup>

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<sup>62</sup> The metaphor, therefore, served as a research program, organizing scientists’ understanding of causality. It is much more than a simple analogy of comparison; for example, in the case of human difference, the analogy “implied a similar *cause* of the similarities between races and women and of differences between certain social groups and white men” (Stepan 1996, 131). It is not a description; it is a re-description. Another important function of the metaphor is the ability to deny or suppress information from human experience of the world that does not adapt to what is implied by the metaphor. Given their function of creating similarity, the metaphor “guides” scientists in the selection of those aspects of reality that are compatible with the metaphor and in the omission of aspects that are not compatible (Stepan 1996, 132). This is a theme also extensively studied by ecofeminism which has highlighted how both nature and research seem to be conceptualized in terms reminiscent of that of domination and torture (Merchant 1990).

To sum up, feminist critiques on science detected and analyzed how patriarchal assumptions also controlled the content and methods of science. On the one hand, we see the erasure of women in science. Secondly, feminist theories also question the practical obstacles that prevent women from reaching prominent positions in science, considering several explanations, from the psychological to the cultural. The third group examines at a micro level the scientific answers that have been given to female phenomena, especially those related to the sexual and reproductive sphere, showing how much sexist and misogynist ideologies have affected the establishment of these theories. Finally, the fourth group analyses at a macroscopic level how the very concepts central to science, such as reason, cognitive method, subject of knowledge, and object of knowledge, have been constructed and defined with attributes resembling those used to describe masculinity.<sup>63</sup>

The purpose of these critiques is to pave the way for the various theoretical knots found by feminists: if we want to do better science, we cannot exempt ourselves from reasoning about these theories. The epistemological question emerges especially in the context of feminist Science and Technological Studies and in the overlaps between constructionism/reflective turn, actor-network theory (ANT), and standpoint theory. In the next section, I will highlight the results of these reasonings: how the problems were analyzed and overcome in feminist epistemology.

## 1.4 Science and feminism: what is exactly the relationship?

### *Constructive Part*

In this paragraph, I will introduce the constructive part, namely the proposals made by feminist theories towards the general problems of epistemology and science. In doing so, I will briefly outline the various strands within feminist epistemology, a scientific discipline that combines political intents (feminist ones) with a reflection

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<sup>63</sup> In this regard, see Prusiner, winner of the Nobel Prize in 1997 for his work on prions or Dmitry Belyayev contained in Dugatkin Trut's book (2017). See also Rouse 2009, Whelan 2001.

on the typical problems of epistemology such as objectivity, the context of justification and discovery, and so on (Felline 2016). For now, I will sketch the basic principles of feminist epistemology, whereas, in the second chapter, I will analyze the relationship between feminist epistemology and philosophy of science in general, namely the epistemological premises of the discipline, what place occupies within the broader debate in the philosophy of science regarding objectivity.

It is possible to imagine these feminist approaches to science as informed equally by feminist political reflections (social, liberal, radical feminism) and epistemological assumptions (constructivism, realism, positivism, critical theory) (Campbell & Wasco 2000). The different combinations of these form the various strands in feminist epistemology. These positions are important for the third chapter, where I will introduce my project of feminist epistemology, which involves the union of two strands, standpoint theory and contextual empiricism.

#### 1.4.1 Divisions within feminist epistemology

The division of feminist epistemology was first introduced by Sandra Harding, one of the pioneers in the field. In *The Science Question in Feminism* (1986), she distinguishes three main theories: feminist empiricism, standpoint theory, and feminist postmodernism. Recently, a consensus has been reached regarding the different approaches, which avoids the strict division among them.<sup>64</sup> In addition to Harding's texts, there is a rich literature on feminist epistemology, beginning with Alcoff & Potter 1993, Tanesini 1999, Potter 2006, and more recent reflections such as Garavaso 2018.<sup>65</sup>

- Feminist empiricism is formed by post-positivist realism and liberal

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<sup>64</sup> Cf. Wylie 2012, Intemann 2010, Garavaso 2018 (Introduction to part three). We also point out the proliferation of new perspectives, such as feminist virtue epistemology by Daukas 2011, and studies on epistemic injustice and epistemology of ignorance (Fricker 1999, 2007, Tuana 2006, Tuana & Sullivan 2006). I will look at these reflections especially in chapter four, because I believe offer path to carry the feminist gaze to epistemological practices on a more general level.

<sup>65</sup> Contributions in Italian are not many, I recommend Garavaso & Vassallo 2007 (for an overview), Tanesini 2015, and Felline 2016.

feminism.<sup>66</sup> Feminist empiricism sustains that sexism and androcentric assumptions can be corrected “by strict adherence to the existing methodological norms of scientific inquiry” (Harding, 1986b, 24). The goal is to make theories less susceptible to gender biases than current science; it is a correction within the existing models and institutions to set more equality. Feminist empiricism has been mainly revised in two branches, one represented by Longino, called contextual empiricism, and the other by Nelson, usually indicated with feminist naturalized epistemology. The two authors’ projects have distinctive differences. However, both researchers emphasized that science is a human activity, thus that social dimension should be considered. This concerns both the context of justification and the context of discovery, that is, this rigid distinction cannot be maintained in the scientific process because both these categories interact, and it is precisely the structure of scientific inquiry that requires this interaction. Scientific inquiry is social and complex, and this also involves revising the idea of objectivity, which as a result, will prevent the understanding of structures and processes investigated as neutral.

- Postmodernist feminism integrates constructivism with radical feminism.<sup>67</sup> Postmodernism highlights the contingency and instability of the social identity of knowers and consequently of their representation. Postmodernist feminism stresses

“the locality, partiality, contingency, instability, uncertainty, ambiguity and essential contestability of any particular view of the world and the good. The postmodernist emphasis on revealing the situatedness and contestability of any claim or system serves both critical and liberatory functions. It delegitimizes ideas that dominate and exclude by undermining their claims to ultimate justification. And it opens up space

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<sup>66</sup> Liberal feminism advocates, in a very general way, for equal access to all resources for all genders in our society (Jaggar 1988). For realist post-positivism, there is an objective reality, but it is impossible for the scientist to capture it in an unbiased form. Therefore, the ongoing effort is to try to identify and remove all sorts of bias (Campbell & Wasco 2000, 780).

<sup>67</sup> For constructivism, the reality is socially constructed, social factors such as gender, race, class are not only lenses that filter reality but are agents that structure our visions and what constitutes our individual reality. Radical feminism focuses on gender oppression and calls for the complete restructuring of social institutions (Campbell and Wasco 2000, 776).

for imagining alternative possibilities that were obscured by those claims.”

Anderson, 2000.

Each theory defines a certain group of terms, and any such theory will contain a definite set of terms that cannot express all conceptual possibilities. Thus, choosing a set of words over another is an “exercise of power that excludes certain possibilities from thought and authorizes others” (Anderson, 2000). Additionally, for postmodernist feminists, the power of the male-dominated world concerns social life in its entirety. For this reason, the most important thing to do is to try to expose this illusion by showing to what extent such a state is prevalent. Feminist postmodernists have also criticized many feminist theories for the concept of “universal” women they suggest; most famous scholars are Butler (1990) and Irigaray (1985).

- Feminist standpoint theory is based upon post-positivism and critical theory, informed by radical and socialist feminism tradition.<sup>68</sup> Standpoint theories make the standpoint, which leads to epistemic privilege or authority, its main asset. Drawing on Marx’s theory, Hartsock (1983) formulates a parallel between proletarians in the capital system and women in the patriarchal system. Class workers tend to exhibit a peculiar trait: they grow into but are also the key to the existence of the capital system (they are the workforce on which the system is built). These workers are aware of the social reality, but they do not have any interest in maintaining a system that oppresses them, and for this reason, they can develop a privileged point of view of the structure itself. Similarly, women are part of the patriarchal system and are the key to the success of such society (or, at least, their reproductive function is); they know and interpret this system, and their point of view is privileged because they have direct experiences of such scheme, yet no interest in

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<sup>68</sup> Socialist feminism believes that Western society’s class and economic structure leads to multiple forms of oppression while emphasizing classism as an axis of power (Jaggar 1988). The critical theory argues that reality is interpreted through our social, political, cultural, and economic markers and values. Knowledge, therefore, is not made up of “facts” but is always filtered through our lenses. Consequently, the identity of the knower is central to the development of the theory of knowing and the production of knowledge (Campbell & Wasco 2000, 780).

keeping it alive.

By living their lives both in a dominant environment and in their own oppressed culture, women have obtained a *dual vision* and, therefore, a more inclusive understanding of social reality – that is, a standpoint (cf. Hartsock, 1983). Yet, the definition of epistemic privilege is not automatic. Formulating a standpoint requires three conditions. Firstly, we must be aware of the social conditions that shape scientific knowledge. Secondly, it is necessary to see outside the hegemonic ideologies and observe how they function. Thirdly, a standpoint is a collective achievement, meaning that it is accomplished due to a critical discussion of the people whose positions it represents (Harding 2010, 174). Hence, a marginalized position does not always imply oppression, it can signify resistance, struggle, autonomy. Only when women “achieve an understanding of how systems of oppression limit and shape their knowledge” (Intemann 2010, 786), they support a standpoint characterized by new epistemic information and open-mindedness. According to P. Collins (1986), marginalization is the occasion to form fresh value systems that struggle against the hegemonic group’s attitude. Therefore, epistemic privilege can also be connected to resistance against hegemony (Tanesini 2015, 11-12).

A standpoint is feminist, not feminine, and everybody can be a feminist. Therefore, the concept of standpoint must be used extremely carefully; otherwise, if intended as a “way of knowing” typical of women or as something automatically belonging to any woman, it risks sadly recalling old stereotypes.<sup>69</sup> In this sense, the investigation of gender in feminist epistemology is used not to highlight a specific way of knowledge of the female scientists, but that scientific knowledge, as intended so far, was affected by gender biases.

Considering these reflections, Harding (1998) specified the difference between a perspective and standpoint. Standpoint is not simply a perspective

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<sup>69</sup> In this matter, standpoint theory is not linked neither to a biological sex nor to a gender category.

on the world but is “an objective position in social relations as articulated through one or another theory or discourse” (Harding 1998, 150).

Standpoint is the result of scientific and political knowledge:

“science in order to see beneath the hegemonic ideologies within which everyone must live; and politics because to engage in such science requires material resources and access to dominant institutions to observe how they function.”

Harding 2010, 174

## 1.5 Why is a gendered approach needed in epistemology?

### *Methodological Part*

After explaining what feminist epistemology is, the time has come to address the fundamental methodological principles of this discipline. This third part also explains how I proceed in research and why I believe a feminist-political epistemology is necessary to study knowledge in general. Hence, I have added the adjective “political” because I believe the political and social intervention implicit in the project of feminist epistemology should be highlighted and used to investigate epistemic practices besides the classical problems such validation, justification, objectivity. In this section, I outline the epistemological tools for feminist-political epistemology and resume them in chapters four of this dissertation.

In the remaining paragraphs, I will present my selection of the principles used by feminist epistemologists. However, they are not equally present in all feminist scholars or theories; the set of methodological tools that I will present are, therefore, the result of my choice motivated by the fundamental aspects that a feminist-political epistemology should have to function at its best. My contribution is about choosing, among the different tools available to feminism, those that are the profitable option for managing a feminist perspective and the consciousness of being positioned (I will explain both in a moment). The purpose of these tools will be to understand how to elaborate a feminist objectivity, i.e., informed by feminist assumptions, that does not fall into arbitrariness but produces justified and valid



knowledge. Moreover, these instruments will be used in chapter four to investigate academic settings.

The first principle of a feminist epistemology is that we should always adopt an intersectional perspective,<sup>70</sup> even in knowledge. I understand the intersectional perspective as

1) a perspective that problematizes the analytic category of gender (and other axes) as an instrument of differentiation and oppression of individuals within the Western<sup>71</sup> world-system.

2) understanding of experiences, i.e., the awareness that every experience comes from a background with different characteristics, and that, unlike the epistemological tradition, the experiences from which to start and live are not the same for everyone (one may occupy a central position, others marginal ones) and the knowledge I produce is not universal, nor abstract and reflecting everyone's experiences. Hence, intersectionality in my vision is also anchored to situatedness and embodiment.

Hence, following the first point, as feminism history has taught, gender is one of the axes of power we organize in modern societies. Trans-intersectional feminism has recently added to the category of gender, other oppressive categories such as race, class, age, species, disability. Feminist epistemology is connected to the social construction of these categories because they also influence our scientific practices and judgments. Therefore, the epistemic intent of feminist epistemology is a theory of knowledge that actualizes the embodied perspective, explaining why certain sexist theories and practices have had a place in science. From this perspective, feminist epistemology constitutes a theoretical framework and creates a methodology with its teaching and research practices.

From an experiential point of view (following point 2), feminism responds to the fact that women have been excluded from forms of knowledge production,

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<sup>70</sup> To indicate the intersectional perspective, I will also use "situated" or "embodied" perspective as synonyms, purely for stylistic reasons and to avoid many repetitions.

<sup>71</sup> As I hope will be clear as a result of my positioning, I am primarily concerned with Western society because I am situated in Western world system and my research addresses primarily this system, but I do not exclude the possibility that the situated perspective may be helpful in knowledge formulated in non-occidental cultural systems.

validation, and access, or when they have been included, they have been described in a false and demeaning way, through controlled and produced descriptions produced by the male world. A feminist approach to science is needed to, first, not separate the explanation of the world from the lived experiences of the researcher and the researched and their contextual relations. This is important because no matter how hard we try, I am, as a person and as a researcher, forced to start from myself, my lived experience, my body, my personal. When considering these subjective aspects, we must deal with the social and political impact that changes based on body and position, interconnected to cognitive practices, such as access to knowledge (an advantage in knowing the world), credibility, and communication of results. I think it is important to emphasize *embodiment* in the role of knowledge, because our positions are characterized by personal and individual experiences, but also by *common* experiences motivated also by our bodies. For example, everybody that recognizes itself as a woman knows that there is a risk that she may be objectified, paid less, or referred to as the most suitable person to rearrange the house. Our body is central both to understanding how axes of oppression are inscribed on it, but it also possesses within itself emancipatory potential and contributes to our definition of self. Thus, undertaking a social survey, study, explanations of women and their experience and social conditions is crucial to allow women to cease to be mere historical objects and become historical subjects, making their own history (Lugones & Spelman 1986, 573).<sup>72</sup>

Feminist epistemology wants to create a different narrative, change the perspective, and perception of our bodies and our values as individuals, differentiating from the universal and typical one. Science is as much stuck in these overlapping power systems as it is gender (Rose 1994). Hence, a feminist epistemology

“seeks to understand not only how our social relations of gender have shaped our knowledge practices but also whether and how these relations should play a role in responsible epistemic judgments. [...] That

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<sup>72</sup> Le Doueff (2007), in this regard, says that feminism is useful because the purpose of philosophy aims for the unknown and unthought of. Here, then, it is imperative to include issues that have been excluded from philosophy to push philosophical thought itself to new horizons.

is, feminist philosophy of science involves the study of how intersecting systems of oppression influence the production of scientific knowledge and the development of normative recommendations for how scientific practices and methodologies might better serve our epistemic aims while also producing the kind of knowledge and practices that might aid in achieving social justice”.

Crasnow & Intemann 2021, 2

Thus, an embodied perspective is fundamental because it helps improve our study in epistemology and achieve epistemic (and social) justice. The combination is given because for feminism (and conversely also for feminist epistemology), a theory is useful if it allows one to see parts of one’s life in connection with other factors; if it can locate us in the world rather than give us a mystification of it. This also regards how responsible one is for being in a certain position; a theory will give criteria and suggestions for change or resistance strategy. Harding reflects a lot on the importance of reflexive responsibility, i.e., a reflexivity that includes awareness of one’s position and how this translates into contingent practices of knowledge and reality creation (Lohan 2000). If a feminist theory has no connections to resistance and change, it remains isolated in the ivory tower of privileged academics.

In feminist epistemology, the embodied perspective has been broadened to understand knowledge as influenced by the subject’s perspective, by the social location of the subject. The social location of the knower is formed by social factors (gender, sexual orientation, race, etc.), social roles. Subjects occupy different social positions and are at the intersection of different power relations based on their gender, ethnicity, class, geography and so on. Each position is therefore never simply neutral or innocent but requires (self) reflection.<sup>73</sup> Positioning means taking responsibility for practices and the contents of knowledge we produce, and it is a practice that several feminist authors adopt in their writings.<sup>74</sup>

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<sup>73</sup> Being aware of one’s social and political position implies carrying out work like someone with a standpoint (Harding 1991). The difference is that standpoint is used explicitly in standpoint theory to signal an epistemic privilege that a subject has acquired and can bear on a given research/scientific problem.

<sup>74</sup> I saw it, explicitly, in a written form in Vergès 2020 e Borghi 2020. During oral communications, however, it is a more common form.

A classic of feminist epistemology, especially when it comes to situatedness, can only be Haraway's (1988) article "Situated Knowledges".<sup>75</sup> Here Haraway discusses the so-called 'view from nowhere', criticizing it as a hostile science's claim to truth, revealing the radical historical specificity and contestability of every level of the scientific and technological case. But Haraway also discusses the solutions proposed by feminists, including that of standpoint theory. The marginal perspectives brought forward by standpoint theory are not innocent.

"The positionings of the subjugated are not exempt from critical reexamination, decoding, deconstruction, and interpretation; that is, from both semiological and hermeneutic modes of critical inquiry. [...] 'Subjugated' standpoints are preferred because they seem to promise more adequate, sustained, objective, transforming accounts of the world."

Haraway 1988, 584

Hence, the basic idea underlying the principle of situatedness, and positioning is that a marginal perspective, duly problematized, can lead to more objective knowledge, paradoxically precisely because it renounces the claim of universality of its own vision. Thus, following this precept, as a feminist then I position myself. From a social positioning: I am a woman, I am white, upper-middle-class, cisgender<sup>76</sup> and straight, non-disabled, and thin.<sup>77</sup> I am a European- southern

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<sup>75</sup> The text was also written in response to Harding's 1986 *The Feminist Question in Science*, in which Harding lays the foundations of standpoint theory. This theory, over the years and also thanks to the questions raised by Haraway (1981), will change and develop more finely until it becomes the theory we know today.

<sup>76</sup> The word cisgender indicates people whose gender identity corresponds to the anatomical sex assigned at birth. On the other hand, the word transgender indicates the condition for which the "correspondence" does not occur at the biological level (in the broad sense) and/or with one's gender identity and/or the social role it is expected to have.

<sup>77</sup> If the discrimination of race, class, and sexual orientation are well known even to those who are not particularly accustomed to feminist debates, recently Fat Studies and Disabled Studies are also getting their proper space. In general, these studies highlight how bodies that do not conform to the Western ideal are subject to social, political, economic, and even health discrimination. The aim is to eradicate the concept of fat as a fault, a problem, or even a medicalized condition and to promote the concept that all bodies are worth (Farrell 2020). At the center, there is the critique of the male gaze, which has always been a tool to validate the identity and value of a woman. Disabilities studies (Goodley 2014, Burch & Kafer 2010, Hall & Wilton 2016) also criticize the culture that puts white, thin, and able bodies at the top, defining ableism as discrimination against people with disabilities. In general, it also concerns the assumption that every person has an abled body and therefore denies it systematic access in

Italian, and while I am writing, I am part of the academic institution as a PhD candidate, a place of production of knowledge and organization of power. As the reader can probably tell, mine is a position of privilege, since for the Western and white supremacist system my only flaw is being a woman. From a political positioning, I adhere to trans-intersectional feminist.

This doctoral dissertation is the result of my intellectual and political situatedness. These are characteristics that in the world-system in which I am inserted, the white and Western one, become axes through which to organize power relationships and hierarchies of power. My declared situatedness serves three main purposes:

1) to emphasize how my experience and my gender puts me in a relationship of similarity with other subjectivities who may suffer from similar forms of discriminations, but at the same time will never be the same as a woman whose characteristics are different from the ones I mentioned (I cannot be discriminated for my skin color).<sup>78</sup> Therefore, if we are to achieve practices and critiques of the system-world in which we find ourselves, awareness about the plurality of experiences and the different characteristics that involve a single identity is fundamental if not necessary.

2) it is important to understand my situation and what my situation represents in this system-world, the personal is not only political but is also the basis for the theoretical (Braidotti 2017). Knowledge has to do with the material conditions of our lives. Hence, my standpoint, my experiences, and my lived experience are central to my reflection and observation of the world and the knowledge I can know and produce. I am aware of how I am a situated and embodied subject, and from this awareness, my reflections begin. These characteristics affect me and affect who decides what is normal and what is normative/regulated (what has norms), and what is out of place. Those who are normal can-do things; they internalize these

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case of architectural barriers, etc. On the different use of “disabled people” or “people with disabilities” see also Intaffi 1996, 180.

<sup>78</sup> There is no “reverse racism” because racism is a system of discrimination against those who are not white, so being white, any discrimination I may suffer will never be caused by my skin color. I may meet people who are prejudiced against me, but their hatred or prejudice will never have the same consequences as racism, i.e., because these prejudices are not institutionalized to the point of making the life of a white person more complex than that of a BIPOC person.

possibilities and take them for granted. Those out of place internalize their exclusion condition and know that others do not apply the same conditions.

3) the way I manage this awareness is through a feminist perspective; that is, I adopt the situated lens to analyze the phenomena that surround me, epistemology and its cognitive practices, and those issues such as scientific objectivity. My research practices are derived from the embodied lens.

Thus, there are several reasons behind the principle of situatedness. The first is that feminism strongly reiterates how no knowledge, and no scholarship is ever politically neutral but comes from somewhere. On the contrary, being aware of one's situatedness encourages decentralization: understanding who you are and who speaks and who listens, allowing for the inclusion of marginal people who do not usually correspond to the standard and normative (neutral). In the next paragraphs, I shall outline the remaining feminist tools I intend to use.

### 1.5.1 The margin

The second principle is the concept of the margin. The concept of the margin originated in Black (bell hooks 1981; 2000)<sup>79</sup> and Latinx feminism (Gloria Anzaldúa 1987).<sup>80</sup> In feminist epistemology, it is connected with situatedness since once a conscious perspective of one's positioning is adopted, it can be analyzed in the macroscopic view of center-periphery. In fact, Sandra Harding re-uses it in her conceptualization of standpoint theory, especially when she must justify the

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<sup>79</sup> hooks' point of view drawn on the experience of African American women during slavery, apartheid and marginalization (this latter for the BIPOC community is still undergoing). At the center of her discourse is the attention to the race-gender couple: sexual violence, a means often used with black and indigenous slaves, has been an excellent ally for constructing gender metaphors and stereotypes about black women (2000). For stereotypes on black men, see Fanon 1952.

<sup>80</sup> Gloria Anzaldúa, a Chicana lesbian thinker, deals with margin and confinement in the concept of *mestiza*. Starting from her multiple identities: American, Chicana, white, Indigenous, the *mestiza* is an instrument of self-awareness against any concept of racial or cultural purity. All the splits that form her identity are healed in the *mestiza*, this new consciousness that gives rise to other ways of living, surviving, knowing (1987).

epistemic privilege of those marginal experiences and viewpoints. They are marginal because they occupy a peripheral place with respect to the dominant system, but precisely by virtue of their conscious positioning they can have a better view of their condition and that of those placed at the center, for the simple fact that marginal subjects cannot afford to take for granted things that central subjects do instead. The marginal place, in the case of hooks and Anzaldúa, concerns the condition of non-white woman. But as these authors teach, the “margin” is a powerful tool to investigate reality, so it can be adopted by others to understand the pluri-verse we are inserted in. Being on the margin means dealing with the perennial contradiction between the disadvantages that a marginal position in a system based on patriarchy and racism has, and the epistemic advantages that come with this condition, seeing the world in its material conditions with the distinction of what the dominant do and what the dominated cannot do. This double vision, however, also contains within it the possibilities for subversion (Spivak & Harysam 1990).

In fact, the margin allows one to overcome one particular perspective, not bind oneself to any precise identity. Only in this way can one be aware of multiple perspectives and free oneself from an essentialist view of both the privileged and the victim. Also, it is not enough to occupy a marginal place not to be an oppressor, nor occupying a marginal place automatically gives an epistemic privilege. Finally, it is not enough to deal with marginal themes and epistemologies in order not to reproduce the elitism of knowledge, it must always be self and then collective reflection on one’s condition. The margin selects and creates, it is never a place of victimhood or flattening of the oppressed, but it is the way to overturn the dichotomy of oppressed/oppressor (hooks 2000). In this way, feminism does not risk essentialization.

The margin allows us to change our view of the world: it will enable us to understand that scientific knowledge is not universal but only a paradigm; it allows us to realize that other forms of knowledge have been dismissed as minor or subordinate. It allows us to understand that the (Western) academy must accommodate other discourses and forms of knowledge, renouncing its own privileges. An inversion of the point of view allows us to think of the margin as a space to inhabit, not a space to occupy while waiting to reach the center (Borghesi

2020). Hooks also uses the margin category in describing her experience of an academic and black woman, therefore a person who occupies a privileged space to produce knowledge and a woman racialized by the Western white system. In order not to lose the strength of the margin, she keeps a continuous transition between high and low culture and perpetual recommendation to remain faithful to her marginality, which allows her to see more clearly.

From the margin, one makes sense of experiences and life paths and makes visible what is invisible, the power relations that make the existing system work.

“Marginality is a radical role of possibility, a space of resistance. A place able to offer us the condition of a radical perspective from which to look, create, imagine alternatives and new worlds. This is not a mystical notion of marginality. It is the fruit of lived experience.”

bell hooks 2000, 68

Therefore, the margin is a place of counterattack because it gives the right combination of dominated and dominant framework, concern, and indifference. Thus, those who go back and forth from the margin can see things that are hard to see for someone totally immersed in dominant places. This also explains why the social order seems to be dysfunctional for women or other marginal categories. Understanding related strictly to exploitation and domination reveals aspects of the social order that are difficult to see from the perspective of those who benefitted, intentionally or not, from the domination (Harding 1993). It is only from the woman’s perspective that certain situations are seen as problematic, to say the least (e.g., sexual harassment and marital rape). And for example, it was only through the struggles to get equal wages between women and men that we realized that formal equality was not enough. The ability of margin relates to everyday life, it was with the feminist voices about the domestic life that the idea of reproductive work was “discovered”. Starting from women’s lives allows one to see exactly how social activity has come to be understood as divided in this gendered way. I will deepen these topics in the paragraph dedicated to the new contents brought to light by standpoint theory in chapter two.



### 1.5.2 Decoloniality of knowledge: check your privilege

The third methodological principle, the decoloniality of knowledge, allows one to be aware of privilege, to resist and forcefully insert into dominated knowledge (Borghi 2020, 18). To not perpetrate epistemic privilege, we must exercise decoloniality, work on privilege, be conscious of our own power (Borghi 2020).

Decoloniality is related to the concept of coloniality of knowledge, associated with Lander (2000) and Grosfoguel (2002), who denounce how the Western university system privileges knowledge produced especially by men and not women originated from a small part of the world (northern and Eurocentric one). Therefore, the social, historical experience of a very small part of the world's population claims to be universal. This also prevents those outside this system from having a way to understand their own world and *episteme* because the Western epistemological system appears as universal and dictates the norms for those outside the dominant system, and they must therefore always earn the status of effective knowers (Said 1978). On this matter, Schiebinger (2004) and Harding (2008) speak of studies of knowledge wholly erased from the Western one and of appropriation of that knowledge or concepts that were useful, obviously without mentioning their origin.

Western knowledge declared the only suitable scientific method, the one that resembled as closely as possible the characteristics of abstractness, transcendence, and impartiality (which is why it finds feminist situated knowledge rather silly). Eurocentric Western knowledge has committed an *episte-micide* (Sousa Santos 2010): Western modernity has physically eliminated subordinate subjects and killed their knowledge. The decoloniality of knowledge discloses the Western norm as it is usually the most difficult to identify and admit. Therefore, it requires a firm work on oneself of what one is, of the position one occupies, and what one represents in the world system.

Vergès (2020), on this point, reiterates that we have never left colonialism, both because even now territories are being colonized, but above all, because “thought” has never been decolonized. Colonization marks an historical period; colonialism is a social process whose perpetuation is explained through the

persistence of the social formations born out of these colonizations (Ekeh 1982). Fanon already said that Europe is the creation of the *third world* because it was built on the plundering of the world's wealth (Fanon 1961). Yet Europe continues to forget (or rather deliberately forget) slavery, colonialism, and imperialism, continuing to define them as past events. Of course, this self-indulgence only serves Europe to minimize the links between racism and sexism, sexism and imperialism, still very much in action (Vergès 2020, 19). Thus, the decoloniality of thought helps carry out this exercise, this continuous reminder of the responsibilities and accountabilities and sets the goal of restoring dignity, and ultimately, existence to colonized peoples. This operation is done first of all by listening to the story told by those who suffered colonization, coming to terms with their and our past. The decolonization of thought is the process of liberation from Eurocentrism, and this includes the deconstruction of one's own cognitive corpus through decolonial writing and the presence of non-white people in the ganglia of power, including epistemic ones.

Margin and decoloniality allow one to realize that it is not enough to belong to a discriminated category (woman) to not be an oppressor or automatically become an ally. But it takes constant work on yourself and where you are. The concepts of marginality and decoloniality elaborated by subaltern and postcolonial knowledge are indispensable in reminding us of who we are and what we can do to obtain a more extensive epistemology.

That is why I took these pages to clarify that my methodology starts from me, from my experience, from the texts on which I was trained. My being situated is intrinsically linked to this thesis project. At the moment, I occupy a space that is central within the dominant system for the maintenance of its order, involved in the reproduction of the mechanisms of power and relations of domination, and my only flaw is to be a woman in this system. This position of mine allows me to write a thesis that discusses trans-intersectional feminism. My status as a privileged white woman also gives me relatively easy access to places where I am given attention. I may not be able to convince every audience member, but I have a way to be heard. This is a privilege that I can use to make space for academic feminist literature and explain how, by following feminism, it is possible to contribute to real changes in the world

that genuinely improve the lives of women and marginalized individuals. But to do so, the conceptual tools must necessarily pass from a deep questioning of our educational background, we must decolonize our thinking, as in stop thinking that the Eurocentric perspective is the only valid and able to determine or not the epistemic existence of others. For typical Western thought, there is no need to position (as an act) because the western system is the story, makes the story, and situates everyone else. Studying feminist issues and making them known to those around me in this environment, albeit on a limited area, is the way for me to be and occupy a place in the academy, because in this way I am helpful for the development and knowledge and awareness of feminism.<sup>81</sup> This last concession connects with the last two principles addressed in the upcoming section.

### 1.5.3 Pluri-versity and the Combination of Theory and Practice

“Ideas are themselves technologies for pursuing inquiries. It’s not just that ideas are embedded in practices; they are technical practices of situated kinds.”

Haraway 2008, 282

The decoloniality of knowledge not only leads to the critique of Western knowledge, which was set as the only valid and legitimate one but also leads to the fourth precept, namely the existence of a plurality of perspectives and stories about the world. As also advocated by Longino, for feminist epistemology, it is not possible to arrive at a knowledge that is absolute, timeless, and fixed, but the consensus on knowledge can instead be understood as “treating science as a practice or set of practices [...] or some version of a semantic or model-theoretic theory of theories” (Longino 1991, 673). I will delve into this concept in the following chapters of this dissertation.

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<sup>81</sup> By this I do not mean that there cannot be individuals who define themselves feminists but who do not study feminism in the academy. It is in this case an admission that is closely related to me and my place in the academy.

For now, decolonial knowledge leads to creating the conditions in which multiple points of view can multiply narratives of the world. The fourth principle is to recognize, as Borghi said, a *pluriverse* (2020). The awareness of the existence of several different perspectives forces us to change the way we use our tools and not treat knowledge as something monolithic and universal. The idea of having to be neutral produces epistemic violence towards other knowledge and blocks any epistemological creativity aimed at social transformation. When this is the case, the university closes in on itself and becomes inaccessible to society. Knowledge is situated. On the contrary, the awareness of different points of view and ways-of-knowledge opens the epistemic “duty” to account for and make room for another kind of knowledge.

Finally, the fifth precept reconnects to the question of the two souls of feminism mentioned elsewhere in this chapter (the political-practical one and the theoretical one), so it requires the combination of theory for practice and practice for theory. I sometimes experience a sense of betrayal, towards feminism itself, when I practice within the academy, a place of production of knowledge often complicit in the process of cancellation and omission of entire minorized categories and alternative knowledge to the Western Eurocentric norm. For this reason, I try in my academic work to situate myself, reaffirm what my tools and sources are, and produce feminist thought. Producing feminist thought means using new methodologies and paradigms, criticizing the dominant ones, and occupying a marginal position with respect to the mainstream view.

This is a way of “academic militancy”, and it requires the combination of theory and practice. Academic militancy requires us to start and talk about the material conditions in which we are immersed and from the experiences of those subjects who usually do not enter the academic canon, to make more and more space therefore to intersectional, postcolonial, and subordinate feminist knowledge and to include identities different from those that we usually imagine occupying the spaces in the academy, both through quoting and the actual presence of different voices into academia. Starting from the material conditions and expanding the audience allows us to connect the union of practice and theory. After all, not

separating the personal from the political is one of the first feminist teachings. And so, do not separate knowledge from material life.

The academy is itself a hierarchical place, subject to relations of power, but also a place of critical knowledge, dialectical interchange, and personal and collective growth. Critical thinking is the most subversive force in academia. It is what inspires the cultural revolution for the improvements of society. It can be an expression of political activism (hooks 2020). That is why theory is always accompanied by practice and vice versa. Theory serves to improve our intellectual development, but also our life in the world practically. Therefore, the consciousness acquired through feminism translates into militancy, struggle against the oppressor, and as a re-writing of the social world, the reorganization of new concepts (Wittig 2019, 11). As theory transforms, so does practice, that is, militancy, struggle.

Conversely, the practice, the experience of every day, is to put back at the center the body, the individual, its situatedness, but always to move from an individual experience to a collective political “us” (The Care Collective 2021). Theory and practice should not be understood as two poles unto themselves. And the theory is a great ally when you want to get the minority point of view out to a larger number of people, breaking down practical and geographical boundaries as well. Moreover, this operation also requires clarity in writing: if I am only understood by those who share the same space as me (academia), then my thinking and research will not fulfill the feminist intent of making space and shedding light on important theoretical concepts that maintain the supremacy of this white, male system. Being clear and direct in my writing is the way for my content to reach a wide audience.

Feminism means radically changing the way we think about and view women’s roles and identities, hence the material conditions of people. And it is a work that never ends because gender perspectives strike back even when we least expect.<sup>82</sup> I genuinely think that every academic should adopt this awareness, reasoning about their situatedness and its privileges. This would open new practices

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<sup>82</sup> Scholar Caroline Criado-Perez (2020) reports several examples where gender apparently is not “involved”, grouped into events related to daily life, workplaces, design objects, medicalization, and public life.

in the dominant academic system and curb Western academic and scientific knowledge's purely abstract and aseptic discourse.

I work and operate with feminist epistemology; my tools are situatedness, margin, trans-intersectionality, decoloniality, and academic activism.

## 1.6 Results & Conclusions

In conclusion, I wish to point out that one challenge of feminist epistemology is to show how political oriented research such feminist epistemology yields knowledge that is more accountable to diverse individuals. This is done by situatedness, which is the idea that knowledge must be recognized in its specific political and social conditions. In this way, the structures, genealogies, and power relations that perform knowledge are emphasized, implying at least three different results.

1. Knowledge, in feminist epistemology, is seen as a tool to broaden and improve experience and inspire an idea of co-responsibility in communal and shared research. Results of research are contextual and historical but are not arbitrary. They are formed in response to and for the needs of the participants in the study (Heldke 1987). The term co-responsibility indicates a responsibility commitment to each other to treat them with care and respect.
2. Feminist theory constitutes the indispensable link between scientific studies and the political epistemology of subjectivity. It evokes an epistemology of practical human knowledge that focuses not only on objects of knowledge but also on the process, praxis, and the subject of expertise. Moreover, the broadening of voices and experiences to be expanded, analyzed, conceptualized in science does not only benefit marginal subjects who are finally included in the practices of science, for epistemology in general which increasingly broadens its epistemic horizon. The subject is thought of as a hybrid, open to diversity and the future, multicultural, traversed by multiple

discourses and practices that may also be mutually contradictory (Braidotti 1994).<sup>83</sup>

“The advantage of defining women relationally is that it avoids all the problems of substantialism and the old essentialisms. It also captures the basic structure of how individual women acquire their genders in society.”

Zack 2005, 204

The individual can be subjected to axes of difference, modes of oppression, and power relations interconnected and mutually reinforcing. Intersectionality is even more effective when taken as a tool of analysis, a lens to look at power relations and analyze the reality in which we live. Our decentralization is positive because it brings our bodies closer to all other bearers of difference.

3. Finally, writing science from a feminist perspective means turning science upside down. Feminist objectivity is the aspiration to describe the world in its complexity, mutual recognition of the multiple and partial character of the subject of knowledge, doing justice to the subjects at stake. Using women’s lives as a basis for critiquing the knowledge-based only on that of the dominated class thus serves to reduce the partiality of the picture of social and natural life that has been given thus far (Harding 1991). In order to clarify this concept of partiality, Haraway’s (1988) essay *Situated Knowledges* comes to rescue. She discusses what objectivity means from a feminist point of view, arguing that we must get out of the dichotomy between objectivity as a view from nowhere and constructivist objectivity: “feminist objectivity means quite simply *situated knowledges*” (Haraway 1988, 581). It is true that we need to deconstruct the claim of universality, but at the same time, we need to find a way not to get caught up in pure arbitrariness and relativism.

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<sup>83</sup> In the sections on feminist waves, I mentioned how the subject-woman faces a complete deconstruction after the third and fourth waves. No category speaks for women in a unified way, but the current social, cultural, and political situation demands that we speak of an intersectional subject. Also, in feminist epistemology, the topic of the epistemic subject will be addressed and will also be used by epistemological feminists as a strategy to revise the way the epistemic subject is traditionally viewed in analytic epistemology (Longino 1991). See chapter two of this dissertation.

Haraway thus initiates a very important debate whereby the solution to the problem of objectivity is not to take a universalist or relativist (aut/aut) position. Rather, we need a network of relationships covering the world, which includes the possibility to partially obtain knowledge between very different and differentiated communities of power. Only from a partial perspective an objective vision may be possible, a practice that does not exclude responsibility towards the generative of all visual practices. The alternative to relativism is “partial, locatable, critical knowledges sustaining the possibility of webs of relations called solidarity in politics and shared conversations in epistemology” (Haraway 1988, 584).

However, it is not the experience itself that provides the basis for feminist claims, but rather it is how it is articulated after these observations and theories that begin with them and look at the world through the perspective of marginalized identities: “identity does not produce science, critical positioning does, i.e., objectivity.”(Haraway 1988). Positioning means taking responsibility for those practices that allow us to act in the best possible way. Moreover, this is also connected with the pragmatist idea of knowledge as experience to stay-in-the-world. Until now, although presented as universal, knowledge was dysfunctional for certain types of subjects. With the expansion of these voices and experiences, knowledge will, in turn, broaden, widening its fields of action.

To sum up, in this chapter, I introduced feminism, its themes, its leading scholars, and the epistemological and academic apparatus that being a feminist entails.

First, I described the status of feminism from both a historical and thematic perspective. Historically, feminism is divided into three to four waves, beginning in 1848 and up to present. Thematically, the fundamental figure is the continuous and undaunted questioning of dualisms. Every dualism involves an opposition, sometimes even ontological, which creates a superior and better term and an inferior one. However, the inferior one is strictly functional to the success of the superior one (Plumwood 1993). One of the most important dualisms that feminism questions is operated by Western thought on sex and gender. Feminism noted how anatomical differences, meaningless in themselves, were used to legitimize a



cultural difference in gender roles, tasks, and even characteristics between males and females. Recent feminist and queer theories have argued that even the concept of sex is culturally constructed if we continue to enroll it in only the sexual binarism. This has also been followed by a careful study of other axes of distinction and classification, such as gender identity, gender expression, role of gender, sexual identity, and sexual orientation, just to name a few.<sup>84</sup> At the center of queer reflection, a place of honor belongs to the body, which has constantly been mistreated, not only the body but also the sexed body. Sex is a force that Western philosophy tended not to analyze or if it did, it was considered an alienation from the other transcendent and rational part of man (Bernini 2019).

On the other hand, subaltern, post-colonial, Black and Latinx theories put the concept of race at the center: scholars and activists speak explicitly of race in a political sense. Race does not exist scientifically, but it does exist politically, and as such, racialized people are subject to different treatments (Vergès 2020). This then highlighted how racism is essentially a feminist issue. If feminism seeks to end discrimination and its functions, it cannot avoid considering the interrelationship of different oppressive axes. This has resulted in new epistemologies, new narratives, and new hitherto excluded stories that have slowly made their way in, challenging the universal and neutral perspective.

Subsequently, I analyzed various feminist critiques of science, highlighting four possible fields of research. These constitute the deconstructive part of feminist theories, listing what is wrong and to be remedied within the organization of scientific work and science itself and its concepts. The constructive part is instead represented by the feminist epistemology, which, with its approaches, analyzes and examines debates such as scientific objectivity, the role of values in science, and so on.

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<sup>84</sup> “Gender identity” indicates the gender (not strictly related to M/F) a person identifies as. “Gender expression” means the behaviors, interests, and dress styles commonly associated with (but not exclusive to) either women or men. “Gender role” represents the different social roles and duties that a person is expected to fulfill based on their gender status. “Sexual identity” is an umbrella term to indicate sexual experiences, desires, interests, acts of a person, whereas “sexual orientation” defines the sex and/or gender person one is primarily attracted to (Serano 2016).

In the final paragraphs, I have clarified why I believe an intersectional perspective is essential for epistemology and the methodological principles of (my) feminist-political epistemology. First, gender is an axis of power inextricably implicated in our scientific practices and our scientific judgments. Moreover, we always begin to know from our lived experience, and the gender social variable can define our experience as human beings and influences what we can know. The intersectional lens then is used to pursue a critical study of our scientific practices and improve them while achieving social justice. Indeed, subjects usually excluded from science can and should be included. Their inclusion broadens the experiences and conditions studied, especially those hitherto ignored. Theory must also serve to improve practice. Feminist theory then is the theoretical implant for achieving this and comes with specific tools. Situatedness, that is, understanding that we are an embodied and situated body from which our knowledge starts, is the first tool. Everyone's positioning defines us and being aware of it is a huge advantage.

For example, knowing that we are in a marginal position allows us to grasp the difference between marginal and dominant subjects. Through the intersectionality of the different marginalities, we understand how many characteristics we need to consider in arriving at a definition of each person's experience. This represents the second precept.

Another tool concerns the decoloniality of knowledge (third principle): knowing one's privilege (which is the opposite condition of the margin) and understanding how not to oppress even more or exercise privilege to enlarge and give voice to more excluded subjects.

All this fosters an awareness of the pluri-identities and pluralities of knowledge (fourth tool). This makes it possible to reduce the partiality of knowledge that has been obtained up to now, also decreasing the exclusion perpetuated by not knowing or considering certain valid knowledge rather than others.

Coming to the fifth and last point, this dissertation is, for me, a way of doing academic activism. To make space, talk about feminism, politics, and future planning for changes in society. These changes must also pass from the cultural transformation starting from the highest spheres of knowledge, and this thesis responds to this need.

The analyses contained in this chapter, beginning with the political position implied by feminism and its research methods, are preparatory to the content of the next chapters. In particular, in the last chapter of the thesis the epistemological tools will be used to broaden the focus from feminist epistemology understood as a discipline concerned strictly with problems of philosophy of science such as objectivity, to more general epistemic investigations. Hence, in this chapter I opened a “circle” I will close in the last chapter.

# Chapter Two: Acquiring Knowledge: Assumptions on Objectivity

## 2. 1 Introduction

“Relativism, like skepticism, is one of those doctrines that have by now been refuted a number of times too often. Nothing is perhaps a surer sign that a doctrine embodies some not-to-be-neglected truth than that in the course of history of philosophy it should have been refuted again and again. Genuinely refutable doctrines need to be refuted once.”

McIntyre, 1985

Feminist epistemology<sup>1</sup> consists of two interconnected poles that accounts for the nature of this discipline: feminism and theory of knowledge (epistemology). In the first chapter, I outlined the roots and connections this discipline has with feminism, explaining why and how this discipline belongs to the feminist area: understandably, feminists have an interest in epistemology since, as amply shown in the previous chapter, knowledge plays a pivotal role in gender and sex inequality.<sup>2</sup> Moreover, I have emphasized what methodological and conceptual tools distinguish feminist research in epistemology.

This chapter is divided in two parts, and it focuses on the other pole, namely the epistemological issues. In the first part of the chapter (2.1-2.3) I place feminist epistemology within the conceptual and theoretical framework of the theory of knowledge as well as the historical framework to grasp the assumptions of this

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<sup>1</sup> For a general introduction on feminist epistemology, see Tanesini 1999, Alcoff & Potter 1993, Potter 2006. For a more recent discussion on various strands in feminist epistemology developments, see Garavaso 2018 (especially Part 3), Crasnow & Intemann 2021.

<sup>2</sup> To sum up what stated in the previous pages, generally, dominant knowledge practices disadvantage women by “(1) excluding them from inquiry, (2) denying them epistemic authority, (3) denigrating their ‘feminine’ cognitive styles and modes of knowledge, (4) producing theories of women that represent them as inferior, deviant, or significant only in the ways they serve male interests, (5) producing theories of social phenomena that render women’s activities and interests, or gendered power relations, invisible, and (6) producing knowledge (science and technology) that is not useful for people in subordinate positions, or that reinforces gender and other social hierarchies” (Anderson 2020). See also Phelan 2017, Langton 2000, Harding 1991; 2015, Code 2014.

discipline and what shares with other positions in the philosophy of science that are not necessarily feminist, such as sociology of science, social constructivism<sup>3</sup>, postmodernism, etc.<sup>4</sup> This analysis will be reconstructed from the authors that feminist epistemology cites or appeals to.<sup>5</sup> So, I will place feminist epistemology with respect to the central debates in epistemology and philosophy of science, the main referents, and interlocutors of feminist epistemology and the framework and premises it adheres. In this way, I intend to provide a clearer picture of how feminist epistemology is positioned in the contemporary epistemological debate and set the structural features of this discipline with respect to other strands. In the second part of the chapter, I analyze specific feminist epistemological projects carried out by Sandra Harding and Helen Longino.

In general terms, epistemology<sup>6</sup> is a philosophical discipline that deals with the study (and theory) of knowledge called *episteme*, differentiating it from opinion or *doxa*. The *episteme*<sup>7</sup> is usually defined as indubitable objective knowledge about

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<sup>3</sup> Social constructivism is the theoretical framework by which the entities of a given domain exist but are filtered and structured through epistemic agents. Moreover, postmodernism is a very broad label to which different disciplines apply (for instance a postmodern aesthetic, a postmodern history, postmodern literature, and even a postmodern philosophy). Generally, the term connotes an anthropological and cultural condition resulting from the “crisis of the foundations” of modernity in the societies of mature capitalism. Postmodernism involves the belief that many, if not all, apparent realities are only social constructs, as they are subject to change inherent to time and place. It emphasizes the role of language, power relations, and motivations (Sim 2001).

<sup>4</sup> While feminist epistemology is much closer to the sociology of knowledge than to value-free theories, it does not share all of its implications, especially its extreme consequences about the exclusively social and political nature of scientific propositions, cf. Barnes et al. 1996, Latour et al. 2013.

<sup>5</sup> The reader may notice that names that contributed greatly to the historical and constructivist turn are missing. If they are not there, it is because the reconstruction is both inevitably partial, and is driven by those authors to whom feminist epistemology appeals directly.

<sup>6</sup> In the anglophone framework, epistemology is synonymous with theory of knowledge. Epistemology applies to the study of sources, foundations, and justification of knowledge (not strictly scientific). Philosophy of science studies the problem of the justification of scientific knowledge, the analysis of the representations of the world provided by the scientific theories, and the implications and consequences of scientific discoveries, namely the application of science. In Italy, philosophy of science and epistemology are used interchangeably (Laudisa et al. 2013).

<sup>7</sup> The types and sources of knowledge in epistemology can be grouped into three types: propositional knowledge that requires utterances, also known as know-that; practical knowledge that expresses skills in performing certain activities or actions (know-how); and finally, knowledge that coincides with direct acquaintance of a certain thing, person or sensation (Calabi et al. 2015, 10). In epistemology, we typically deal with the first type of knowledge discussed in relation to its classical problems, such as the nature of justification, knowledge, and

facts based on criteria that guarantee and justify absolute truth, certainty, and objectivity.<sup>8</sup> This particular form of knowledge usually applies to scientific knowledge. These days, this image of science is not taken for granted, and several scholars are redefining what scientific knowledge is and how to define objectivity. Feminist epistemology also participates in this debate, whose main contribution concerns precisely the rejection of knowledge as value-free not only in its factual realization but also in its ideal aspiration. Feminist epistemology strives to offer an idea of objectivity that does not fall into the value-free ideal but at the same time does not condemn objective knowledge to pure arbitrariness. One of the ways to achieve this goal is precisely to leverage the role of feminist values to improve our epistemic practices while also making them more inclusive concerning social and political groups usually ignored or underrepresented in science.

The structure of the chapter will begin with references to Kuhn and Quine, among others. These authors mark a watershed in the debates in philosophy of science and epistemology known to date. With the decline of neo-positivism,<sup>9</sup> thanks

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skepticism. According to a tripartite model, a standard answer to the problem of knowledge and justification is that knowledge is a justified true belief, if P (utterance) is true and S (subject) knows that P is true. In 1963, Gettier discussed this model and argued for its insufficiency. For example, one objection concerns the fallibilism of justification: it is possible to be justified in believing that p even if p is false. Another objection concerns the deductive closure of knowledge: if I know that p, and I know that p implies q, then I also know that q.

<sup>8</sup> Philosophers discuss several types of justifications. An internalist conception of knowledge holds that justification has to do with a subject's belief states or, more generally, with elements that are internally accessible to him. For a belief to be justified, it must have supporting reasons to p which are transparent and accessible through a process of introspection. On the other hand, an externalist position holds that justification is a property that belief p possesses due to some relationship that exists between belief p and the world external to the subject (Calabi & Sereni 2015, 20). One of the exponents of the externalist strand is Alvin Goldman (1979), who argues for a reliabilist conception for knowledge: to have knowledge, it is enough to have a belief that is true, in the sense that it is in an appropriate causal relationship with the fact it describes. If the process in question is reliable, the belief is a case of knowledge.

<sup>9</sup> The philosophy of science was born as an autonomous discipline within logical empiricism (circle of Berlin and Vienna) in the XX century. In its early days, philosophy of science was influenced by functionalism and the crisis of causality induced by relativity and quantum mechanics. For logical empiricists, the philosophy of science has as its purpose the rational reconstruction or explanation of the concepts and methods of science. To perform a rational reconstruction means to exhibit the logical structure of the theories, the core of science, and inferential processes and conceptual operations (how to formulate scientific theories). Attention to theories is focused solely on the syntactic and semantic aspects of scientific language, leaving aside the pragmatic aspects (Okasha 2006).

also to pragmatist influences<sup>10</sup> and the second Wittgenstein,<sup>11</sup> doubts began to arise about the existence of a single method, as well as of an absolute definition of objectivity, and a single accurate description of reality, since factors were not fully ascribable to empirical learning or to purely logical-rational elaboration. These authors respectively challenged the myth of objective and impersonal knowledge and highlighted how subjective elements intertwined with objective ones.<sup>12</sup> After these changings in science, scientific objectivity will be interconnected with the role of values in theory choice, the distinction between epistemic and non-epistemic values, and the way these values participate in scientific objectivity.<sup>13</sup>

I chose Kuhn and Quine not only for their relevance in epistemology and history of science but also because they connect directly with feminist epistemology, being among the most cited authors by feminist epistemologists, precisely because they pose the assumptions in which this discipline engages: attention to contextual aspects and gap between theory and observation. In feminist reception, Kuhn and Quine open two cornerstones in epistemological-feminist thought, proving that

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<sup>10</sup> Pragmatist thinkers (James 1907, Peirce 1978, and Dewey 1938) emphasize the pragmatic character of knowledge, that is, the fact that cognitive activity never has a purely contemplative value but is developed as a tool for action. Knowledge also serves as a response to the occurrence of indeterminate or problematic situations, and both the theoretical and practical moments of knowledge have an operational character. This aspect will be well received by feminist scholars, forming the so-called pragmatist feminism (Seigfried 1989, Lake & Whipps 2021) and by feminist epistemology, as understanding and knowledge of one's condition of dominance become a tool to initiate social and political changes.

Today we also use the label neo-pragmatist to indicate very different thinkers (for instance, Rorty 1979). The label draws influence from traditional pragmatism and focuses in particular on language, refusing notions of universal truth and a foundationalist approach to epistemology.

<sup>11</sup> Some scholars (Dummett 1959) argue that the second Wittgenstein (that of the *Philosophische Untersuchungen* 1953) advocated a form of relativism, particularly in terms of the arbitrariness and conventionality of the rules of use of linguistic signs. For different interpretations of Wittgenstein, see Coliva 2009.

<sup>12</sup> In a similar vein, Stephen Toulmin (1961) describes perceptions as being conditioned by factors and concepts from past processing. Toulmin highlights how the transition from one theory to another is accompanied by so many changes in worldviews, in scientists' psychological and linguistic habits that any attempt to understand all these upheavals within a model of scientific rationality that deals only with logical-mathematical connections and experimental procedures is not sufficient.

<sup>13</sup> In the relevant literature, depending on the author's preference, 'cognitive' or 'constitutive' are used as synonyms for 'epistemic,' and 'non-cognitive' or 'contextual' for 'non-epistemic' (Potter 2006). By epistemic values, we mean all those values generally considered constitutive of the objectives of knowledge and the search for the truth through scientific inquiry, while non-epistemic values concern personal, social, cultural aspects and depend on the context and the person who supports them (Rooney 1992).

feminist epistemology fits in this debate since “it is a rebellious child of epistemology. It bears the sign of its parentage, but it is also the daughter of different times, and, therefore, it is different from the tradition that generated it” (Tanesini, 1999, 5).

But from these authors’ reflections come not only assumptions but also theoretical problems. In section 2.2, I discuss the distinction between epistemic and non-epistemic values and the possible positive use of non-epistemic values. Several authors outside of feminist epistemology agree with the admission of non-epistemic values into science; what distinguishes feminist epistemology is the thesis that this interference is not detrimental to knowledge but can, in fact, play an epistemically positive role. As I mentioned earlier, this chapter aims to trace the links of feminist epistemology and highlight how it differs from the disciplines and positions from which it draws inspiration.

Theoretical assumptions and epistemological problems also determine in contemporary epistemology a debate that revolutionizes the classical image of knowledge and the concept of objective knowledge. The discussion concerns the image of science as value-free or value-laden and is explored in section 2.3. Even if we abandon the classical idea of objectivity understood either (1) as objective because it grasps the objects of the world precisely as they are and, in their independence, or (2) as objective because it ensures the absence of non-epistemic values in the central stages of the production of scientific knowledge, we find ourselves in a panorama of definitions (normative or otherwise) that sometimes make scientific understanding even more confusing. Several philosophers of science share the idea of abandoning a single account of scientific knowledge and rather analyzing different notions depending on the context and the aspect of knowledge we are referring to. So, I will describe some various narratives and justifications that contribute to the idea of science as value-laden. This concept will be examined through several explanatory strategies, for example, from a historical perspective with Daston and Galison (2010). A specifically feminist strategy is that of MacKinnon (1987) and Haslanger (2002), who denounce the androcentrism and sexism inherent in the value-free ideal.



Finally, I will conclude the chapter by mentioning Longino's and Harding's new elaborations of the concept of objectivity, which far from abandoning the possibility of having scientific knowledge, elaborate projects that can help improve it. Longino and Harding's respective approaches will be analyzed in the second part of the chapter (2.4 and 2.5) and will pave the way to my combination of standpoint theory and contextual empiricism in chapter three.

## 2.1 The Epistemological Assumptions of Feminist Epistemology

### 2.1.1 Historical Turn

In the Anglophone tradition, the relationship between the philosophy of science and the history of science have not always proceeded linearly. Starting from 1950, the historiography of science has studied past and present science historically, revealing a picture that did not always correspond with that of standard philosophical accounts (Wagenknecht et al. 2015, 2). In particular, with Thomas Kuhn's work, the so-called "historical turn" begins;<sup>14</sup> other notable scholars who contributed to this turn are Fleck 1938, Polanyi 1958, Hanson 1958, and Feyerabend 1975. This historical turn has raised the question of science's logical nature and structure, hitherto seen as ahistorical. Kuhn's theory is one of the premises within which feminist epistemology moves.

One of the most important assumptions of Thomas Kuhn is that scientific activity is necessarily carried out within a world. According to Kuhn, the development of theories about the world, the gathering of evidence, and our epistemic practices are mutually related to the strategies we use to investigate it, methods, and practices that may constrain the type of theory produced, the selection or choice of empirical evidence with specific characteristics, a certain vocabulary, a particular use of categories, etc. This intermingling with the investigated world opens to factors that are not necessarily scientific yet compel our epistemic

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<sup>14</sup> For a contextualization of Kuhn's reach see Omodeo et al. 2021.

practices. Among these factors, we also find power forces and hierarchies that decide what is permissible and what is not.

Thus, the scientific world is also social, our scientific practices have social conditions, and scientific theory applies to a predominantly social world (Lacey 1999, 151). Historically speaking, there have been different narratives of the world in which scientific activity has been carried out, and a change in strategy usually comes with a radical shift in theory (for example from Aristotelian to Galilean). Furthermore, Kuhn states that different scientific statements or theories cannot be compared solely based on logical arguments or empirical evidence.

Kuhn proposes the concept of paradigm<sup>15</sup> to indicate a vision of the world, never merely neutral and logical in which social and cultural factors, typical of the scientific community that holds the paradigm, participate in its production (Egidi 1988, 16). This implies that the objectivity of scientific theories is rationally and logically determinable and relative to the paradigms in which they are embedded. According to Kuhn, the motivations that have determined the change of theories in science cannot be traced back to rational arguments, but science must be inserted in the historical dimension and also in the social and political forces that determine its evolution over time. Science changes by alternating revolutionary and normal movements.<sup>16</sup> Normal science operates in an established paradigm, while scientific revolutions are transitions from one paradigm to another. And given that they are

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<sup>15</sup> Each paradigm is formed by an ensemble of theoretical assumptions that the scientific community accepts and embraces, and a second group of exemplar case studies of scientific problems overcome and analyzed by these assumptions. Paradigm then is not just a theory, but it represents the way scientists think the future of research should proceed, which are the pertinent problems to face and the methods to solve them. So, it is more a grand perspective through which to look at the world.

<sup>16</sup> Through time, sometimes anomalies occur. In this case, when these anomalies cannot be reconciled with the paradigm and they become too numerous, the trust posed in the paradigm weakens and a crisis and a revolution start. In this period, new theories and ideas are accepted and studied and ultimately, we come to a new paradigm. The problem was that scientists were used to thinking that changes based on theories are due to objective motivations. But this idea about faith in the old and new paradigm undermined this idea of objectivity. The rational concerns and motivations were not the only ones involved in the changing paradigm. Change was also motivated by the social pressures that scientists exert on each other.

different ways of looking at the world, the paradigms are incommensurable among them.<sup>17</sup>

Another author who contributes to this debate is Hanson, supporting the thesis that empirical observation is not a totally neutral operation but is also conditioned by the orientation and interests of the observer (Corvi 2007, 167). This is also known as the theory-ladenness principle, according to which every observation is by its nature theory-laden (Hanson 1958, 19-31).<sup>18</sup> Even Popper, who shared some of the interests and assumptions of neo-positivism, does not criticize this position.<sup>19</sup>

Finally, Feyerabend (1975) takes these concepts to their extreme consequences by criticizing the objectivity of the scientific method and emphasizing the relative, if not subjective, nature of scientific knowledge. Feyerabend was

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<sup>17</sup> The thesis of incommensurability claims that two paradigms in question do not have any measures in common and thus makes it impossible to compare the two because the principles by which the meaning of observations is specified are inconsistent with each other and the same standards for evaluating theories and methods change according to paradigm. Thus, only within a certain predefined paradigm can the concept of objectivity actually be applied (Feyerabend, 1975). However, in the less extreme formulation of incommensurability, empirical applications are the basis on which scientific theories can be evaluated, compared, and chosen, thus paving away from the idea of the total impossibility to confront or rival theories because, in any case, meanings constantly change according to the context in which one finds oneself (Stegmüller 1976).

<sup>18</sup> Imagine that we have two opposite theories, and we have to choose which one to use. Usually, we would apply to the empirical evidence to see which theory supports more empirical evidence. But facts are not neutral; they are shaped somehow by our assumptions. I cannot really be detached and neutral when I observe the data, but it is impossible to isolate pure data from our theoretical thoughts. Our background assumptions heavily shape our perception; what we see is affected by our beliefs.

Harry Collins (2016) extends this idea stating that our outcomes of experiments are inserted in highly theoretical discourse. This is also known as the “regress of experiment”: scientific theories are tested not in sensory experience but are tested in experimental facts and abstract phenomena, which are often impossible to look at in bare experience. Instead, these experiments and phenomena are established using intricate procedures of measurement and experimentation. Is the result of these experiments, however, really a-prospective? Collins says that if an experiment is correct, one must first decide or be certain that the apparatus producing and recording the result is entirely reliable, but one cannot establish this unless one admits that it produces correct results, thus going *ad infinitum*. Collins even adds that this circle can be broken by totally contingent aspects, such as the scientist’s career, the community’s social interests, and how much productivity is expected if the result is correct.

<sup>19</sup> Popper points out that the traditional ideal of the progress of scientific knowledge is unattainable because science does not progress by cumulative successes of irrefutable theories. Instead, these theories are continually tested and, if refuted, must be abandoned, demonstrating that possession of ultimate knowledge is never possible, but the quest is always persistent and never concluded (Popper 2010, 311).

convinced of the nonexistence of any method of science that differentiates it from other types of knowledge: in the course of history, in fact, every rule has been violated at least once in the formulation of a scientific theory. These violations, however, are not considered oversights or flaws in the process of determining a theory: they precisely represent the necessary conditions for the advancement of scientific knowledge. For Feyerabend, the fundamental characteristic of science is its rejection of dogmatism, which translates into openness to any methodology.

These epistemological premises revolutionize scientific knowledge and will be discussed in section 2.2, but before, I shall examine another central premise for feminist epistemology: the underdetermination thesis.

### 2.1.2 Underdetermination Thesis

A further scientific premise feminist epistemology faces is the underdetermination thesis (also known as the Duhem-Quine thesis). The underdetermination thesis (UT henceforth) allows feminist epistemology to bridge the gap between theory and observation with the fruitful use of non-epistemic (feminist) values.<sup>20</sup>

The UT achieved its greatest fame in 1970 with the historical turn and the birth of positions such as social constructivism, although the first formulation can be traced back to Duhem (1954). This version is also referred to as Duhem's problem, and it is applied explicitly to physics experiments (Ladyman 2014). According to this version, it is never possible to deduce an assertion about what will be observed from a single hypothesis. Rather, it is necessary to add further assumptions such as background conditions, the reliability of measurements, the ideal conditions of a system, etc., to the hypothesis to be tested. Hence, a physics experiment can never condemn an isolated hypothesis, but only a whole theoretical system. This means that the verification or rejection of a hypothesis is not only based on empirical or logical evidence because it is never just one hypothesis that is put to the test, but a set of hypotheses, since each hypothesis is also articulated through

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<sup>20</sup> On the fruitful role of UT that emphasizes "the impact of non-empirical values or cognitive values on theory choice" outside the feminist sphere see Carrier (2011).

auxiliary assumptions that also define the required empirical consequences. In the case of empirical refutation, one cannot establish which of all the deductive and auxiliary assumptions is the incorrect one (Duhem 1954, 211).

This problem became central when the inductive method was replaced by the hypothetical-deductive method of the empirical examination of science at the end of the 20th century.<sup>21</sup> In general, hypothetical-deductive evaluations involve the hypothetical adoption of an assumption and its assessment through its empirical consequences (Carrier 2011, 190). In this way, the theoretical assumptions of science are not bound to be reconstructed solely from experience. On the contrary, theories may be able to capture processes that are beyond our senses. Deductive hypotheses are much broader than inductive hypotheses that can be worked out by looking at experience; on the contrary, hypotheses are first formulated and then put to the test of empirical examination. Hypothetical deductive hypotheses are therefore required to structure then and test the available empirical data, and the relevant evidence is produced precisely through the empirical application of the theories (Carrier 2011, 191).

A different formulation of underdetermination is referred to Quine (1951).<sup>22</sup> Quine's UT has ties with his holism which predicts that "our statements about the external world face the tribunal of sense experience not individually but only as a

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<sup>21</sup> Generally, hypothetical-deductive method indicates the theory of the world for which science proceeds by hypothesis and deducing predictions that are checked experimentally. The hypothetical-deductive method can be formulated in inductivist or falsificationist terms, depending on whether the positive result of experimental controls confirms the theory or not. According to Hempelian theory, the explanatory procedure has the logical structure of an inferential argument, consisting of a set of premises, which together constitute the *explanans*, and a conclusion, the *explanandum*. The basic idea is that the explanatory power rests on empirical laws (which describe correlations between observable phenomena): the role of these laws is to connect the *explanandum* to the initial conditions mentioned, alongside the laws, by the *explanans*. If the laws used are of an unexceptionable or deterministic type, this connection is necessary, and therefore the *explanandum* is a logical consequence of the *explanans*: the nomic connection thus established allows us to consider the particular facts described by the initial conditions as having explanatory relevance with respect to the phenomenon to be explained (Galavotti & Campaner 2018).

<sup>22</sup> Quine is one of the most influential American philosophers of the 20th century. In his education, he was influenced by at least three important strands: the empiricist tradition, the pragmatist tradition, and modern mathematical logic. Quine learns the relationship between experience and theories of the world from the empiricist tradition, from the pragmatic tradition comes his defense of holism, and finally, from the logical tradition comes his commitment to the theory of truth (Nelson & Nelson 2003, 2).

corporate body” (1951, 41).<sup>23</sup> The UT states that our *overall world theory* is not entailed by *all the true observational conditionals* it entails; this is also known as the strong version of UT.<sup>24</sup> This is because it is likely that there are theories of the world that are empirically equivalent to but logically incompatible with our overall theory. So, theories are not underdetermined just by past and present observations but by all observations (Quine 1975).

The UT thesis is still central to debates in the philosophy of science, and several authors have reasoned about the very nature of this thesis. For instance, Philip Kitcher (2001) expanded the original UT and distinguished it into three different formulations: the transient version states that *some* theories are underdetermined by the *currently* available evidence. The permanent thesis contends that *some* theories are underdetermined by *all* possible evidence. The global thesis states that *all* theories are underdetermined by *all* the evidence we will ever have access to (Kitcher 2001, 30–31, emphasis added).

Some scholars have tried to refute the UT because it endangers the ideal of science as value-free (Grünbaum 1973, Laudan 1990, Laudan and Leplin 1991, Norton 2003). A strategy usually used to overcome underdetermination is to consider it a problem only in case of permanent or global thesis (Haack 1998). In transient UT, in case of impossibility of theory choice, one strategy is to suspend the judgment and wait for further future evidence (Haack 1996). To respond, scholars who accept the transient UT, argue that transient underdetermination is sufficient to create problems for the traditional model of science (Biddle 2013, Nelson & Nelson 1990, Potter 1996, Rolin 2002). A lot of cutting-edge research is in this situation, and in the case of some research, for example, research into the use of particular pesticides or climate change, we cannot wait (Douglas 2000, 2006). It might be thought that the transient thesis gives room for solving the issue. Trust in

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<sup>23</sup> In general, the term holism indicates the approaches that lead every particular phenomenon to an organic totality and consider it explainable only in reference to it; the *whole* is superior to the parts that compose it. The term is sometimes used in a derogatory sense; for example, Popper (1945) uses it to criticize interpreting society as an organic whole of which the members would be a subordinate function.

<sup>24</sup> There also exists a weak version for which some theories or hypotheses are underdetermined only based on the current situation’s evidence (Ladyman 2014).

the scientific process justifies our belief that the question will be solved shortly; hence our doubts are just temporary. However, often scientists do not have the luxury of waiting for a future solution. For instance, Heather Douglas (2006) cites climate change, which is such a time-sensitive and urgent topic that we cannot wait to precisely and unequivocally determine how much our influence affects changes to the planet. Moreover, agnosticism would impede scientists' engagement in present and future research, blocking scientific progress (Biddle 2013). The latter is a very strong argument and one that I do not necessarily agree with. I think it is worth remembering that it is not always possible to postpone decisions about the choice of theories. Thus, such a suspension is detrimental and sometimes impossible for science (Kourany 2003, Howard 2009, Biddle 2013).

Other refutations of UT are made by scholars invoking epistemic values, for example simplicity, that allow to decide between two theories if the empirical evidence is not enough (Lakatos 1976). Hilary Putnam (1975) justifies supporting our theories because otherwise, their success on a predictive level would not be explained; they would be a miracle (the no-miracle argument). On the contrary, antirealists reply that many theories that were successful in the past turned out to be false, and therefore we could reasonably think that it will happen for our successful theories (this argument is also called pessimistic meta induction).<sup>25</sup>

Other scholars accept the UT and try to move once this problem is acknowledged by arguing that if between theory and observation does exist a gap and it is not possible to make a choice, we could use other parameters (non-epistemic values included) to make a choice. The moment we have a gap between theory and observation but have to choose, non-epistemic values will fill the choice. Feminist epistemology's responses fall in this second category. In fact, feminist epistemology takes a step further arguing that non-epistemic values do not enter just in the case of underdetermination.

For instance, Longino (1987, 1990 ch. 2-3-6, Longino & Lennon 1997, 28) is one of the feminist authors who refer to Quine and the UT to argue about the

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<sup>25</sup> Other responses to the underdetermination thesis are Jeffrey (1956), based on the Bayesian model of probability, and S. Mitchell (2004). Biddle (2013) provides a refutation of both analyses.

plausibility of the criticisms of science from by feminist perspectives, and the unsustainability of the difference between cognitive and non-cognitive values. Sandra Harding (1975; 1986b, 36-37) also cites Quine because he challenged Carl Hempel and Thomas Nagel's logical-empiric tradition with his rejection of the analytic/synthetic division and reductionism, i.e., the thesis that every sentence with meaning is equivalent to some logical construct that relates directly to immediate experience. However, Harding claims that Quine's other aspects are not compatible with feminist criticism.<sup>26</sup> Other references of UT in feminist authors can be found in Potter 1997,<sup>27</sup> Intemann 2005.

Moreover, some strands of feminist empiricism have ties to Quine and his naturalism; that is, justification and status of knowledge claims also depend on the characteristics of the processes that generate and maintain beliefs (Wagenknecht et al. 2015, 4).<sup>28</sup> For example, in Anderson's formulation (1995a), feminist epistemology is presented as a naturalized social epistemology. Exactly as Quine proposed to study epistemology as a chapter of natural science, in feminist epistemology, the cognitive subject that produces knowledge is also subject to the same laws that affect its object of study (Severini 2015, 131). At the center of the epistemological debate, then, we find the ways of justifying the content of knowledge and the acquisition of certain knowledge and how these scientific

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<sup>26</sup> According to Harding, Quine's epistemology does not allow for the kind of normativity that feminism requires. For a reconstruction of Quine's feminist interpretations, in contrast to Harding's theses, see Nelson & Nelson 2003.

<sup>27</sup> Potter gives an example concerning the production of Boyle's gas laws. When Boyle had to choose between the old and the new mechanism, he took into account not only observations and data but also the social meanings of each paradigm. For similar influential versions, see also Steven Shapin and Simon Schaffer (1985). Shapin and Schaffer aim to show that the debate between Boyle and Hobbes had political repercussions beyond the intellectual sphere and that to accept Hobbes' or Boyle's method of knowledge production was also to accept a social and political philosophy.

<sup>28</sup> Naturalism in epistemology and analytic philosophy is a label that gathers many different positions. These positions, however, share the idea that philosophy should follow and be attentive to the results of the natural sciences since some philosophical problems can be solved by the methodology and results of these sciences. Moreover, much philosophical inquiry must be investigated with a posteriori evidence and not on a priori arguments. However, adopting a naturalist position opens the problem of the lack of epistemic norms for knowledge. Quine is one of the exponents most often associated with naturalized epistemology since he argued for an almost descriptive psychological type of inquiry: epistemology is about descriptively studying the process that leads from sensory stimulation to belief formation (Calibi & Sereni 2015, 23).



practices can also be influenced by characteristics such as sex, gender, social status, etc.

Unlike Quine, however, feminist epistemology also stands as a normative and not only descriptive investigation of knowledge production. In this regard, feminist values are legitimately used to inform empirical inquiry but also to revise scientific methods. Moreover, scientific practice is essentially a social and collective activity and never an individual's enterprise (Severini 2015, 132).

In the following two sections, I will explore more the epistemological issues derived from Kuhn's and Quine's theses, such as the distinction between epistemic and non-epistemic values and the possible use of the latter group in the internal stage of scientific processes. I will briefly reconstruct the debate and show possible solutions advanced by feminist epistemologists, among others, showing the continuity with the general debate in epistemology.

## 2.2 The epistemological problems of Feminist epistemology

### 2.2.1 The Distinction between Epistemic and Non-Epistemic Values in Science

The analysis of the role of values in epistemology has as the oldest reference the famous fact/value dichotomy dating back to the 18th century with Hume (III, I, I 1739-40), who stated that it is impossible to deduce moral conclusions from empirical facts. Hence, we can only deduce empirical conclusions from empirical premises. Ethics and its propositions do not fall into this category because they cannot be said to be true or false, nor analytically true, as is the case with logical or mathematical truths. Scientists should only rely on facts, on empirical verification, so that their statements can be checked factually because facts, by definition, do not depend on us.<sup>29</sup> Consequently, in scientific knowledge, ethical judgments and values

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<sup>29</sup> Putnam is one of the authors who discuss this distinction in a famous essay (1982). Putnam denies that there is an absolute dichotomy between values and facts, and the former is not irreducibly subjective but has cognitive character; moreover, facts that neo empiricism assumes to be absolutely objective are imbued with value. The judgments of fact and value are inexorably intricate, so it would be more correct to speak of a distinction rather than a dichotomy (De Caro 2004).

must not enter in the formulation, justification,<sup>30</sup> and verification of scientific theories, and when they do they interfere detrimentally with the objectivity of knowledge. This type of error is called by G. H. Moore (1903) the naturalistic fallacy and indicates the error of deriving prescriptions from simple descriptions.

But the anatomy of the word *value* is itself controversial, as “it is one of those weasel words that slip in and out of the nets of the philosophers” (McMullin 1982, 4). It is almost impossible to give an unambiguous meaning to the word that can accommodate all the various value aspects of human experience.<sup>31</sup> In general, by value, we mean a wide range of phenomena such as emotion, belief, or feeling. By value, we can also mean property or a set of properties that are valuable for a certain entity because the possession of certain properties is desirable for this entity. In this case, it can be called a characteristic value and serves, in general, an entity to function at its best. Two operations can be performed with respect to these values: the first is evaluating how much a certain entity realizes this value. In this case, the operation is acceptable to traditional science. The second operation concerns value judgment, asking whether an entity should have one value or another and whether the value is actually positive for a certain entity. This judgment is not allowed in the logical-empiricist framework since it would necessarily fall into a subjective formulation.

Regarding the first operation, the question revolves around the epistemic values, called in this way because they promote the truth or truth-likeness of theories.<sup>32</sup> Commonly the epistemic value denotes in the philosophy of science a

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<sup>30</sup> In classical foundationalism, beliefs are divided into two groups: those justified inferentially from other beliefs (deductive or inductive inference) and basic beliefs that avoid going *ad infinitum*. The latter are infallible and certain. There are different positions, e.g., the coherentist position, for which there are no privileged beliefs, but every belief is justified because it fits coherently into the overall system of our knowledge (Calibi et al. 2015, 141). One of the ways of understanding whether a belief fits coherently is to understand whether its addition increases the overall coherence of the system.

<sup>31</sup> There is not always an agreement on the word “value” as it often does not exhaust all the factors that can influence the choice. In this regard, Solomon (2012) prefers the term empirical or non-empirical vector to indicate a preference for theories with some empirical success or preferences of another nature.

<sup>32</sup> Usually, what makes a belief epistemically justified has to do with its truth (this does not mean that a belief epistemically justified can never be false). McMullin states that when we say that a scientific proposition is true, we suggest that it is “well supported,” not absolutely true. Truth-value would function more as a conceptual horizon to aspire to (McMullin 1982, 7).

rationaly acceptable criterion or characteristic for a scientific belief or theory (Lacey 1999, 45). However, scholars have noted that there is not a standard list of values agreed upon by all; for example, Kuhn (1977) lists accuracy, consistency, predictive and explanatory scope, simplicity,<sup>33</sup> and fruitfulness, Putnam (1981) includes instrumental efficacy, and Popper adds a high degree of falsification (1934). In section 2.4.1 of this thesis, I will also outline the list of epistemic values that can be defined as “feminist” in Longino’s perspective.

In addition to possible disagreement over values, there may also be disagreement in terms of ranking, such as which of simplicity and consistency should be favored first.<sup>34</sup> These disputes open up debate and scientific controversy, and eventually, the answer can rest on practical judgments.<sup>35</sup> For instance, Heather Douglas (2013) divides cognitive values into three groups: minimal epistemic criteria, pragmatic considerations, and genuine epistemic assurance.<sup>36</sup> Douglas establishes minimum requirements (internal consistency) whose absence indicates an epistemic problem. The second group concerns values that are considered strategic or pragmatic, e.g., simpler statements or theories are easier to follow in their implications and consequences, or theories with a broad explanatory potential can offer different applications or evidential relationships. Finally, the third group concerns those values that ensure accuracy through the relationship between theory and evidence to which they refer. Therefore, the third group becomes a

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<sup>33</sup> There is also the case where the same value is present for different authors, e.g., simplicity, can incorporate different meanings: harmony, elegance, economy, efficiency, conceptual clarity, etc.

<sup>34</sup> One example is the controversy between Bohr and Einstein over the acceptability of the quantum theory of matter. Einstein gave more importance to coherence with the rest of the physical theories, and its theory was very complex (thus failing the value of simplicity). At the same time, Bohr considered the predictive success of the new theory much more important (Ladyman 2014).

<sup>35</sup> According to McMullin, the game between value-free and value-laden is not to be played in the constituted role of truth-science, nor in the ethical respect of adhering to and not tampering with scientific evidence and operations, nor even in the values derived from decisions about what to do with science (applied science), but in whether or not value-judgments are present in logical inferences.

<sup>36</sup> Douglas is inspired in her division by Laudan’s division (2004) in truth indicative values versus the rest of the cognitive values. In Laudan’s classification among all cognitive values, only internal consistency and empirical adequacy are truth conducive.

looser error indicator than the first group but still valid because it studies the relationship between theory and evidence to which it refers.

The purpose of Douglas's division is to limit conflicts between the choice of different values by assigning superiority to the first group over the other two, accepting productive tensions within the values of group 2 and unresolved tensions in group 3. But most importantly, she also explains and opens to the influences of non-epistemic values, especially in group 2, which respond to strategic or pragmatic needs. Douglas joins other scholars, feminist and otherwise, who reason about this blending of epistemic and non-epistemic values.

For instance, according to Rooney, since there is no precise classification and no single list of epistemic values, choice operates more on the basis of value judgments than an algorithm, whereby choice involves "a complex background of languages, practices, skills within which all kinds of constituent-contextual factors are already encoded" (Rooney 1992, 19). Hence, epistemic values are also constrained by the historical moment, culture, class, and background, so it cannot be excluded that social and moral factors also influence cognitive values and that power and institutional relationships also enter as factors for our scientific beliefs.

On this matter, feminist philosopher Longino (1995; 1996; 2004) suggested that these epistemic values are not strictly epistemic because their use involves political and social aspects in the evaluation. Furthermore, she proposes feminist epistemic values that can lead to new results. Putnam also questioned this difference between epistemic and non-epistemic values because facts and values are well intertwined in the sense that ethical concepts are used in scientific descriptions. Some terms can be both descriptive and normative. Dupré (2007) also suggested that some scientific theories are relevant to human interests and are therefore necessarily linked to ethical aspects. If there are statements that are really neutral, it is only because they do not interest us that much.

These positions indicate that science has undergone a remarkable transformation, and science is now considered not only in its purely epistemic pursuit but also as applied research, a practice (Svetlova 2014, 80). This intertwining of science and practice also changes the standard assessments of scientists and the classic debate between epistemic and non-epistemic values. There

may thus be a truth-oriented component and an equally legitimate practical-oriented one. The close correlation between science and practice also explains that truth is not scientific research's only aim or objective. That is, some values are called epistemic because they can promote the goal of science, which is usually to arrive at the truth. But even if this were the case, it is still difficult to understand how to put these values in relation to the truth. There is no logical connection between simplicity and truth. And even if it was, it could not be demonstrated on the grounds of empirical evidence since epistemic values are called in question when the hypothesis overcomes the available data (Bueter 2015).

To this problem, feminist epistemology believed in the role of non-epistemic values not only in the context of discovery but also in that of justification, given the great influence of sexist assumptions on the content of science and how it occasionally played a role in reinforcing gender stereotypes (Biddle 2013). In the next section, I will look at how these non-epistemic values can foster past and future scientific endeavors.

### 2.2.2 Different Use of Non-Epistemic Values

Usually, in the context of discovery and applied science, it is perfectly acceptable and sometimes required (in the case of humans or animal experiments) that non-epistemic, hence moral or social values are kept in mind (Rottschaefer 2003, 225). However, in the philosophy of science, the classic distinction between the context of discovery and the context of justification has begun to be questioned.<sup>37</sup> For example, Kitcher (2011) explains how in the process of scientific inquiry, it is not so simple to

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<sup>37</sup> According to Reichenbach (1961), the act of discovery escapes logical analysis; the context of discovery concerns the genesis of discoveries or research questions that may include elements that are not necessarily epistemic. The context of justification analyzes the connection between factual data and the theories advanced to explain them. Logic deals only with the context of justification. Nickles (1980) also adds the context of hypothesis development (context of pursuit). Mertonian school of history and sociology of science argue that social values and cultural values impact the kinds of research developed. Hence, the questions undertaken to be explored are determined by both social and cultural factors and internal aspects of scientific inquiry. However, according to Merton (1938), scientific inquiry (the actual production of science and the conduct of research) is driven by internal norms which secure the integrity of contents produced by science.

divide the phase in which one chooses which research to undertake and the phase in which one collects the data and advances the hypothesis about the starting question based on the data. At each stage, one asks whether the results obtained warrant further investigation. Hence, non-cognitive values might influence research well before we get to the question of evaluation and justification of theories: when considering the variables relevant to evaluating theories, what data are generated according to these variables, how much plausibility to assign to hypotheses, and which ones are deemed worth testing even in the presence of outliers (Bueter 2015). The influences on these decisions are transferred into the evaluation of theories “via the question, which theories get developed and pursued (and which not) and which data are accordingly generated (and which not)” (Bueter 2015).

Another strategy called the “blind spot argument” states that science cannot really arrive at the whole truth but at most at parts and segments of the truth. This involves first choosing and selecting significant aspects and variables to take into account then selecting significant things. Who decides what is minor or not often also depends on contextual factors, so there can be a blind spot, i.e., aspects that you have opted not to investigate but that you cannot know that if pursued, would have led to the elaboration of a theory, which goes against the one that is now accepted. The blind spots argument predicts that acceptance of a theory can result from the lack of alternatives, also explained by the invisibility or apparent insignificance of other options.<sup>38</sup>

The problem is not that just value judgments override the empirical evidence, because the relationship between values and science is much more complicated since empirical data and internal logical consistency are not always sufficient to guide the choice of theories. The idea suggested by feminist scholars is that non-cognitive values do not only fall under cases of underdetermination because, in reality, non-cognitive values also affect all stages of knowledge production. For instance, how we assign trust to others’ testimony. Rolin (2004)

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<sup>38</sup> There is no certainty that something is not missing. That is why to overcome the problem of blind spots, the idea of adopting pluralism of values and goals is more suitable. Bueter’s example is supported by the case study on evaluating hormone replacement therapy to prevent cardiovascular disease.

focuses on the trustworthiness of scientists' testimony, saying that non-epistemic values can distort scientists' assessments of the trust to be assigned to colleagues, through sexist values or racist prejudices. Indeed, trust sometimes takes the form of a stance rather than something that is inferred from what is heard. However, whether positive or not, this explains that social values have ramifications in science.

Values can also influence how we choose the threshold of evidence to form a justified epistemic judgment and the relevance assigned to evidence (Miller 2014). The influence of values can be bottom-up - background assumptions guide the way we interpret data, or top-down - functioning as a tiebreaker in choosing which epistemic values to adopt.<sup>39</sup> The choice of evidentiary models and the threshold to be accepted also depend on social judgments that judge the same evidence differently.

For Douglas (2000, 2014), non-epistemic values can only play a direct role in the practice of research in the context of discovery, whereas in the context of justification, they can only intervene indirectly<sup>40</sup> to assess whether the evidence gathered is sufficient to support the hypotheses. Hence, in the context of discovery, the use of values is almost inevitable because every scientist, before undertaking research, chooses which areas to pursue and how. Douglas states that ethical concerns and values are practically necessary in some cases, like when human beings are involved (Douglas 2014, 170).<sup>41</sup>

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<sup>39</sup> Miller (2014) gives the example of physical experiments, where data are not pure but always have some noise that must be reduced or removed and the boundary between signal/noise is not clear; on the contrary, it is also influenced by social values. In this case, it is not a matter of choosing between one theory and another, so it is not a case of underdetermination, but in any chance, social values participate in the determination of "the evidential threshold level putative evidence must meet" (Miller 2014, 11).

<sup>40</sup> A direct and wrong way of social values interfering in research is when a scientist, in order to follow his values, tamper with the methodology to produce a certain empirical result that proves the thesis.

<sup>41</sup> The Stanford experiment organized by psychologist Zimbardo was an attempt to study the psychological effects of perceived power, focusing on the differences between prisoners and guards. A group of volunteers was randomly selected to play prisoners and guards. Some guards began to develop their own rules and even subjected prisoners to psychological torture. Supervisor Zimbardo did not stop the experiment to study the effects of power and allowed the abuse to spread (Douglas 2014).

In the context of justification, Douglas examines the role of non-epistemic values with respect to what we can infer from evidence. Indirectly, scientists are influenced by their own values, which in the presence of a certain value can affect what we see in a particular set of evidence. Scientists must also always decide whether, based on their own judgment, the evidence is sufficient to support the claim we want (Douglas 2014, 174). In making these judgments, non-epistemic values can play an important role.

Douglas also presents the role of non-epistemic values in the case of inductive risk, whose concept she borrows from Hempel (1965) and Rudner (1953).<sup>42</sup> In this case, the use of values does not override the need for a correct argument for the interpretation and methodology of data but influences “the understanding of what counts as a good argument” (Douglas 2000, 560). In cases of inductive risk, value statements act as legitimizing premises in whether or not to accept or reject scientific hypotheses and serve, above all, to evaluate the consequences of a possible error with respect to the chosen theory. It is not only a matter of assessing possible unforeseen errors but also the direct effects of a certain action, of a certain chosen theory. A distinction on the direct and indirect role in the sciences also serves to avoid the externality of values; usually, as long as non-epistemic values do not interfere with the internality of the reasoning processes, there are not too many problems. But in the case of inductive risk, for example, “we are required to consider the consequences of error alongside the arguments concerning evidence” (Douglas 2000, 564).<sup>43</sup> This consideration calls into question both epistemic and non-epistemic values. The choice of which model to use is also influenced by the pragmatic and social value of whether one prioritizes risks, for example, to human nature or favors productivity.

Summarizing, in this section, I analyzed two classic problems in epistemology to which feminist epistemology also responds or takes a stand. The

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<sup>42</sup> The concept of epistemic risk appeared in *Science and Human Values*, where Hempel (1965) defined it as the possibility that one could be wrong in accepting or rejecting a particular hypothesis.

<sup>43</sup> Douglas uses the example of dioxin level, to see in action the role of values in these internal stages: choice of method, collection and categorization of data, and interpretation of these data. In this case, the moral consequences of what may happen should outweigh any explanatory potential we might obtain.



first one was whether or not it is possible to maintain a clear distinction between epistemic and non-epistemic values, and the second one was about where and when non-epistemic values interfere in science, especially if in the so-called internal stages of science. Usually, non-epistemic values are allowed in the discovery phases of science but not in the phases that concern confirmation, justification, and validation of scientific theories. Feminist epistemology belongs to the strand of studies that argues that non-epistemic values can also enter these internal phases of science (this is of course a controversial point). Feminist epistemology suggests that this interference is not necessarily harmful for science but can produce an epistemically fruitful role. In the next section, I will describe the epistemological frames and image of objective knowledge that may derive from these premises and those who adhere to feminist epistemology.

## 2.3 The epistemological framework of feminist epistemology

### 2.3.1 A Non-Absolutistic Framework

A framework that upholds assumptions such as UT, the interweaving of epistemic and non-epistemic factors in the choice of theories, the importance of context in the formation and production of scientific knowledge usually distances itself from the classical idea of scientific knowledge and objectivity.<sup>44</sup> This opens to the possibility of a non-absolute and relativistic or constructivist image of the world. Relativism has a very ancient history and can be understood in different ways.<sup>45</sup> In the general

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<sup>44</sup> This is a very complex picture that also calls metaphysical debates and questions about the fundamental structure of reality. Epistemic realism in philosophy is the conception whereby we know that our best scientific theories refer to unobservable entities that exist independently of the mind. There are different types of realism, for example, causal realism, whereby mind-independent objects exist, but we interact only indirectly. On the other hand, for direct realism, we directly perceive external objects that exist independent of us with our senses. For metaphysical realism, our language says true things about the world, and the world is independent of our mind and the knowledge we have. In contrast, anti-realism holds that we do not know whether our scientific theories refer to unobservable entities that are genuinely independent of our minds. On the other hand, social constructivism argues that entities exist insofar as they are dependent on our minds.

<sup>45</sup> Relativism can be traced back to the Protagorean idea that the notion of truth is not absolute but always relative to some parameter and that it can vary according to the subject's standards (Protagora 80B1 DK).

sense, epistemological relativism is usually understood as the conception according to which the meaning of scientific terms and statements, the methods of justification and evaluation, the choice of theories, and the criteria for comparing epistemic values cannot be determined in a direct absolute manner with an external perspective or metatheoretical and neutral language but depend on the epistemic context in which they are embedded (Egidi, 1988, 8). For example, epistemic relativism about justification argues that the justification of a belief depends on the epistemic system adopted, i.e., the methods of reasoning and verification, theories, and fundamental explanatory principles embraced (Coliva 2009, 54).<sup>46</sup>This is not to say that everyone who holds a feminist position in epistemology adheres necessarily to a constructivist or relativistic position. The intention of this chapter is to retrace in a general way the premises, frameworks and problems that may share diverse feminist epistemologists.

In fact, adhering to an epistemic relativistic framework does not necessarily mean being skeptical about knowledge and justification, nor necessarily entail epistemological egalitarianism since I will argue that pluralism of perspectives does not always coincide with an undifferentiated equivalence of possible alternatives. Hence, within relativism, we can find skeptical scholars who deny any foundation or

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Moreover, relativism can be said of many aspects. For instance, cultural relativism, inspired usually by social anthropologists, argues that there are no neutral criteria for judging different cultural systems and statements. Within cultural relativism, we can also distinguish between moral and cognitive relativism. Linguistic relativism argues that language influences the speaker's thought; therefore, language is not just the way of organizing experience (Sapir-Whorf hypothesis). For conceptual relativism, reality is the result of interaction between a world out there, as such unknowable, and our concepts. The concepts then intervene in perception and not only with judgments about the world. There is also factual relativism that provides that the facts themselves are not given in an absolute way but are in some sense dependent on our description; perhaps the most extreme exponent of this conception is Rorty. Another form of relativism is that truth is relative to a context of evaluation and the standards adopted by those making the evaluation. I realize that each concept mentioned listed carries meanings that are difficult to define in a few lines. Hence, for the broad level "relativism" I will only consider aspect referring to epistemology, omitting debates on moral relativism, ontological relativism, etc., although I am aware of their existence.

<sup>46</sup> One of the most known relativist assumptions on justification is the coherentist position, for which there are no privileged beliefs, but every belief is justified because it fits coherently into the overall system of our knowledge (Calibi et al. 2015, 141). In contrast, a foundational approach holds that justified beliefs fall into two categories: basic beliefs, justified independent of any other beliefs, and non-basic beliefs, justified based on their inferential relationships to other beliefs. There are approaches within foundationalism that accept the idea that basic beliefs may be fallible.

logical-rational justification of knowledge and scholars who instead, while adhering to a relativistic position, try to formulate a theory of knowledge compatible with the concepts of objectivity and rationality typical of scientific process. For the first case, Barnes et al. (1996) do not envisage that there are non-cultural, non-contextual norms for rationality, and they challenge any truth criterion for scientific propositions. Scientific facts are pure negotiations between scientists. Support for such claims is also provided by the Laboratory Studies attributable to Latour and Woolgar, in which scientists do not reveal hidden truths, but “objects are constituted through the artful creation of scientists” (Latour et al. 2013, 129). But, we can find less extreme positions, such as social epistemology, which examines the practices of discussion, communication, reliance on experts and authorities, and in general all interactions between members of an epistemic community, with a particular focus on the social factors that promote or impede the attainment of knowledge (Goldman 1995, 172). Feminist epistemology is sometimes described as a social epistemology with a particular focus on gender relations in knowledge (Grasswick 2011).<sup>47</sup>

Overtime, feminist epistemology has been criticized for being a form of sociology of science, reducing everything to social constructions, but this is not the case. Indeed, according to Benhabib (1995), a similar view is not compatible with the very possibility of feminism as a theoretical and normative articulation of women’s emancipatory aspirations. By reducing everything to constructs, we risk fragmenting any attempt at reasoning, even if temporary. Women’s roles and constructs are socially constructed but entail fundamental differences in social and cultural life. Social constructivism may help free us from atemporal and ahistorical preconceptions, asking us why the various constructs have been constructed in such a way and not others (Hacking 2001). Thus, social constructivism rather than condemning science to arbitrariness, could shed light on the emancipatory possibilities within it. Nothing is absolute, anything can be modified.

In general, feminist epistemologists and my perspective, which will be presented in chapter three, try to find a non-foundational justification that allows

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<sup>47</sup> I agree that feminist epistemology can resemble a social epistemology, given the importance of social feature and character of knowledge. Yet, I think is important to always remember the feminist attention on gender that feminist epistemology uses to study these social features.

perspectives to be made accessible and such that we can choose between them in a non-random manner. Knowledge and truth-likeness of the results are to be understood in a regulative sense and governed by empirical constraints, rational theoretical and methodological principles that are not absolute but historically variable. Thus, there are limits to the arbitrariness of interpretations. The goal is a non-coercive, non-foundational theory of the use and definition of truth in our cognitive practices, an empirical and non-metaphysical interpretation that gives possible justification and conclusive verification. However, even though knowledge is not doomed, certainly, the idea of scientific objectivity is also subject to reinterpretation. In the next paragraphs, I shall discuss this image, arguing for a value-laden science.

### 2.3.2 Science as Value-free

The concept of scientific objectivity is of central importance in the philosophy of science, but it is also highly controversial. Science as a value-free ideal has long been the dominant ideal.<sup>48</sup>

The value-free ideal generally expresses the idea that the claims, methods, and results of science are, or at least should be, free of any influence from perspectives, values, self-interest, and bias of any kind (Reiss 2017). Therefore, it is often regarded as an ideal to be achieved in scientific research, both to secure the scientific work of knowledge and to justify the very authority of science over other types of knowledge. For a classical image of knowledge, there are facts independent of human beings; what makes a belief justified is not dependent on human beings, and in certain circumstances, we hold beliefs in virtue of what provides a

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<sup>48</sup> Lacey (1999) traced back the ideal of science as value-free in Galileo and Bacon. They stated that the world's facts could be explained in terms of the underlying order and a quantitative sense, and these interactions are governed by laws expressed in mathematical formulas. These objects are ontologically independent of human research. And so, scientific theories should have no value judgment since the aim is to represent the world as made up of pure facts, independent of any human dimension and action.

justification for them (Boghossian 2006).<sup>49</sup> This position, also called objectivism, is usually associated with analytic philosophy.<sup>50</sup>

On the other hand, constructivism sharply opposes this view by arguing for the dependence of facts, justification, and explanation on human beings. Nowadays, positions that mediate between the two extremes, objectivism or radical relativism,<sup>51</sup> are becoming increasingly popular. For instance, Lacey describes science as value-free, not so much a sure thing as it is an idealization of fact, in the sense of an aspiration to which science should strive both in what it produces and in the consequences that these products entail (Lacey 1999, 1-2). Moreover, Lacey dissects the various aspects of the value-free ideal, arguing that it is formed by three different aspects: neutrality, impartiality, and autonomy. Value neutrality requires that a theory does not presuppose or offer support for ethical or political values. On the other hand, impartiality requires that a theory is connected to empirical evidence and cognitive values such as simplicity or explanatory power. Anderson (2002) rightly notes that a theory can be unbiased without being neutral. A theory that has been accepted impartially may presuppose certain ethical values or offer support for them and, as such, not be neutral. Finally, autonomy presupposes that social and moral values have no place within the scientific methodology and that science should be conducted free from interference derived from value commitments.

Another example of value-free reconsideration is offered by Kitcher (2001), for whom scientific objectivity does not imply that there is a single, context-independent goal towards which scientific research should pursue. Our goals are sculpted both by past research and achievements and evolve according to interests that are theoretical and practical. Kitcher argues for a “modest realism.” He claims

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<sup>49</sup> Boghossian (2006) discusses the limits of epistemological relativism, and he cites, among the detractors of the value-free ideal, feminist epistemology.

<sup>50</sup> This is not very surprising since, apart from notable exceptions such as Putnam or Goodman, relativism has not received much fame in analytical philosophy.

<sup>51</sup> Problems with science and values escalated with the so-called ‘science wars,’ a controversy between extreme positions, one of which prefigures a faith-based science, liberating and practically the most successful research in human history, and the other which reduces science to a power move where no truth is ever possible to achieve while demonstrating the increasingly central role and the relative need to reflect on the role of science in society.

that there is a kernel of truth in what science says but also accepts the constructivist precept that our standards of epistemic objectivity are not independent of space and time. The sciences are constitutive of the world, in the sense that we choose each time what we consider important and worth investigating, also on the basis of practical - worldly interactions. Practical interests thus balance epistemic values, and sometimes may also happen that the response to these practical interests can interfere with the well-being of humans or historically disadvantaged people by questioning their cognitive abilities (Kitcher 2001, 200).

Kitcher proposes the notion of well-ordered science, the idea that the aims and applications, but not the methods, of scientific research should be subjected to public scrutiny according to a scheme of democratic deliberation.<sup>52</sup> Kitcher is not a constructivist, but he, too, considers the role of values, showing that even those who hold a realist position can slowly be inclined to abandon the classical idea of objectivity. In this vein, however, the idea remains firm that non-epistemic values should not enter the internal stages of science: methodology, justification, evaluation. This position includes scholars such as Giere 2003, Koertge 2000, Pinnick et al. 2003, McMullin 1983, Haack 1998, Lacey 1999, Laudan 1990.

Feminist epistemology, on the contrary, argues that a value-free ideal “allows the dismissal of the politically grounded claims of subordinated groups as emotional and consequently ‘subjective’ (Jaggar 1988). In response, feminist and minority scholars developed an epistemology based on the very belief that the knower’s social position is significant.

### 2.3.3. Scientific as Value-Laden

“When this knowledge is presumed to be gender-free – when the male experience is taken to be the human experience – ‘the resulting theories, concepts,

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<sup>52</sup> This should also limit the entry of research led by financial companies, whose main objective is economic productivity and growth; it is not by chance that more research is funded that can have a useful economic application than purely epistemic research. It is no coincidence that more medical research is funded for first-world diseases like obesity than others (Carrier et al. 2008, 219).

methodologies, inquiry goals and knowledge-claims distort human social life and human thought.”

Harding & Hintikka, 1983, XXX

The claim now that science is or can be value-laden no longer creates any particular shock as it did in the 1950s. Indeed, the changes taking place in today’s philosophy of science are understandable precisely because of the change in the perception of the role of values in science (McMullin 1982). The value-laden model argues for the entry of values into the internal stages of science and possibly even the beneficial role these values can play and that the value-free model is unreachable.

Indeed, science is an activity that takes hold in political, social, economic, and real-world contexts and influences and is influenced by these contexts (Biddle 2013).<sup>53</sup> Science is always constrained in various ways by the context in which it is produced and the interests of those who practice it.<sup>54</sup> Specifically, feminist epistemology has studied these contexts and the subject who has practiced science thus far, recognizing how it is relatable to the white, Western, heterosexual, highly educated, non-disabled, upper-middle-class man. Hence, continuing to maintain an idea of value-free science as something possible or desirable leads to not analyzing the role of non-epistemic values and not realizing how they influence choice. However, even if other scholars question traditional premises of epistemology, feminist scholars are the ones who are criticize the most (Anderson 1995b).

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<sup>53</sup> A similar interest for contextual and pragmatic interconnections can be found in Eleonora Montuschi (2004). She analyses by which processes social phenomena become the ‘objects’ of the social sciences. The objectivity through which these social objects are identified and classified does not respond to a standard ideal of objectivity but can be assessed according to the questions posed and formulated for these objects. Montuschi suggests that the objectivity of the processes through which the objects of science are said and classified can be evaluated based on the questions formulated and made for these objects and not because of some scopes and ideal standards. Therefore, the procedures of analysis are not totally separate from the objects we want to investigate, so much so that they are involved in the formation and configuration of these objects.

<sup>54</sup> Peter Dear (2009) explores the double meaning of science. Science is a label that we use to define a certain type of knowledge based on evidence, experiments, observation, etc. Before the twentieth century, science was associated with natural philosophy, so it was an endeavor devoted to understanding nature. However, science is also connected with its applied use, and can be connected with corporations and the military that finances it. So, Dear adds another meaning to science, science as an instrument, techniques that allow us to intervene in the world. And this also explains why scientists are called and seen as experts for crucial questions.

Anderson argues that the suspicion is based both on a misunderstanding of what values actually entail in science and on the traditional value-free view that social influences should in no way touch the heart of scientific integrity, almost as if any value judgments lead to nothing more than silly desires and interests. In contrast, the feminist argument suggests that values are embedded in the background assumptions that help determine what counts as evidence or explanation, how certain evidence is presented, and in what direction the evidence points (Anderson 1995b, 29).

Furthermore, Elizabeth Lloyd (1995) highlights the existence of a double standard against feminist epistemology when criticizing scientific objectivity. This latter has, in fact, already been charged and is at the center of most of the current debates in metaphysics, epistemology, and philosophy of science. Rather than a critique of the idea of objectivity brought forward by feminist epistemology, the main problem of detractors of this discipline has, is the feminist concern with the impact of sex and gender on scientific understanding. Lloyd highlights how the value-free concept of objectivity is, in fact, obsolete and outdated and, above all, already revised within other debates and epistemological positions, which, however, being non-feminist, are not left out or ignored on principle. To dismantle these theories, Lloyd first analyses the standard meanings used for objectivity, then criticizes these anachronistic views, not through feminist views, but through other more accepted theories in epistemology, to show the existence of the double standard.<sup>55</sup> In fact, theories that are not overtly feminist but which nonetheless criticize the classical meanings of epistemology, are not received with the same coldness or suspicion as criticisms of objectivity provided by publicly feminist positions. Lloyd, therefore, argues that the criticism aimed at objectivity is just a way for masking the rejection of the centrality and relevance of sex and gender in philosophical and cognitive work. The most difficult problem to accept then would not be value-free objectivity per se, but the fact that social factors such as gender, sex, etc. play a predominant, often negative role in knowledge.

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<sup>55</sup> E. Lloyd (1995) identifies four authors: Carnap, McDowell, Nagel, and Searle, who propose transformations of the concept of objectivity. According to her, none of these authors manages to exclude the relevance of sex and gender in the analysis of knowledge.



The division of sex and gender is a central distinction, at least in Western social groups, and provides the structure that then holds all other divisions, roles, interactions, and human activity, including communication, enforcement of social norms, and obligations of behavior. Therefore, it is very possible - indeed, it is challenging to deny - that sex and gender play a central role in human knowledge, including scientific knowledge. Those who deny this influence rely on an idea of objectivity that is anachronistic at its best. Feminist theories of objectivity are mocked or ignored, not by suspicion of objectivity, but rather in the refusal to recognize the relevance of sex and gender in knowledge.<sup>56</sup> This refusal to acknowledge how certain social categories can impact epistemic operations that should be unbiased on paper is also indicative of how internalized the ideological and cultural system of patriarchy is, leading us to ignore certain aspects or even consider them natural.

I will now proceed to trace some of the criticisms made of the concept of science as value-free through different explanatory strategies: one that reconstructs the historical and shifting meaning of value-free objectivity, one that discusses the irreducibility of the various concepts attributed to objectivity, another that criticizes the association of value-free objectivity with a type of operation that is not at all neutral. Finally, I will conclude the chapter with the last strategy that I associate with two authors in feminist epistemology, Sandra Harding and Helen Longino: overturning the concept. In fact, both do not abandon the idea of objectivity but certainly, *overturn* it radically. However, given the importance of these authors for my thesis, I will discuss their projects separately in the second part of this second chapter.

*From a historical point of view: Daston & Galison*

Galison and Daston have offered historical accounts of “different meanings of objectivity with respect to particular scientific ideals in specific episodes in the history of science” (Tsou J. Y. et al. 2015, 2). These historical studies reveal the complex and especially contingent nature of the ideals contributing to our notion

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<sup>56</sup> On the marginalization of feminist epistemology, see also Haslanger 2008, Code 2007.

and understanding of scientific objectivity. Daston and Galison's thesis is even more radical when it reveals that science itself has not always coincided with the idea of objectivity. There can therefore be science without objectivity (Daston & Galison 2010, 371). Moreover, objectivity and its meanings are associated with precise and changing beliefs about the nature of the knowing subject. Hence, different visions of objectivity are understandable on the basis of the then-existing theories of subjectivity, thus asserting that not only does objectivity have a history but that it is inevitably linked with that of subjectivity.<sup>57</sup> According to the authors, objectivity is one epistemic virtue among others, and it is possible to reconstruct the history of this concept in three major stages.

It was only around the middle of the 19th century that scientists had to eliminate all subjective interferences to obtain a scientific image of science (ivi, 17). Previously, the epistemic virtue associated with objectivity was the idealization of each species, and to achieve this idealization, the scientist had to engage in tenacious observation in order to be able to eliminate everything considered inessential and grasp the universal form. The scientist was not passive but had to make an effort to understand the ideal form amidst the chaos of multiplicities. Daston and Galison call this epistemic virtue 'truth with respect to nature'.

After Kant, objectivity changed the epistemic subject radically, as someone who can organize the data of experience. For this reason, to achieve objectivity, scientists had to limit their pervasive and intrusive role as much as possible. The second point is called by the authors mechanical objectivity and involves "a cultivated will to will-lessness – a quieting of our desires and aim, and a hunt for aesthetic perfections" (Galison 2015, 58).

In the 20th century, we found an additional attribute for objectivity that the authors call 'trained judgment.' The scientist must develop intuition and a capacity

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<sup>57</sup> This link with subjectivity, or with the idea of subjectivity dominant in the period, also leads the authors to analyze the connection with the idea of self and control, and at the heart of this attitude is an ethical imperative. The possibility of controlling scientific practice is linked to the capacity for self-control and the cultivation of a precise idea of the self or how it should be (Daston & Galison 2010, 40). The scientific self, in fact, also has a history. Daston and Galison's insistence on the connection between epistemology and ethics is firm: whatever epistemic virtue (truth-nature, objectivity, or trained judgment) is recommended in the scientific literature of the time, the exhortations are almost always religious and ascetic in tone.

for judgment capable of interpreting and using the processes that lead to scientific discoveries. Here, the observers become experts only after long and careful study that allows them to identify patterns, remove superfluous details, and categorize the world.<sup>58</sup>

The core of Daston and Galison's historical critique of objectivity is "there can be, has been, science without [...] objectivity" (Daston & Galison 2010, 371). The fusional relationship between objectivity and science is historically contingent. It is only by considering both poles, objectivity and subjectivity that we can reconstruct the contours of both and see the epistemic problems irreducibly interconnected to them. This strand also includes what is known as historical epistemology, which studies the historical development of key concepts in epistemology such as "fact" or "experience."<sup>59</sup>

#### *The Irreducibility of objectivity: Douglas*

Another critique is based on the dismantling of classical features and meanings usually applied to objectivity, showing that there are no absolute or fixed.

Douglas (2004) reconstructs eight meanings of the term objective, which cannot be reducible to one another.<sup>60</sup> Each sense described cannot be accumulated with the other since it also concerns three different aspects: (1) relation between knower and world, (2) individual reasoning, (3) intersubjective reasoning. There can be one meaning, as well as all three. None of them are strictly irreducible to the other, effectively demonstrating its irreducible complexity by asserting that no single sense can fully capture the meaning of objectivity (Douglas 2004, 455). In each of these types of understanding, we can intend different ways. Moreover, these meanings are not fixed, and one can likely evolve or find others.<sup>61</sup> Finally, each way can also be analyzed in different modes or apply to different aspects.

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<sup>58</sup> For a historical and philosophical study of objectivity and case studies, see Tsou et al. 2015, Howes 2015.

<sup>59</sup> See Omodeo 2019. Historical epistemology also refers to French scholars Bachelard (1995), Canguilhem et al. 1997.

<sup>60</sup> Another reconstruction is due to Marianne Janack (2002). She identifies thirteen senses in which objectivity is used in today's debates in the philosophy of science.

<sup>61</sup> In the final part of the paper, Douglas also sketches an outline of meanings of subjectivity, considered the other pole when discussing objectivity. The first meaning of subjectivity regards experiences that only one can have something that cannot be shared with others. Subjective can

The first way of understanding objectivity concerns the processes through which individuals turn to the world to learn about objects. The processes of this first way of objectivity can be said to be objective in two modes: manipulable or convergent. The first sense is based on the reliability of our results and theories for further intervention in the world. The second sense occurs when we subject our results to multiple verifications and venues in different ways.

The second way concerns the role of the values of the knowing subject at work in reasoning processes. What does it mean that the final result of reasoning is objective? In this sense, objectivity is not about the relationship between the observer and the world but only about the observer and the values involved in forming individual thought. The first sense concerns the non-use of values in place of evidence and recommends a distance or detachment from the known object. The second mode is the value-free way in which all values are banned from all reasoning processes. Douglas affirms that it is correct that no value acts directly on evidence (supplanting evidence), but it is wrong to adopt the value-free ideal because it excludes any value and judgment from any phase of reasoning and scientific process. But this does not mean that these judgments do not occur, but they are simply masked. Finally, there is a third sense that Douglas calls value-neutral, in which one decides to take a neutral position with respect to a spectrum of values. In a situation where there is clearly no one value that is better than another, one chooses to take a neutral position to make the necessary judgments without committing to a specific place.

Finally, a third way focuses on the social processes that structure epistemic practices: what it means for the outcome of a social scientific process to be objective. A first mode is called procedural by Douglas and occurs when the same result is always obtained regardless of who is doing the process. The second mode focuses on the agreement between different individuals, if it is asked and they all agree, then there is objectivity, there is no debate. The third sense is always about agreement among individuals, but this time it requires discussion among the participants, who

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also mean facts and experiences relevant only to one's subjectivity. Subjective can also have a derogatory sense when it means interfering with one's own interests in reasoning processes. Yet, Douglas argues that not all subjective elements are detrimental.

must discuss among themselves and be able to resolve any disagreements. This last sense is found in objectivity as Longino understands it.

Douglas's analysis of objectivity also inspires Koskinen's project (2020) on objectivity. She refers to the reliability of research results, so the word 'objective' is reserved for a type of knowledge that I trust and others should too. Hence, Koskinen connects the idea of objectivity not so much to truth or verisimilitude as to the idea that "we have very good reasons to rely on it." Koskinen uses the concept of epistemic risk and our inherently fallible nature as epistemic agents to validate the normativity of scientific objectivity. When we consider something objective as connected to epistemic risk, we are not saying that this is true but that we have good reasons to trust the results, and this means that we are relying upon because we think that the epistemic risks that arise from our fallibility as epistemic agents have been avoided. Acknowledging our nature as imperfect epistemic agents and thus focusing on the possible risks dependent on our theories and actions is used to increase the reliability of our knowledge. They are objective because we have reasons to believe that we are not wrong, and even if we are wrong, the possible epistemic risks have been taken into account, thus avoiding overly problematic or unsafe theories in case we are wrong. Ethical and political reasons that may lead to the acceptance or rejection of a theory cannot be ignored in this consideration.

*Contesting the concept: MacKinnon, Haslanger & Lloyd*

Haslanger's (2002) analysis focuses on the links between rationality, objectification, and objectivity. In the first chapter, I have argued how reason and rationality, and the way they have been conceptualized, have been criticized in feminist literature. The main thesis of this literature is that reason is gendered; that is, it is conceptualized to resemble typical masculine traits and opposed to those traditionally associated with femininity.

According to Catherine MacKinnon's analysis, gender is defined in terms of sexual objectification: women are treated as objects (they are often sexually objectified) while men are the ones who objectify. A woman is not alienated from what she produces because she does not exist as a subject, since she owes her existence as a woman to sexual objectification. Being constituted by the desire of

others is not the same as being alienated in the violent separation of the proletarian worker from her product. This produces the feminist awareness of the non-existence of women except as products of male desire.

Furthermore, the sexual reification of women, according to MacKinnon, is linked to the particular forms that the theory of male knowledge has taken.

“Objectivity is the epistemological stance of which objectification is the social process, of which male dominance is the politics, the acted-out social practice. That is, to look at the world objectively is to objectivize it”

Haslanger citing MacKinnon, 227<sup>62</sup>

Thus, Haslanger expands the concept arguing there is an epistemic and practical ideal of norms for knowledge that she calls ‘assumed objectivity’ that contributes to men’s success in their social roles and supports a gendered division of social life because this assumed objectivity supports and legitimizes objectification. This assumed objectivity includes epistemic practices such as neutrality and disinterestedness. We can thus trace an ideal of epistemic norms that are appropriate to the role of the objectifier. Male power is sustained by a conception of knowledge in which it is the eye, the gaze, that fixes reality, reifies it, and represents it as manipulable and controllable. The male takes on reality an epistemological point of view that claims not to be a point of view, to be without perspective, as it is neutral. The male standard is thus passed off as the norm and the universal, while ‘it is from the point of view of power. Being inscribed in a relation of domination, through objectification, the knowing subject also has the power to assert its vision and transform it into reality’ (MacKinnon 1987, 11). Moreover, if one wants to objectify others, the most convincing way of doing so is by saying that the results of the objectification show things as they really are, by saying that the objectifier has no impact on the observations he makes. He can see what he wants, (he is disinterested and neutral) without being part of it, without mixing with what he observes. This is how neutral, disinterested, a-prospective, objective norms mystify

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<sup>62</sup> A significant difference in MacKinnon’s and Haslanger’s elaboration is that the former considers epistemic norms to be intensely masculine, i.e., the ideals are sufficient to function as a man under certain conditions of male dominance. Haslanger, on the other hand, considers a milder analysis arguing for a contingent ideal in the social role, therefore not sufficient to function as a man, albeit a problematic one.

and are allies of male domination; realizing the norms of objectivity allows the objectifier to maintain this role better.

On the other hand, Elizabeth Lloyd (1995) follows a different strategy to contest the value-free ideal. She first distinguishes four different meanings of objectivity: 1. objectivity as impersonal and unbiased, i.e., not dependent on any point of view (view from nowhere), 2. objective as public, observable and accessible, 3. objective as existing independent of us, 4. objective as existing - things as they are in reality. These four meanings are then applicable to different 'aspects' and not necessarily mutually exclusive (who knows, the relationship between who knows, what is known).

For a long time, what Lloyd calls 'tyrannical ontology', i.e., the idea that it is possible through objective methods to arrive at the true essence of things, has predominated in the mainstream debate. To grasp the independent existence of things, we have to get rid of any point of view that might influence or interfere with our understanding of things and their reality. Therefore, the detachment of the knowing agent lies at the heart of objective methodology.<sup>63</sup>

But after this tyranny is over, there is no consensus on what and what is the appropriate way to define objectivity. Many argue that objectivity is a community-based or socially grounded concept in its meaning of knowledge and truth. And this is also based on social factors and conventions, including sex and gender. Moreover, without the metaphysical premise and commitment to the existence of a single, determinate knowledge of reality, then it is possible to accept the idea that objectivity and knowledge are also subjected to other standards of judgment and the irreducible importance of social and political life (E. Lloyd 1995, 374). In this way, the idea that feminist epistemology is an oxymoron because true knowledge should imply objectivity, where objectivity stands for neutral and detachment from

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<sup>63</sup> Tyrannical ontology also signified the distinction between primary qualities (the truly objective ones belonging to things) and the fuzzy, unreliable secondary ones arising from the senses.

However, several studies on early modern have opened the way to analyze which social, political-historical, and religious conditions scholars have relied on to justify these visions. For example, the Galilean idea of mathematical science was also based on a religious view that God had made the world through an immutable mathematical system.

all self-interest, collapses. Rather, the value-free ideal is unlikely; in general, objectivity itself has no fixed, self-evident referent.

*Overturing the concept: Longino & Harding*

Finally, I consider here the last strategy, which is to overturn the concept of objectivity as we are used to thinking of it without, however, condemning knowledge to a mere whim and arbitrariness. Both strategies are carried out by two feminist epistemologists, proving that it is possible to devise a feminist approach to science from which a positive direction can be derived through (feminist) values in science.

Harding articulates a defense of objectivity, along the lines of the strong objectivity model that begins by examining the individual and collective experiences of women and marginal subjects usually underrepresented in and by science. Harding critiques the false spirit of objectivity as value-free and argues for a better standard - a *stronger* one - from which to articulate and explore problems in science that can critically evaluate values, interests, and assumptions in the sciences. It should be emphasized that the problem was not only that science failed methodological standards, but that even in "good science," there are cases in which sexist and androcentric assumptions shaped research results; in fact, the supposed superiority of men over women, whether justified on biological or social aspects, was so taken for granted that it passed undetected in scientific research and its methods (Gilligan 1982, Harding & Hintikka 1983, Hubbard 1982, etc.). In modern Western bureaucracies, therefore, claims of neutrality go to reinforce the institutional power of the ruling elites against the demands of vulnerable groups for economic and political equality (Harding 2015, 39). Scientific objectivity needs to be rethought, including a rethinking of modern, liberal Western democracies. In Harding, there is not only an eminently epistemic interest in improving the reliability and validity of science but also a political and ethical interest in producing science for social justice.

On the other hand, Longino (1990; 2002b) argues that scientific knowledge results from a critical dialogue between individuals and groups that have diverse points of view. If knowledge is produced through social, critical, discursive



interactions, then a normative account of knowledge production should rest on the norms governing these social interactions. Thus, Longino illustrates how an idea of social objectivity can help distinguish what knowledge is from mere opinion. Objectivity is a product of a community. Scientific knowledge is social; it is produced by a set of social activities, such as the fact that hypotheses or data theories are accepted both by the scientific community and the public domain. Objectivity proceeds by degrees, such as recognized avenues for criticism, shared standards, community response, and equality of intellectual authority, which will make it possible to ensure transformative criticisms and enable a consensus to qualify as knowledge.

Summarizing, suspicion of feminist epistemology is often motivated by the fear that the autonomy of science, its rigor, its authority is diminished because of political and moral direction, a direction that then influences the practices of science and how we know the world, so much so that we are prevented from grasping it as it is. Yet, feminist epistemology has a specific answer to this problem of value-free science without blurring into the complete arbitrariness of scientific knowledge. Feminist epistemology thus focuses on epistemic agents asking about the relationships between material objects and what these material objects are. To do that, it stresses that scientific knowledge can generate a world of asymmetrical relations between those who are informed by scientific knowledge and those who must adapt their lives to conform to the imperatives of scientific knowledge. Scientific knowledge is, in fact, a privileged place to make judgments about what is and what is not possible. Moreover, scientific knowledge advocates certain values, disguising them as scientific ethos such as individualism, competition, intellect, and adaptation to a certain lifestyle (usually compatible with privileged people).<sup>64</sup> To not fall into the objectivism-relativism dilemma, we must produce a notion of objectivity that can be taken into account and is based on the different perspectives that characterize epistemic subjects.

Feminist epistemology criticizes the god trick (Haraway 1988), i.e., talking automatically from nowhere, because it prevents the interests of scientists and

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<sup>64</sup> I will explain more about this aspect in chapter four.

institutions that are often led by white men and have consequences for the lives of marginal groups. Moreover, to be purely rational is to be sexually indifferent because the mind is disconnected from a body. But this disembodied view disengages from vital aspects of human life traditionally assigned to women, such as the care of our bodies and emotional labor. Indeed, marginal groups do not ask for social research to be disembodied because such research is compatible with groups whose social needs have already been met, which is not the case for marginal groups. Marginal groups want social change. Furthermore, cutting out political needs prevents us, for example, from considering how politically directed research can lead to new research outcomes. Following these perspectives is therefore important both from an ethical and epistemic point of view because it introduces epistemic potential and promotes social change.

Feminist epistemologists are interested in the relationship between the knower and the known and treat scientific knowledge in a participatory and inclusive, and partial sense rather than understanding it as a whole. Furthermore, objectivity is linked to intimate aspects and human needs in relation to an ever-changing world, truth is never eternal and immutable. It is always historically and temporally situated, capable of revision based on changes in human needs. Indeed, it is bound to change when it no longer responds to human interests, any revision is also temporally localized and depends on the research context.

Reprising Haraway's words (1988), knowledge is always partial, and this is in two senses of the term. It is partial because it is incomplete since every point of view is always 'situated' and cannot grasp everything. It is also partial in the sense that it is biased since knowledge is never entirely passive, just as the human beings who engage in its attainment are not mere devices but are driven by interests and desires, i.e., by prejudices.

## Chapter Two: Two projects in Feminist Epistemology

This second part of the chapter is devoted to a detailed analysis of Sandra Harding and Helen Longino's projects. It is important to clarify what are the fundamental concepts and coordinates that the authors follow respectively, to see the distinctive features of their analyses. It will be precisely from these analyses that in the third chapter I will concentrate on showing what aspects they have in common (3.1), what I consider to be the most vulnerable points of their projects (3.2), and how the union of these two perspectives takes place (3.3), to overcoming both the fragile points but also the differences that can already be glimpsed in this second part of the chapter.

Section 2.4 will be devoted to Sandra Harding's standpoint theory, whereas in 2.5 I will focus on Longino's contextual empiricism.

### 2.4 Sandra Harding's Standpoint Theory

Feminism and the women's movement provide the theory and motivation for inquiry and political struggle that can transform the perspective of women into a "standpoint"—a morally and scientifically preferable grounding for our interpretations and explanations of nature and social life.

Harding 1986b, 26

Sandra Harding is one of the most prominent scholars in feminist epistemology and feminist standpoint theory.<sup>65</sup> Since its genesis in the late 1960s, her standpoint

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<sup>65</sup> Generally speaking, standpoint theory scholars similarly agree that occupying a subordinate social position can cause epistemic privilege, especially on sensitive issues concerning one's oppressed status and the status of those who oppress them. One of the classic grounds for this precept is the concept that appeared in Marxist theories, whereby the proletariat has a closer look at history and social science (Lukács 1923). What may change among feminist epistemologists is that they ground this epistemic advantage in different features of women's

theory has constantly opened to the recent trends encompassing postcolonial studies, calling for a re-evaluation of the idea that modernity is globally uniform in every culture. She defends the “reality, desirability and necessity of multiple sciences” (Harding 2008, 174) advanced by postcolonial scholars.<sup>66</sup>

The structure of this part will proceed as follows. In the first paragraph, I lay out the central concepts of Harding’s standpoint theory. Next, I describe her methodology, organized around three phases: the method of seeing from below, the meta-reflexivity, and the strong objectivity.<sup>67</sup> Afterward, I will show examples of new contents provided by standpoint theory, which constitute essential grounds for the significance feminist gaze in scientific communities. Finally, I set out conclusions that serve as a starting point to the confrontation and description of Longino’s project.

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social situation (Anderson 2020). For example, Hartsock (1983) and Rose (1994) focus on the centrality of reproductive, domestic, and care work carried out by women. Others such as Flax (1983) place attention on the different ways in which gender relations inform the psychological growth of men and women. MacKinnon (1987) emphasizes the alienation and objectification to which women are subjected. P. Collins (1986) elaborates a particular standpoint belonging to Black women, while Nakata (2007) reflects on the Indigenous standpoint. These are just a few examples that can be given; I will pick up on some of them in section 2.4.4 on the new content offered by standpoint theory.

<sup>66</sup> Standpoint theory has important implications for fields that are related to feminism but can exist separately from feminism: race and ethnicity theories, LGBTQIA+ theories, and postcolonial studies (e.g., Anzaldúa, 1987). In this context, the notion of standpoint can explore the structural and materialistic dimensions of culture. Through the concept of standpoint, race, and ethnicity, LGBTQ+ scholars can claim privileged knowledge positions that contrast unmarked dominant knowledge. Spivak & Harasym (1990) strategic essentialism is similar. It is strategic because some essential characteristics can be used to restore power to historically marginalized and disadvantaged groups (Fuss 1989, 31-32). Strategic essentialism is used to counterbalance attempts to ignore historical and cultural patterns that privilege certain groups and marginalize others. Attempts to ignore or erase “essential” differences between groups can lead to the erasing of histories of oppression in the name of equality (Grosz 1994). At the same time, Spivak argues that for this strategy to be successful, the concept of essentialism must continually evolve and problematize. In this sense, standpoint theory presents a toolbox to scholars inside and outside feminism.

<sup>67</sup> Harding refers to these three phases as strong objectivity, strong reflexivity, and strong method in “Starting from Marginalized Lives: A Conversation with Sandra Harding,” 1995, 204.

#### 2.4.1 Three Theses for Standpoint Theory: The grounds for Knowledge Claims

The straightforward formulation of standpoint theory revolves around three famous theses:

4. The first one states that our cultural beliefs are all situated and is also known as *situated knowledge thesis*. It entails that our social positions always shape our knowledge. Knowledge is always located, *for* and *by* a particular set of socially situated knowers (Crasnow 2008). According to this formulation, it is impossible to achieve the view from nowhere. The epistemic knowers cannot abstract from all the external and non-epistemic values. Thus, these aspects have an epistemic role in the process of knowledge.
5. The second thesis claims that the different characteristics of a woman's position in a gender stratified society are used as an advantage in research because they produce more accurate descriptions and explanations; this is also known as the *epistemic privilege thesis*.<sup>68</sup> According to this thesis, "the social oppression that socially disadvantaged groups experiences can bring them epistemic benefits" (Ashton & McKenna 2020, 36). The standpoint theory must defend itself, however, both from those who find it too relativistic and from those who consider it too sociological. Now, it is true that the standpoint theory says to start from the life of women as the preferable way to generate and test scientific hypotheses, but it does not state that there is any transcendental or transhistorical privilege and that this privilege provides a foundation for justification (Harding 1993).
6. Finally, the standpoint is not automatic, but it is always the result of careful and precise work on one's condition and that of others.<sup>69</sup> Moreover, it is most

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<sup>68</sup> The analogy is based on the Marxist stances about the privileged gaze of the proletariat in the capitalistic world. However, there is a big difference since sexism is not intended as a class problem deriving from structure and superstructure and the bourgeois class.

<sup>69</sup> Just as the gaze of the proletarians could be distorted by capitalist ideology, a patriarchal ideology could also distort the gaze of women. Therefore, the acquisition of a standpoint is never automatic but is always the result of intense work on what is called false consciousness, and that does not immediately allow us to grasp the contradiction. It is always a political and intellectual effort that leads to overthrowing the false conscience imposed by patriarchy (Jaggar 1988).

likely to arise when people who occupy a certain social position engage *collectively* in a struggle to change their conditions.<sup>70</sup> Thanks to the engaging work for acquiring a standpoint, an oppressed individual understands that she is oppressed because she belongs to a certain social group and not because she individually deserves to be oppressed. This represents the third thesis, named the *achievement thesis*. Thus, standpoint theory also entails the political duty (and not just epistemic possibility) to investigate the relationships between specific social positions and the knowledge they produce.

These three theses are conjugated in Harding towards a new form of objectivity, *strong objectivity* as she renames it, and all contributors of standpoint theory accept all these. Whereas the first one and the third one are usually consistent with other theories in feminist epistemology, the second thesis, concerning epistemic privilege, constitutes a specific trait of standpoint theory and is the most controversial.<sup>71</sup> Standpoint theory focuses on science from the women's point of view and it does so to understand a perspective not tainted by biased gender views. It also intends to map the practices and hierarchies of power between dominant and dominated, by highlighting an epistemic privilege due to this form of oppression, they suffer (P. Collins 1986, D. Smith 1974, Hartsock 1983). This understanding leads to a change in concepts by which the oppressed are usually deceived, as they perceive this domination as natural. Instead, the standpoint reveals this deception and prepares the terrain for social and political change. Hence, this understanding is not only crucial from an epistemological point of view but always aims at changing society to

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<sup>70</sup> An example is the consciousness-raising groups of women in the '60 and '70, which participated in the women's movement. See also the first chapter of this thesis on the second wave.

<sup>71</sup> For instance, in 1981, Haraway posed skepticism about epistemic privilege and the possibility of knowing from women's perspectives without falling into old stereotypes about feminine knowledge or the exaltation of the subjective. Harding's response to this essay came in 1986b. Harding claims that standpoint theory aims to obtain theories that accurately represent women's activities. There is nothing subjective about this project; on the contrary, what is subjective and androcentric is traditional objectivity, which offers a biased view but poses it as neutral and general (Fricker 1999).

projects that are “socially situated and politically engaged in pro-democratic ways” (Harding 2004, 32).

#### 2.4.2 Methodological Tenet: Starting from Below and Strong Reflexivity

This section illustrates Harding’s method’s first two phases, (1) *seeing from below* and (2) *stronger reflexivity*. In Harding, the features implicit in standpoint theory are intricate and unified. For clarity, I will separate them, showing how seeing from the below method is concerned with research objects. The phase of stronger reflexivity, on the other hand, involves the subjects engaged in research.

Starting from below means essentially ask questions from marginalized perspectives, actively engaged with members of minorities groups. The first way starting from below is useful is thanks to the contents they investigate. Starting from marginalized lives entails considering new questions and contents to examine. This is connected with the epistemic privilege that helps focus on a more comprehensive research content because it prescribes the best resources for science to *start* new questions or analyze old issues; for example, engaging social questions about how the social order works rather than starting from the dominant ones. Starting from below is then the first phase to enrich the contents of science and have ‘stronger’ objectivity – stronger as more comprehensive. Scientific problems do not exist in a vacuum but they are always problems for someone; historically, scientific problems have usually been those of men, including those problems of managing the activities and lives of others, such as women. This means that the natural and social sciences have produced partial knowledge and partial understandings, which have not reflected the systematically different experiences of women (Harding 1987). Hence, with the epistemic privilege thesis aims to reduce partiality of the explanations given to phenomena, including the problems and questions raised by marginalized groups.

But obtaining new content for science is not the only characteristics of epistemic privilege. Starting from below means acknowledging the situated knowledge, being localized, embodied and visible, and historical. So, the same social forces that form the objects of knowledge also influence acquaintance and

knowledge projects. The question rests not on the objects but on the subjects who cannot be separated from these contingencies. This meta-reflection on science, methodology, and the conditions of the subject who perform knowledge is the *strong reflexivity phase*. Putting oneself in a critical position (exactly as we do with the object of research) and thinking about our conditions and social contexts is required because our beliefs function as relevant to evidence at every research stage.<sup>72</sup> Therefore, if I do not examine my interests, I will not obtain adequate objective knowledge.

A suitable methodology for science must emphasize social factors and the epistemic knower's social locations to establish which social sites can produce better science. The epistemic agent must be placed on the same critical level as the objects of knowledge. The knower must reflect on their social location and the process through which they acquire knowledge. In this process, the epistemic privilege emerges brightly, since, according to Harding, marginalized subjects immersed in specified social locations are better at catching these analyses of contextual factors and social spots. This is due because these individuals are more likely to develop and struggle for certain political values, such as democratic values and feminist values, which are more conducive to good science than non-democratic values. For instance, sexist values will be more likely identified by feminist values which are accustomed to detecting these kinds of viewpoints.

“A maximally critical study of scientists and their communities can be done only from the perspective of those whose lives have been marginalized by such communities.”

Harding 2004b, 136

Hence, the different characteristics of a woman's position in a gender stratified society are used for research advantage. These characteristics allow us to produce more accurate descriptions and explanations because marginal subjects will more likely address their own situational and contextual factors, marking our knowledge process. This methodological efficacy of epistemic privilege, a comprehensive framework of problems (starting from below) and a less partial

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<sup>72</sup> These beliefs are in Longino's project "the background assumptions" of the researchers. I will resume this idea in chapter three of this dissertation.



knowledge about these problems carried by specific identities (stronger reflexivity), lead to the third and last phase, strong objectivity grounded.<sup>73</sup>

#### 2.4.3 Strong Objectivity: How the Epistemic Privilege Works for Science

These two phases require forming a new and revisited objectivity that Harding calls (3) *strong objectivity*. Harding uses this expression to highlight two different aspects. First, to signal that she does not abandon objectivity altogether. Secondly, she contends that, as it is, objectivity's standards are not strong enough to provide knowledge that can be called objective. I will reconstruct the critique of objectivity by Harding through different levels: historical, theoretical, and political.<sup>74</sup>

From a historical analysis, Harding (1986b) states that objectivity has never been value-free, but it has always embedded social values and historical context. Indeed, since 1960, especially with Kuhn's (1962) and Feyerabend's (1975) works, objectivity had faced intense criticisms, and these criticisms only accrued by the 1970s with feminist approaches and by the 1980s with postcolonial studies defying Eurocentric standards. Moreover, historical studies have suggested that the choice for value-free ideals was not solely motivated by an epistemic issue of how best to advance science.<sup>75</sup> Rather, it was a political and social issue that forced the philosophy of science toward the logical positivism commitment. By investigating the US framework, Harding claims that the fear and threat of McCarthyism and the Cold War<sup>76</sup> and the escalation and intromission of federal funding for scientific and

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<sup>73</sup> Longino's project shares this necessity of detecting errors in science and less distorted explanations. The conflict with standpoint theory emerges on the epistemic superiority of certain social identities compared to others. In chapter three, I will discuss how to manage this conflict.

<sup>74</sup> It can be traced a similarity to the use of the various strategies used by other scholars to revise the concept of objectivity seen in the first part of chapter 2.

<sup>75</sup> Since 1960, 'unity' has been assimilated with oppressive demands of Western culture for the assimilation of native cultures. The *dominated* cultures call the right to social diversity, autonomy, and independence of each culture (Galison and Stump 1996). Moreover, studies focused on actual practices in scientific labs, and field sites showed how our scientific methods followed pragmatic concerns and not only theoretical choices (Latour & et al. 2013, Traweek 1992).

<sup>76</sup> The specter of science shaped by ideology is a frightening one – the examples of Nazi science and Soviet Lysenkoism bear witness to both the moral and epistemic dangers. Science that is value-free promises to eliminate the evils of ideology (Crasnow 2013).

technical research lead to the strategic and political choice of protecting scientific projects from political intervention.<sup>77</sup> However, this blocked access to important resources to grow scientific knowledge and social diversity (Harding 2015, 107).

Moreover, objectivity has never had a single referent but has referred to multiple assumptions, aspirations, and attitudes (Novick 1988). Objectivity and the value-free ideal were always embedded in political and social situations. Hence, philosophers of science began to explore the possibility of leaving the “armchair”<sup>78</sup> rational approach of scientific inquiry and centering on the actual practices of working scientists. Harding supports these criticisms, showing a description where objectivity and diversity can be mutually supportive. Science and scientific knowledge are a product, not less marked by interests or social values than any other things. Science and society are co-produced and co-constituted between each other (Harding 2015, 18).

From a theoretical point of view, the concept of objectivity fails because it is either conceptualized as too narrow or too broad. According to Harding, objectivity is too narrow because the ideal of neutrality requires that all social values are identified and eliminated. Still, in reality, it allows the elimination only of some values, namely those brought by researchers that differ from those of the status quo.<sup>79</sup> This is further aggravated by the fact that the only place these social values are sought is in the context of justification, but the interests and values intertwined in the initial research questions remain intact.

However, objectivism is also conceptualized as too broad: it requires eliminating all social values, but for feminism, not all social values are negative because some generate less distorted ideas. And this is true especially for standpoint theory, but, in general, it is important to remember that political and social interests are not something *added* to scientific discourse or applied science. Scientific beliefs

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<sup>77</sup> However, it should be noted that this has not always actually meant the absence of external funding in scientific research. See Jasanoff (2004) and Harding (2015).

<sup>78</sup> Armchair epistemology is based solely on a priori reflection, including (for example) the process of logical analysis characteristic of much of the philosophy of the last century.

<sup>79</sup> Many feminist scholars show how research is dense with non-epistemic values, such as sexist or racist values (Fausto-Sterling 2000, Haraway 1988, Rose 1994, Schiebinger 1987). See also chapter one of this dissertation.

and problems are built through social and political projects, and the best and worst of modern science have been made through political desires, interests, and values (Harding 2015).

Finally, objectivity has also been used to mark the other sciences' distance due to a political choice.<sup>80</sup> Objectivity or the lack of it is used to dismiss other kinds of knowledge attributed to groups different from white western men.<sup>81</sup> Hence, Harding seeks stronger objectivity without abandoning objectivity altogether, and foresees that social and cultural values are scrutinized thanks to the self-examination of the researchers' interests. Starting from women's lives increases the objectivity of scientific investigation because it observes and examines the assumptions and practices that seem natural or taken for granted from the perspective of men. It leads us to ask questions about natural and social relationships and the social conditions that make someone else different from the dominant perspective. It, therefore, forces us to understand the subject/object relationship differently and focus on the subject knower (Harding 1991).

Therefore, the diversity of individuals in scientific communities concerns the different physical presence and the diversity of values and interests of individuals.

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<sup>80</sup> Conventionally evaluated by Westerners as only technologies, or only speculations (i.e., theories lacking empirical support), indigenous knowledge is now increasingly recognized as valuable systematic knowledge about parts of nature and social relations on which Western sciences have often been ignorant. Consider, for example, legal struggles between Western pharmaceutical corporations and indigenous groups over who should have rights and benefits from the Western appropriation of indigenous pharmacology and agricultural products (See, Brush and Stabinsky 1997, or Schiebinger's (2007) work on colonial botany as the "big science" of its era). Moreover, in Harding (2015), Indigenous knowledge is defined as a type of science since it refers to their natural system and to the fact that science is a social activity. In Indigenous knowledge, just as in Western knowledge, inferences and principles are drawn and verified from the experience and whose world models are adjusted to conform with observed regularities from events. Contrary to Western popular belief, this knowledge has been continuously tested and adapted to natural and social environments; therefore, it tends to be empirically and productively reliable in the environment in which it is inserted.

<sup>81</sup> Ian Hacking (2001) has argued that objectivity has been used as an "elevator word" to improve the scientific claims and status of whatever is at issue. Instead, we should reconnect objective science to its method, critical attitude, language, metaphysics, and justification for beliefs, without elevating it to transcendence and a priori predominance. Furthermore, Hacking (2015) suggests that questions about objectivity are to be asked only about specific cases and not abstract definitions. Discussing objectivity in the abstract makes little sense because objectivity is, in fact, an unstable concept. His advice is to think of objectivity not as a noun but as an adjective.

Harding (2015) poses the accent on what to do primarily with those groups that have been excluded from research whose results, however, also affect their lives. It should be an ethical principle that those who suffer the consequences of a choice should at least participate in this science.

Nevertheless, analytic methodology and epistemology usually take for granted that people are interchangeable as epistemic agents. Thus, every political value or social action jeopardizes science. Since women and minority groups always have political reasons to enter science, their claims will always appear not scientific. In contrast, standpoint theory considers both a political intent and an epistemological one equally important, analyzing how power relations shape knowledge production. Starting with the lives of the marginal serves social justice purposes by opening inclusive and democratic projects, listening to different voices, educating one's own situated knowledge, critical examination of the institutions that cause differences.

If knowledge is always situated. The real challenge is to rearticulate situated knowledge and restructure the conventional notions of objectivity, reflexivity, and relativism.<sup>82</sup> In the next section, I will provide some examples of standpoint theories on the new contents in social sciences.<sup>83</sup>

#### 2.4.4 Many *Foci* of Feminist Research

Standpoint theory proposes different examples of which content marginalized groups can propose. Each one produces new understandings of women's situation and marginalized groups, maximizing objectivity through the norm of starting from below. Thanks to these examples, standpoint theory presents objective results of research and social progress for women, also explaining the global centrality of these issues by also addressing the consideration of the category of women as not

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<sup>82</sup> I will argue in chapter three that Harding entails a mild form of relativism without losing the epistemic privilege, namely that some positions are better than others in producing new content.

<sup>83</sup> The analysis will concern primarily social sciences, but natural sciences are not excluded since their standard influenced so much the social sciences, namely that social sciences had always justified the means and outcomes of research according to the threshold of natural sciences.

homogeneous. Women occupy the most distinctive locations in the system: class, race, ethnicity, sexuality, etc.

One of the first fields involves the study of institutionalized gender relations, and this division applies in different ways.

For example, in daily life, it is considered more “normal” for women to care for others or take care of home. These divisions of tasks between men and women are not natural; they are socially constructed knowledge that took the shape of natural constructions. Believing and perpetuating these kinds of claims means to justify a sexist behavior which, in turn, consolidates the supremacy of men over women in economic and social practice.

“The assignment to women of domestic activities both inside and outside the home, and women’s seeming predilection for domesticity, are structural features of their general situation in industrialized societies at the present time. Therefore, any research which examines women’s feelings and attitudes about housework can be expected to have something to say about both the ‘oppression’ and the ‘liberation’ of women”.

Oakley 1974

These analyses are particularly fruitful for sociology (D. Smith 1974). Women are assigned types of work that men do not want for themselves, such as caring for everyone’s bodies (men themselves, babies, older adults, sick people). This kind of material – and primal – work allows men to immerse themselves in a world of abstractions. But this also implies that the work of care and clean is assimilated as natural for women and inscribed in sociobiological claims. On the contrary, starting from the questions of women’s lives will pose attention to these allegedly natural divisions of duties and tasks and the repercussions of the economy and capitalist world. Another area of study concerns the sex work activity, outsourced in several ways, such as the “development” of sex tourism (Harding 1991). Women and children are especially vulnerable to sexual assault and exploitation in this phenomenon. These studies have developed questions on both how to end sexual violence and reflections on what constitutes rape in the context of

romantic relationships, especially marriage, or whatever is “consent.” Alcoff (2009) has studied the context of sexual violence in western cultures and discourses such as “honor crimes”.<sup>84</sup>

- The sexual division of labor also applies to scientific work. More and more research is being conducted to re-discover and re-model the classical philosophical canon, including almost no women. Women scholars existed but were not documented since they were not considered, for a sexist prejudice, interesting enough to become part of the canon. Moreover, studies wondered about the strategies developed by women scientists in scientific environments. Women’s work in science may appear almost invisible to a superfluous gaze if we only focus on the public, official events, and work. However, women’s work becomes indispensable in the laboratory by collecting data, compiling reports, etc. Without that work, which is usually considered minor, conclusions and theory could not be confirmed. Moreover, sociological studies have shown that once women enter science, they work much harder than men to reinvest the credentials they accumulate.<sup>85</sup> Hence, gender “could be understood as a part of science’s conceptual schemes, as a way of organizing the social labor of science, or as an aspect of the individual identity of scientists” (Harding 1986b, 35). These dimensions influence science because they affect the way it is produced. Ways in which who is dominant influences who is dominated are the mechanisms of peer review, funding, recruitment, ranking between science and specializations. The social locations affect all the phases of scientific research, from the detection of problems to what counts as relevant for the analysis and even the formation of hypotheses (Morley and Walsh 1996).

These examinations challenge the practice of scientific endeavors and can generate radical changes in science-custom. Thus, the fact that contributions

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<sup>84</sup> An honor killing is defined as a crime committed to avenge the honorability of one’s name or family. In this case, the penalty has a mitigating factor compared to the similar offense but with different motives. Honor is often linked to something the woman is blamed of; in fact, honor killings occur mainly if the woman has sexual relations before or after marriage, asks for a divorce, or even is raped.

<sup>85</sup> See (Rossiter 1992). The ensemble of the invisible barriers that women and marginal groups encounter in science is also called the glass ceiling. More on this will be explored in chapter four.

by women were not recognized has thrown doubts on the effective naturalism and universalism of traditional science and those who decided and defined the contributions.

- Other standpoint theorists have studied how women's activities repair the dichotomy typical of western science between nature and culture and intellectual work and manual and emotional work. For instance, Hilary Rose (1994) studies the "unity of hand, brain, and heart in craftsmanship". Rose argues that women's artisan/manual work compared to men's industrial work has a distinct way of knowing and processing and reflecting on the union between manual, mental, and emotional. The reflection is centered on post-Marxist thought, highlighting the division between manual and mental labor as the place of the abstractionist mystification of bourgeois science.<sup>86</sup>

Nancy Hartsock (1983) also sees the feminist epistemological foundation in the post-Marxist work theory and its effects on mental life. Like Rose, Hartsock argues that in the gender division of labor, one can find reasons for arguing that a feminist theory of knowledge is more adequate. These reasons are based precisely on the opposition between thought and practice, mental work, and manual work, but differently from what Rose reported. For Hartsock, women's activity consists of sensitive human activity [*sensuous*] patterns. And this activity is essentially expressed in two institutionalized activities: (1) subsistence, that is, all those activities that contribute to producing food, clothing, shelter for the survival of the species, and (2) raising children. This immersion in the world of uses and exchanges is more concrete than that of men. Therefore, women would have an advantageous point of view in representing themselves and knowing the world from a materialist point of view; this would also increase knowledge in understanding class relations and the logic of capitalism in general. Hartsock (1983) also focuses on the experience derived from raising children. This

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<sup>86</sup> Rose (1994) focuses on biology, psychology, anthropology in which craft activities may still be possible against industrial and laboratory experiments and activities. Rose sees how the presence of women in these areas has led to more holistic understandings, for example, between organism and environment. An organism is not the passive object of a selection due to a domain but is an active participant in determining its future.

woman's activity allows her to produce and reproduce men and women daily and long-term. This aspect of woman's production exposes all the inadequacies of a Marxist production concept because the production and reproduction of a human being cannot be combined with that of an object. The all-female experience of reproduction (developing the other) represents "unity with nature beyond the proletarians' experience with nature" (Hartsock 1983, 358). This subjection of women to a practical, concrete, relational activity allows women to grasp aspects of natural and social life that are not usually accessible to male activities.<sup>87</sup>

- Jane Flax (1983), a psychotherapist and political theorist, focuses on the epistemological possibilities that affect the psychoanalytic theory of object relations from a typically feminist point of view, illuminating aspects related to the knowledge of oneself and others of nature that normally does not exist. In particular, Flax argues that certain atavistic philosophical dilemmas are not an expression of the human mind's immanent structure but reflect socially and typically male ways of relating. In the case of men, social relations are managed to dominate and repress others to prove their identity from childhood. Hence, Western philosophy has problematized the subject-object relationship, mind, and body, inside and out in a certain way. This repressed material shapes our consciousness for how we see and reflect on the world. This repression is also linked to a central role of women, as she is assigned the responsibility of care and growth. Flax (1983) precisely studies the different processes between men and women by which male identity passes from the mother's rejection. To become a man, one must reject the bond with the feminine and move away, validating the dualistic scheme of patriarchy. By this, Flax does not mean that male rationalization is nothing

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<sup>87</sup> Hartsock understands the term motherhood in a broad sense, not only as a personal experience but as an institution, which can include the experience of childbirth and the preparation for motherhood that almost all women receive in their social upbringing, as a result of the construction of the female experience. Several "phenomena" allow female psychology to challenge that classic dichotomy between subject and object of the world. Menstruation, coitus, pregnancy, childbirth, and breastfeeding all pose challenges to bodily barriers. Rich (1976) also describes pregnancy as that experience in which the embryo is both inside and outside; it is within the woman but at the same time develops to separate from her (Hartsock 1983, 292).



more than the result of the painful childhood experience of the submission of the other to arrive at one's own identity. However, Flax's point is that a feminist examination of these considered normal relationships between genderized infantile processes and adult masculinity patterns reveals the limitations in men's philosophical ability to understand women's experience and demonstrates the tendency of men to think of their experience as universal. Adopting a feminist perspective, on the other hand, which includes the childhood experiences and activities of women in the realm of the social and the knowable, allows a critique of philosophy.

- Finally, a particular standpoint for social relations is explained by the black feminist sociologist Patricia Collins (1986). According to her, black women can contribute to strong objectivity, particularly in the social sciences, because women can be "outsiders within": women are "strangers" living amongst men who are "natives." The insider level of black women can be traced back to the fact that many black women filled the homes of white families, where they cooked, cleaned, and at the same time also raised children, becoming honorary members of these white families. However, they were not considered members of the white family, despite their deep involvement, and for this reason, they also remained outsiders (P. Collins 1986, 14). This dual status offers women a special standpoint on white families, society, and African American culture, especially in the US.

Collins (1986) applies this also to academic settings. Collins shows how the African American standpoint in academic circles primarily involves affirming the importance of one's definition and evaluation that challenges the stereotyped (external) image of black femininity (White 1984, hooks 2000).<sup>88</sup> These stereotyped images aimed to take a dehumanized picture of women and exploit their labor (Collins 1986, 17). In contrast, black women embrace their assertiveness and "sassiness" by openly defying patriarchy. Patriarchy treats black people and women as something other than the norm

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<sup>88</sup> P. Collins also cites Simmel's objectivity of the stranger's and native's gaze (1921), Merton (1972), Manneheim's free-floating notion (1991) to explore the sociological meaning difference in social differences and marginality.

(the white man). Being outsiders within, they can strike a consonance and dissonance between dominant activities and their beliefs in the outsider community (P. Collins 1986, Beal 2008, Davis 1981). Unlike white women, black women cannot use their whiteness to curb subordination, and unlike black men, they cannot appeal to masculinity to overcome the “stigma” of being black.<sup>89</sup> Black feminism then treats the interaction between different axes as an object of research. Therefore, Black women would have a unique relationship concerning sexist and racist content and therefore can grasp these assumptions and criticize them.

By throwing light on these kinds of questions, feminist standpoint theory offers alternative reflections on nature and social relationships, along with methodological differences that involve taking women’s lives as starting points, leading to results that often conflict with the dominant western view. Indeed, these insights offer a more transparent look at women’s disempowerment in the social world. Being an outsider gives the right combination of remoteness and closeness, concern, and indifference, and therefore can see things that are difficult for someone immersed in. Therefore, standpoint theory is pivotal, and it accounts for women’s epistemic privilege to improve research and produce social change.

#### 2.4.5 Summarization

Standpoint theory argues that feminist values and researchers ask for different social and natural relationships starting from women’s lives. Moreover, these outcomes usually conflict with the dominant version of western knowledge, especially on topics like gender, women, and colonial development assumptions, policies, and practices. Hence, we should ask, could Western standards be the only desirable and reasonable, or exist different standards for objectivity, rationality, method, and empirical reliability? What should we do with this picture of disunity and plurality?

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<sup>89</sup> For a reconstruction of black masculinity, see Fanon 1952.

Standpoint theory responds that this disunity is desirable due to social diversity and less biased objectivity (Harding 1995). The methodology and mainstream epistemology took for granted that people are interchangeable with epistemic agents. But most feminist discussions reply with the immense proliferation of research results in biology and science, showing the evident rampant sexism in the dominant scientific framework. However, if science has a purely neutral nature, how was such a thing possible? How do researchers with precise political values (feminist researchers, for instance) seem to be more objective than the science guided by the principle of neutrality (Harding 1992)?<sup>90</sup> Feminist epistemologists manage to produce more accurate research for them and the rest of social and natural relationships because the lack of a heterogeneous community produces ignorance about social and natural aspects and relations they do not know nor care about.

Heterogeneous communities are formed by individuals with different values, and these different values result in different relevance given to evidence and other questions to be asked. It is then a mistake to assume that social values and interests will result automatically in empirically unreliable research. It is important to understand how to exclude those values that led to bad science (sexist or racist) and those that do not. Harding suggests that if marginalized groups best achieve this critical study, only democratic projects, open to heterogeneous groups, will ensure these reflections. Democratic projects are not easy to define. I will refer to them more properly in chapter three of this dissertation.

## 2.5 Longino's Contextual Empiricism

In the remaining paragraphs of the chapter, I will present Helen Longino's approach. Helen Longino is the founder of contextual empiricism, which revolutionizes

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<sup>90</sup> According to the value-free ideal, a science that gives room to political values and personal interests is bad and endangers the pure nature of scientific knowledge. Since women and minorities always have political motives whenever they enter science, then, for the value-free ideal, they will do so for their own agendas.

feminist empiricism.<sup>91</sup> According to Longino (1991), feminist empiricism is still tied to an outdated idea of the mode of knowledge, namely the purified mind and the epistemic or cognitive authority. In contrast, contextual empiricism holds two fundamental principles: (1) *empirical adequacy*<sup>92</sup> remains the legitimate defense for the claims of knowledge in science; (2) the relevance of evidence for a particular experience is mediated by underlying assumptions.

Although she maintains the empiricist idea that data and observation are the ultimate grounds for theory assessments, she also states that theories and hypotheses overreach data they serve as evidence.<sup>93</sup> Thus, no just purely or logical connections can be held between the two poles of observations and theories. Data does not indicate what it serves as evidence for; it acquires its status as evidence for certain theories in the context of background assumptions. Moreover, just as data does not stand in a unique evidential relation with hypotheses, we can also make different descriptions of the same data, depending on the angle and interests of those describing it (Longino 1979). This makes it possible to receive a different evidential emphasis or assessment based on the context and description.<sup>94</sup> So, background assumptions can motivate why someone takes a given observation as evidence for a certain hypothesis.

The picture gets more complicated when Longino adds that non-epistemic values also shape these background assumptions. This interference is not eliminable, hence paving the way for the complex and well-known debate of

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<sup>91</sup> For a general idea on feminist empiricism, see chapter one of this dissertation. See also Antony 1993, Anderson 1995a.

<sup>92</sup> Empirical adequacy is also a central factor in standpoint theory, which I will analyze in the next chapter.

<sup>93</sup> Longino disputes her account relates to both positivist and holist frameworks. For the positivist view, theories are true insofar they are proven by observations, and the relation between evidence and hypotheses is syntactic (Longino 1990). In this way, the inference is not mediated by value assumptions. Longino also debates with the holist account especially accusing to maximize the incommensurability thesis, and that data would appear in support of a theory only if this theory has already been accepted (Wray 1998).

<sup>94</sup> Longino (1990) reports the controversy between Priestley and Lavoisier over the “discovery” of oxygen. Priestley explained his observations in the context of phlogistic theory. After repeating Priestley’s experiment, Lavoisier proposed a different explanation. He suggested that combustion, instead of being a release of the phlogistic into the air, was a reaction between the air and the metal components. He identified the component that reacted during combustion and called it “oxygen.”

epistemic and non-epistemic values.<sup>95</sup> In this respect, like other philosophers of science, Longino takes a stance on this debate by arguing that “there is no way of guaranteeing the eliminability of such [non-cognitive] values from science” (Longino 2004, 127). Indeed, she argues that “not only scientific practices and content on the one hand and the social needs and values on the other are in dynamic interaction, but that the logical and cognitive structures of scientific inquiry require such interaction” (Longino 1990, 5).<sup>96</sup> Thus, this internal interference is not a dissonance, but it can be an advantage to improve our idea of how scientific knowledge functions. It ultimately challenges the assumption that value-laden science is always bad because contextual aspects are admitted as relevant (and to a certain extent also positive) to scientific argumentation. Accordingly, based on different background assumptions and contextual elements, the same data can acquire relevance as evidence in different contexts for other hypotheses (Longino 1996).

Since we cannot eliminate the background assumptions in which theories are formulated (and the contextual aspects inherent), her philosophy turns around the concept of *context*, whose we can distinguish three different meanings (Rolin 2011):

- the context of basic assumptions: epistemic justification relates to the underlying assumptions required to establish the empirical relevance of the evidence compared to the theories. Hence, the context of background assumptions is fundamental for the evidential reasoning process.
- The context of scientific communities: it is in the context of scientific communities that objectivity takes place.
- The social and cultural context of science. In consequence of the mentioned meanings, Longino places great attention on the *nature* of science as social

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<sup>95</sup> Longino also calls the values conducive to the scope of science ‘constitutive’ as they are tools to determine what constitutes acceptable scientific theories or methods. All the aspects which belong to the social and cultural framework (hence, social, personal, cultural values) are called ‘contextual.’ (Longino 1990, 4)

<sup>96</sup> We can find plenty of examples of these investigations. Historical studies have studied the relationship between theory and ideology, revealing the political bias hidden in specific research programs. For instance, the relationship between Darwinian evolutionary theory and nineteenth-century theories of capitalism, racism, and even sexism stated the genetic grounds/justification for racial differences in I.Q. tests, or hormonal basis of gender differences.

knowledge. Scientific knowledge is produced thanks to the community of scientists, and background assumptions are always present in scientific reasoning. This motivates the inevitably social and contextual nature of scientific knowledge.

In Longino, contexts are the crucial epistemological problem and the solutions since she focuses on this social and contextual dimension of science to avoid theories from being entirely subjective. Her project aims to develop an account of scientific reasoning and knowledge considering the role and influence of ideology or external factors and contextual values within the classical scientific issue of evidence and logic.<sup>97</sup>

In the first section, I will report the interesting analysis offered by Longino on the epistemic and non-epistemic values. Next, I will show some examples of interference of non-epistemic values in science. Finally, I will conclude by explaining the criteria that underlie the normative choice for theories and establish knowledge as objective.

### 2.5.1 A Dichotomy Reconsidered: Epistemic Vs. Non-Epistemic Values

Longino holds that not only contextual values could and did function as cognitive values, namely, they have a role in determining what counts as acceptable scientific judgment, but also that reason for choosing between different epistemic values is not motivated entirely by epistemic reasons, but it also contains social and political preference. Hence, the choice between epistemic values is context-dependent. To demonstrate this intersection, Longino (1995; 1996; 2004) suggests comparing two sets of epistemic values, the traditional one and another set of values formed by feminist ones. The traditional category is based on Kuhn's list, and it is formed by accuracy, internal and external consistency, simplicity, breadth of scope, and fruitfulness. The "feminist category" is formed by empirical adequacy, novelty, ontological heterogeneity, the complexity of relationships, applicability to current

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<sup>97</sup> Longino also broadens the scope of the underdetermination analysis, but I will examine this question in chapter three as part of my argument to justify the combination with standpoint theory.

human needs, and diffusion of power. These are feminist values not because they express nor belong to a feminine orientation to understand the world through these traits. They are signaled as feminists because they are more germane to meet feminist goals, such as revealing gender and gender bias and dismantling gender oppression.

The first operation made by Longino is to compare the two sets, pairing feminist values with a traditional one. I will list below some examples.

- **Empirical adequacy.** The first feminist value is in common with the traditional set and concerns empirical adequacy, i.e., observations must agree with theory or hypothesis. Feminist scholars use it to criticize studies that fail to respect the minimal standards of empirical adequacy. Hence, something fails the empirical adequacy when statements or claims are sustained even if they are incompatible with what has been observed and registered. For example, this is the research case that pursues a biological etiology for differences ascribed based on sexes (Fausto-Sterling 1993) and (Bleier 1984).
- **Novelty.** The second is a novelty: the idea of preferring theories that differ from the previous ones, either by postulating different processes and entities, using different metaphors, or explaining parts that researchers have not yet defined. For example, novelty takes over when one examines old theories in a non-androcentric way. Harding (1993) and Longino have endorsed this value to deconstruct assumptions of traditional science (primarily biological and social research, which treated alleged male superiority as the norm) for the sake of new accounts and explanations.

**vs**

**Internal and external consistency.** The theory does not present contradiction, and the theory is consistent with already accepted theories.

- **Ontological heterogeneity.** The value of ontological heterogeneity postulates equality between different types of entities. This value has been mainly taken into account by feminist studies in biology to ensure that

individual differences are respected.<sup>98</sup> Feminists endorse this value because of the image of the world it suggests: a rejection of a world built and arranged through hierarchical forms. Organizing and postulating a single model under a chosen one treats difference as a failure compared to the standard. It finds a specific complement in the social world with the white middle-class male as the standard to which all the others can only aspire.

- **Complexity of interaction.** The complexity of relationships appeals to the same rationale of heterogeneity. It requires relations between the different entities to be equal and not unilateral/directional. Therefore, it becomes a way to interpret the different relationships between entities. Longino & Doell (1983) apply this complexity to the endocrinological explanations of the role of sex hormones in the development and expression of differentiated sexual traits and how these hormones affect anatomy, behavior and temperament, and cognition. The value of complexity may appeal either to natural (accounts of fertilization and female organisms as active) or social world. For example, if we apply it to the analysis of social contexts, we can illuminate the role of gender in the social structures of the private role in a different light, such as domestic life.<sup>99</sup>

vs

**Simplicity.** The simpler theory is the one that postulates fewer properties or entities for explaining a phenomenon and treats other models as derived from the basic one.

In this comparison, Longino's aim in these articles is that feminist values can be used, like the traditional ones, as an assessment for our hypotheses, theories, and models. But, if we compare this set with the traditional one, we will see that some

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<sup>98</sup> See Barbara McClintock's work on maize and transposition genes.

<sup>99</sup> Longino states that economics studies consider the head of the household the leading financial agent and takes for granted that the interests of those beneath him are the same as his. In doing this, it presents "an oppressive family structure [...] and indirectly legitimates the assumption by welfare policymakers, family policymakers that this structure is the primary and appropriate family structure in our society" (Longino 1995, 393).



values, for example, novelty and external consistency are opposite to each other. So along which principles should our choice proceed? Longino (1995) contends that our selection is influenced by a socio-cultural component inherent in these epistemic sets, and sometimes, “the only reason to prefer a traditional or an alternative virtue is socio-political and not epistemic ones”. For instance, novelty, as the intention of picking alternative explanations to a given phenomenon, serves the political feminist intention to examine gender oppression, namely to revisit accounts that could be guilty of hiding masculine bias in the name of preserving existing and well-established theories. On the contrary, external coherence favors explanations that do not diverge from already existing theories. External coherence can have a socio-political orientation driven by the maintenance of the status quo. The effects of its endorsement may keep from viewing how currently accepted theories are implicated in legitimating gender oppression.

Socio-political values also inform the criterion of simplicity and treating the phenomena in a simple lens risks flattening the differences and making other phenomena corollaries. Finally, even the standard of empirical adequacy could have socio-political dimensions when one wonders for whom and what data a theory should agree. We must always ask ourselves how method, deployment, research programs respond to social and political contexts. For Longino, empirical adequacy remains central since only theories which receive support from empirical evidence can be adopted with justification; however, she recognizes the ineradicable role of background assumption in determining which evidence is illuminated and how.

This does not mean that traditional values are always regressive and that these criteria have a fixed socio-political meaning, but that these values have no value-neutral grounds. If the feminist group can be accepted as quickly as the classic set, which is thought to be truth-conducive, we have no reason to support the superiority of the traditional set. Hence, they should be placed in context because their valence “will be modified by their interaction with whatever other criteria are brought to bear in a given situation and the relative priorities assigned to the different members of a given set” (Longino 1995, 396). Placing these values in their context diminishes the idea that we can separate cognitive form from the political form in an absolute sense.

### 2.5.2 Examples of Interference

After displaying how and which causes the dynamic interaction between the two sets of epistemic values, Longino (1983) offers examples of when, generally, the contextual values can interfere in science by considering another well-known debate, the one between the context of discovery and justification. Longino underlies that contextual values participate in developing and accepting models, theories, and answers in science. Longino then presents these examples to further investigate the scientific process. She lists various ways in which contextual values can shape knowledge:

“1. Practices. Contextual values can affect practices that bear on the epistemic integrity of science.

2. Questions. Contextual values can determine which questions are asked and which are ignored about a given phenomenon.

3. Data. Contextual values can affect the description of data. That is, value-laden terms may be employed in the description of experimental or observational data, and values may influence the selection of data or kinds of phenomena to be investigated.

4. Specific assumptions. Contextual values can be expressed in or motivate the background assumptions facilitating inferences in specific areas of inquiry.

5. Global assumptions. Contextual values can be expressed in or motivate the acceptance of global, framework-like assumptions that determine the character of research in an entire field.”

Longino 1990, 86

An example related to (1) is the interaction between moral values and research methodologies, especially research with humans or research objects that could have a harmful effect. Longino presents the case of the plutonium controversy regarding which method to use to determine exposure standards for inhaled plutonium.<sup>100</sup> Plutonium is widely known as a substance highly carcinogenic already in minimal amounts. The biggest threat is that plutonium metal is lethal to the lungs, and because of plutonium’s long half-life, once we inhale it, the particles will subside

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<sup>100</sup> The case is similar to the one presented by Douglas (2000).

the lung and migrate to other parts of the body. The problem is how to choose between two kinds of risk measurements on the distribution of plutonium in the lungs because when we consider the calculation of cancer risk depending on the radiation dose, comparing two models, the assessment risk will vary a lot.<sup>101</sup> In 1960, scientists did not have enough information to decide between the two, and suppositions were made for both cases.<sup>102</sup> This case is a classic example of an underdetermination thesis. When the theories overcome the available data, but a decision is required, we fill the gap with other contextual rationales. We now know which model offers more margin of safety. Nevertheless, at the time of the controversy, our understanding of plutonium's behavior was so inconsistent that the only choice we could make was also based on contextual and non-epistemic values.<sup>103</sup>

Another example represents another area of biological risk, and it falls into the second category (i.e., questions) is the following. Carol Korenbrot is the scientist who demonstrated that during the oral contraceptive study, "the selection of risks was a function of the extra-scientific values of those performing or supervising the test" (Longino, 1983, 10). Korenbrot argues that Pincus, the scientist who supervised the contraceptive study, was motivated by an explicit desire to limit population growth. This has greatly influenced how the contraceptive has been studied on its effects. Data suggesting a relationship between estrogens and reproductive tract cancers and estrogen and blood coagulability have not received

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<sup>101</sup> One model was the hot-spots model, which assumed that the distribution of inhaled plutonium was non-uniform in the lungs. On the contrary, the radiation was taken as uniform in the lung for the hot-lungs model. So, in the former case, the radiation dose is calculated on a tiny lung area. The results for an average-sized particle are an estimate of 500 rem per year average dose to the irradiated diffuse and of 3000 rem per year to tissues closest to the particle. The latter case treats the radiation on the entire surface of the lung, so the particle of average size is estimated to deliver a dose of 0.0002 rem per year per square centimeter of lung tissue (Longino 1983).

<sup>102</sup> For example, the hot-lungs model was justified based on the analogy between plutonium and radium, distributed uniformly. For the hot-spots model, scientists stated that plutonium particles should not travel more than three or four millimeters (Longino 1983).

<sup>103</sup> The hot-lungs model was chosen by the International Commission on Radiological Protection and the Atomic Energy Commission. Some scientists disagreed with these standards, especially in the case of human risks. The best way to proceed was to assume the more significant risk rather than, the lesser harm and accuse the AEC of not including the costs in human health (Longino 1983).

the same importance as Pincus had decided to emphasize the prophylactic and therapeutic properties and minimize the risks. Thus, Pincus's extra-scientific bias has pushed him to favor contraceptive use, looking positively rather than negatively on contraceptive effects. Pincus's political commitment to limiting population growth has led him to focus on those data that demonstrated the potential of oral contraceptives in avoiding certain diseases such as breast cancer. His concern about his political values led him to highlight the benefits rather than the risks for women's health. According to Longino, if his reflection had been discussed and studied within a wider (and heterogenous, I add) community, these biases most likely would be perceived.

The third example is connected to 3 and 5, and this time it shows how biased assumptions have been resisted for so long, even if they indulge a biologically determined image of the social relations between sexes. In behavioral endocrinology, sex hormones were related to anatomical and physiological explanations, temperamental, and cognitive behavior of men and women (Potter 2006, 101). The example shows how "social and cultural values can also influence the assumptions required to mediate between hypotheses and theories on the one hand and observational and experimental data on the other" (Longino 1983, 12). The hormone study is exemplary because the difference in hormone's distribution in men and women has been used "as causing or influencing differences in behavior between the sexes, between the so-called masculine behavior (aggressive, assertive, dominant, independent, creative) and so-called feminine behavior (passive, submissive, gentle, dependent, nurturing)" (Longino 1983, 12).

On this matter, researcher Elizabeth Adkins has argued that the assumptions that human gender-related behaviors are controlled or modified by hormones are not supported by evidence. Moreover, these unjustified claims regulate hormonal aggression as a characteristic of men and lead to accepting the domination of men as natural, thereby combining human behavior with social organization. These qualities, such as aggression, are understood as desirable features in social life to contribute to success. So, we witness an analogy between human behavior and social organization. Since aggressivity is a feature of male behavior and not female, it

constitutes the ground for male dominance in animals and humans. Male social dominance becomes a natural and inevitable consequence.

Still, when appealed to social explanations, it is unclear why aggressivity is linked to assertivity, intelligence, and independence, all features perceived as desirable qualities in person and society (Longino 1983). Western men occupying the dominant positions just gain more validity to these claims. These assumptions, rather than factually-determined, should be seen as value-determined since they found a justification not in evidence but in the value and ethos system (the conceptual forms of Western society) they support.

Each case presented enables us to distinguish the different modes at which contextual values interact and operate in research. The point of all these examples is that we must inform, explore, and eventually signal how contextual factors enter theoretical reasoning, have a clearer gaze of the determinants of the interpretations of observations, and act based on this awareness instead of maintaining these factors hidden. Non-epistemic biases can be expressed within the contents and the practices of science, enabling and constraining scientific research, namely when bias, but also standpoints, are incorporated in the logical construction of theories, the determination of what counts as evidence, and how data available are linked to the hypothesis which supports them. Indeed, if the description of a fact is not the direct consequence of hypotheses as evidence, then there is a gap between the two, which external values can also fill (Longino 1983).

Indeed, in all these cases, non-epistemic, cultural, and social values have entered the practice of science both externally and internally. The internal point of view is the most problematic for the value-free model since it shows interference between data and theories mediated by contextual assumptions so embedded that they usually are unrecognized. In the case of the hormone study, the values intervene in mediating the relationship between hypothesis and data, “determining the type of hypothesis for which the data can be taken as evidence and the types of data that can support a given hypothesis” (Longino, 1983, 15). It may be worth noting that in the case of hormones, ignorance is subtle because assumptions are based on the nature of men and women, and they are incorporated into a world’s view that is very difficult to perceive.

It is also important to note that these examples do not represent cases of bad science, as in deliberate cases of bending or altering the data to support a given hypothesis. These examples are examples of regular science; the central issue here was to prove how contextual values can affect the norms and practice of good science. And this claim requires a better account of the scientific approach because only with this account could we analyze the scientific method and the nature, scope, and limits of scientific inquiry. We must examine more how the interrelations of the multiple factors in science work. In this respect, the feminist voice can alter the traditional patterns of scientific authority (and the rituals and models of masculinity in this positioning).

The consequence of this analysis led to Longino's primary outcome, such as highlighting the contextual and social dimension of science: it means studying scientific practice, how scientists relate to each other, and how to deal with contextual values that enter into science. When science is seen as social, achieving objectivity changes, and it is ensured if values are accepted and well-monitored by the scientific community (Longino 2004). Longino's idea on objectivity will be explained in the next section.

### 2.5.3 Procedural objectivity: Is Social Epistemology Possible?

The social dimension of science leads to two different principles. Firstly, an account of the justification of theories must consider the social interactions which apply to scientific inquiry and not just the conditions involving observations and reasoning. Hence, the context of justification is not just the study of relations between our claims and beliefs but has importance in the internal and social relations between the community of researchers. Hypotheses, as well as the background assumptions, will be tested with the available data. From the earlier general lessons, we can argue that every empirical reasoning occurs in background assumptions that are not self-evident and logically true. Through these assumptions, contextual values enter science. This is not to say that empirical evidence is irrelevant, but that is not

sufficient for a correct account of scientific reasoning. The idea is that we must treat epistemic agents as located in particular and complex interrelationships by acknowledging that the purely logical claims are not sufficient to accept a particular theory. But this network is not an obstacle to knowledge, but it is a path to analyze the gap between observation and theory.

Secondarily and consequently, we also need diversity in the community.<sup>104</sup> Otherwise, background assumptions will persist unconsciously and be shielded by criticisms. If we all share the same background assumption, we will not likely spot contradictions in our points of view or alternative explanations. As the reader may already see, these are central and pivotal in Harding's theory, albeit differently exposed.

At this point, Longino can develop her project of procedural objectivity, highlighting the norms which regulate the social dimension of science. Objectivity is secured through the social character of the inquiry, whose main ingredients are evidential reasoning and diversity of the background assumption (Longino 1990). Knowledge is constructed by the community, i.e., by members interacting with each other, and this interaction modifies their observations, theories, and patterns of reasoning. The scientific method involves more than the hypotheses testing through comparisons of experimental data, but also comprehend "the subjection of putative data, of hypotheses, and of the background assumptions in light of which they seem to be supported by those data to varieties of conceptual and evidential scrutiny and criticism" (Longino 1993b, 318). Hence, a good understanding of our knowledge production can be acquired by considering the context of background assumptions and the interaction with the relevance of evidence and thanks to diversity of points of view.

Both observations and reasoning (the evidentiary support between data and theories) have social features, and we cannot keep considering them as idealized sets of relations between subject and object.<sup>105</sup> Scientists do not work alone, and even if they do, their work must meet specific criteria to be defined as scientific

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<sup>104</sup> I will also argue on the kind of diversity required by Longino in chapter three.

<sup>105</sup> Similar investigations have been carried out by Lynch and Edgerton (1997), Cetina (1995; 2009).

knowledge and accepted. Observational data are organized in observational reports, and these reports rest on consensus by the group members (Longino 2002b, 100). Moreover, data from an experiment must be available to the entire scientific community since the experiment might be repeated and verified by others. The stability and reliability of data are assured by subjecting the results to the criticism of peers, a paradigmatically social activity. Also, scientists discuss their theories, so the decision whether something is an appropriate reason is made socially, through discursive interactions (Longino 1995).

Social cognition is then the appropriate vehicle for knowledge practice because it also explains how to distinguish between objective knowledge and opinion. Objectivity means considering the social norms that regulate discursive and social interaction. Longino provides four equally binding criteria for this regulation, representing the feminist methodologies for doing science: avenue for criticism, uptake of criticism, shared standard for evaluating theories, and tempered equality of all members.

- Avenue for criticism prescribes publicly recognized ways for the criticism of evidence, theories, and models. Criticisms of research must be articulated using the same standard and in the same venues where the original study is presented: journals, conferences. So, criticism and original research should be evaluated in the same way. Effective criticism that advanced original research should be recognized.
- Secondly, the community must not merely tolerate dissent, but theories and beliefs must change in response to the ongoing critical discourse. Hence, a community must pay attention to the critical discussion and the assumptions governing their group activity.
- Thirdly, rules must be publicly recognized according to which theories, hypotheses, and observations must be correctly evaluated. For criticism to be relevant must appeal to something accepted by those who hold the position criticized. These standards are not static and can be revisited and criticized, and they can include epistemic principles and social values. The point of requiring public standards is that individuals and communities adopt adequate criteria to be assessed in a non-arbitrary way by explicitly or



implicitly professing adherence to those standards. This criterion has two objectives. On the one hand, it forces community members to welcome criticisms relevant to cognitive and practical aims. On the other hand, it limits and narrows the criticisms to those that respect these aims.

- Finally, communities must be characterized by the (tempered) equality of intellectual authority.<sup>106</sup> This criterion aims to disqualify a community that exerts domination of certain assumptions by political power. The suppression of an alternative point of view cannot be a matter of politics. The consensus is not the result of the exercise of power but the result of critical work in which all the perspectives are heard. People should be persuaded by reason and argumentation, not forced to accept by persuasion. Every community member can be considered capable of carrying out a role in the investigation. The equality of intellectual authority does not mean that every perspective is equally valid. Everyone is recognized for their ability to make arguments that can construct the theory.

These four criteria serve to subject the results to multiple points of view to eliminate idiosyncrasies in the background assumptions and obtain a higher level of objectivity because the more knowledge can handle criticisms originating from various perspectives and capable of removing contradictions to make scientific reasoning reliable, the more objective it will be. Knowledge is objective when the result of an inquiry has undergone a scrutiny process capable of weeding out any existence of idiosyncrasies in the background assumptions of scientists. Here, the idea of diversity and criticism is the resource and the normative aspect because the discussion itself relies on the normative force to guarantee enhanced and accurate objectivity. The more voices we hear, the more precise our knowledge will become. The idea of diversity also includes abandoning another mantra of scientific objectivity, namely the ideal of universality. What counts as a scientific claim is not independent of the different cultural backgrounds, which are inevitably partial.

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<sup>106</sup> In 2002 *The Fate of Knowledge*, Longino revised this criterion, after some criticisms received, and renamed it “tempered” equality of intellectual authority since in its first formulation was too “raw”.

The guidelines she presented require pluralism for the inquiry because plurals are the perspectives and processes to achieve science. Epistemic pluralism is not an a priori choice of metaphysical explanation of the world rather a consequence of the complexity of nature. One single theory/value cannot grasp all the causal interactions in a given process. We should not aim to eliminate values but rather incorporate them to explore alternative explanations. This social interpretation of objectivity can ensure the constructive role of values and their examination in the scientific community. Scientific knowledge results from a cognitive and intellectual expression and interaction between the natural and social world. Every articulation of the world can change and be modified thanks to new questions or new cognitive needs. If we recognize the partiality of our theories, we can give space to pluralism without falling into contradiction (Longino 1993b).

To summarize, Longino develops an account of scientific knowledge, focusing on cognitive and social practices, leading to objective knowledge. She argued that evidential reasoning is always context-dependent since data are taken as evidence for something in the light of background assumptions. We can concentrate on certain aspects over others based on different background assumptions. But background assumptions are also how contextual values and ideology enter science.

So, controlling the background assumptions is the first rule. Moreover, these background assumptions can have a positive role since they concentrate on different (and unexplored) aspects. Longino has been accused of relativism, i.e., she does not provide effective criteria to come to the truth. But she does not say that “the congruence of a hypothesis [...] with the social interests of the members of a scientific community determines its acceptance by that community” (Longino 1994, 136). Longino’s account provides the four criteria precisely to govern scientific selection and discussion. So, when community members interact with each other, following her criteria, they produce objective knowledge.

## 2.6 Conclusions of the Chapter

This second chapter has been devoted to reconstructing, as far as possible, the connections that feminist epistemology has with the theory of knowledge more generally. I think it is very useful to understand how this discipline fits into the more general debate because this reconstruction sheds light on two main aspects: (1) which sides are most akin to this theory and how it is positioned. Feminist epistemology is not an esoteric or detached field, although it may be less known than others. Like many, it is a discipline that participates in the contemporary and general debate of epistemology. The second aspect that emerges is (2) what exactly this discipline offers with respect to those related fields.

To answer the first question, I started from the authors and the problems most often cited or referred to generally by feminist epistemology. The authors in question particularly belong to the historical turn, beginning in the 1950s. With Kuhn and Hanson, the main problems concerned the intrusion of subjective, historical, cultural, and political aspects within a scientific framework hitherto seen as ahistorical and above all immune to these aspects.

On the contrary, Kuhn (1962) introduced the problem of scientific progress seen as an interruption of normal moments and revolutionary moments, in which the transition from one moment to another was also due to reasons external to science and especially precluded some form of comparison between the various moments. Hanson (1958) extended this “intrusion” of extra-scientific aspects in the observation of theories, sanctioning the principle that observation is always *laden* by theory: observation is never neutral and pure, but the observers always interpose auxiliary aspects, not necessarily theoretical, between them and the theory that they want to validate.<sup>107</sup>

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<sup>107</sup> Hanson (1958) reported the example of Kepler and Tycho Brahe while observing sunrise. Both would receive a very similar image, but they would observe different things: Kepler would see the Earth’s horizon lowering concerning the equator of the Sun, Brahe would see the Sun rising on the horizon. So, Kepler and Brahe would give to sensory stimuli an organization/interpretation that is full of their personal theoretical beliefs.

The second assumption shared by feminist epistemology concerns the underdetermination thesis formulated by Duhem and then later by Quine. In particular, the latter is perhaps among the authors most cited by feminist epistemologists because with the underdetermination thesis it is possible to imagine how non-epistemic values (including feminist values) enter epistemic reasoning and fill the gap between observation and theory. Longino (1995), in particular, goes one step further by stating that these non-epistemic values do not enter only in the case of underdetermination, but the very dynamics of epistemic process involve the active role of these values.

Section 2.2 and 2.3 respond to the second aspect, what feminist epistemology offers to the scientific debate. Indeed, from adherence to Kuhn's and Quine's assumptions also come theoretical problems to be addressed. One is whether it is still possible to have a clear distinction between epistemic and non-epistemic values since the latter group would enter, whether we want it or not, in the scientific procedure. Feminist epistemology, along with other non-feminist positions, argues on the one hand that we cannot maintain this distinction, since sometimes the decision with respect to one epistemic value or the other is also due to contextual, social, and cultural reasons. But non-epistemic values are also part of those stages of the scientific process, called internal, namely those of validation, testing, and justification of theories. What distinguishes feminist epistemology, in particular, is that it considers this admission not detrimental as condemning science to arbitrariness, but it reflects how these aspects can be exploited to improve the final picture of knowledge.

Given these answers to the problems set out, one cannot help to consider the type of framework to which one adheres, especially concerning how knowledge is justified, and more generally, the image of science that is given. For this reason, in section 2.3, I clarified which differences are between similar positions to feminist epistemology, as they share the same problems and similar answers. While they may adhere to a non-absolutistic idea of truth and a non-foundationalist idea of justification, scientific knowledge is in any case distinguishable from other types of knowledge. This latter is not reduced to negotiation between scientists or power moves. Yet, for feminist epistemology, we should reject scientific objectivity as

value-free since it is unachievable; to support this thesis, I have grouped various strategies used by scholars (historical, theoretical, political), and I have culminated by anticipating some traits of the projects of the feminist epistemologists, Harding and Longino. In fact, feminist epistemology favors an image of science as value-laden but still capable of producing reliable and shareable knowledge.

But the answers are not necessarily the same. For this reason, I have selected two that, in my opinion, best answer the problem of how to redefine objectivity. Sandra Harding (1991) is a feminist epistemologist belonging to the standpoint theory; her project is named “strong objectivity” and has as its main focus the heuristic potential of the perspectives of marginalized groups. Their social position and the work of reflection and awareness of their own condition and that of others gives them an epistemic privilege on some scientific questions, and this contributes to producing a more comprehensive and therefore more accurate epistemic framework, but also responds to social and cultural deficiencies.

Longino’s project (1990) is called procedural objectivity and belongs to contextual empiricism, a (very) revisited approach of feminist empiricism. Longino’s most interesting point is the intersection of the social and epistemic character of scientific knowledge. In fact, knowledge is an intrinsically social operation, so if we want to have justification and legitimacy for the knowledge produced, we must also account for the social aspects. Indeed, the criteria she proposes respond precisely to the need to give plausibility, authority, and ultimately normativity to a social knowledge.

In the next chapter, I will show why I believe that a combination of these perspectives responds better to the problem of objectivity and which improvements and results to be expected. I will propose how and why combining these two approaches is the best course of action to follow to ascertain the effective potential and contribution of feminist epistemology to the debate of scientific objectivity.

## Chapter Three: Rethinking Objectivity: How to Maximize Two Approaches of Feminist Epistemology 3.1

When we began theorizing our experiences during the second women's movement a mere decade and a half ago, we knew our task would be difficult though exciting one. But I doubt that in our wildest dreams we ever imagined, we would have to reinvent both science and theorizing itself in order to make sense of women's social experience.

Harding 1986b, 251

### Introduction: A Contextual Standpoint Theory

In the first chapter, I analyzed the political and historical roots of feminist epistemology and the selection of methodological tools that I deem relevant for this discipline. In the second chapter, I framed feminist epistemology in philosophy of science and epistemology's debates. I also described the two approaches I intend to combine, contextual empiricism by Helen Longino and Sandra Harding's standpoint theory. On this basis, I now develop my integrative approach to the scientific objectivity debate. I call it "contextual standpoint theory".

In feminist epistemology literature, there are authors who bring these two perspectives together, for instance, in Wylie (2003; 2012) and Intemann (2016). However, although these approaches target the same goal, they argue standpoint theory and contextual empiricism still maintain some pivotal differences (Intemann 2010; Crasnow 2013; 2014, Tanesini 2020). In this chapter I deal with the difference between Longino's adherence to pluralism and Harding's reticence to it, to show how nonetheless these two approaches can go along.

As illustrated in chapter two, scientific objectivity is a highly debated topic in epistemology. The epistemic framework which feminist epistemology supports, and therefore also my project, is part of a strand that discusses central epistemic issues such as the underdetermination thesis in theories, theory-ladenness, the role of

epistemic and non-epistemic values in science, the inherently social character of scientific discussion in the contexts of discovery and the context of justification, provided that we can still consider this last division tenable.<sup>1</sup> Moreover, feminist epistemology, in addition to the issues already listed, also maintains a particular critical *intersectional*<sup>2</sup> eye on the hierarchies of power and domination embedded in science (especially those organized through discriminatory axes such as gender, race, etc.), on the epistemic agents (their social locations and background assumptions) and how aspects like credibility and testimonial reliability in science are connected to political discriminations. Within this metaphysical and explanatory framework, feminist epistemology refutes pure arbitrariness for epistemic knowledge but rethinks how to define knowledge as objective. To talk about objectivity, we must come to terms with the situatedness and non-abstractness of our cognitive practices and thus investigate how it is possible to maintain an objective character while accepting the sociality of knowledge production. Longino and Harding's accounts share this idea.

Another distinguishing feature of the feminist epistemology on objectivity is also to avoid being caught in a dichotomy between a universalist or relativistic epistemic position;<sup>3</sup> after all, avoiding a dichotomy is perfectly in line with a feminist position. My intention to bring Longino's and Harding's epistemologies into dialogue is therefore motivated by the confidence that, although scientific knowledge is socially and culturally situated, it is still possible to obtain shareable and objective knowledge, i.e., not to fall into relativism, as complete equivalence of every perspective, while admitting the existence of multiple valid epistemic points of view. I anticipate my answer briefly by stating that contextual standpoint theory allows

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<sup>1</sup> In particular, Longino, as I examined in chapter two, does not believe it is possible to maintain a neat division between contexts of discovery and justification and between epistemic and non-epistemic values cf. Longino 1995, 1996, 2004.

<sup>2</sup> As I did in the previous chapters, I will use "situated", "embodied" "feminist" as a synonym for intersectional for purely stylistic reasons and ease of reading.

<sup>3</sup> This intent is already explicit in Donna Haraway's famous 1988 essay "Situated Knowledges", where she cautions against being trapped between objectivism or subjectivism. In the non-feminist philosophical literature there are other authors who have ventured down this middle path, one example is Giere 2006. For a thorough discussion of Giere's perspective in relation to relativism see Ashton 2020b. Other authors who claim to be relativists are Rorty 1979, Code 1991, Feyerabend 1975, Kusch 2016.

one to accept a form of epistemic *mild* relativism that is not detrimental to the fate of knowledge, while admitting the situated nature of the latter. I will dissect what I mean by mild relativism and how it applies to Harding's standpoint theory and Longino's contextual empiricism. I believe the most complex obstacle is given by Harding (2009), who expresses criticality towards relativism, while in Longino, relativism is more easily recognizable. I will explain how I intend to support these statements later in this introduction.

Now, I want to clarify why I decide to use Sandra Harding's Strong Objectivity<sup>4</sup> and Longino's Procedural Objectivity.<sup>5</sup> On the one hand, Harding draws political and epistemic attention to diversify and include the subjects that participate in science, especially in the social sciences, where research problems are closely related to social issues. With their epistemic privilege, marginalized subjects broaden and readjust the focus on the initial topics of our research and bring new points of view and ideas, hence new content (Harding 1991, 2015). Harding criticizes the traditional scientific framework for focusing only on the context of justification because political, economic, and personal interests always enter into research and can be subject to bias, so Harding's strong objectivity has, among its goals, to set out a rigorous logic of discovery to improve research results (Harding 1993, 56). On the other hand, Longino (1990, 2002b) focuses on the criteria that manage social discussion among the members of an epistemic community.<sup>6</sup> With her criteria, Longino offers norms for evaluate subjective preferences, keeping them in check. Moreover, these criteria also control the social discussion and exchange, they are standards according to which a knowledge become objective. This aspect is especially related to validation and justification's problems, hence the methods.<sup>7</sup>

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<sup>4</sup> Cf. Harding 1977, 1986b, 1991, 1992, 1993, 2015.

<sup>5</sup> Cf. Longino 1990, 1991, 1995, 2002a and b.

<sup>6</sup> I mean "epistemic community", in a broad sense; so I am not just referring to strictly scientific communities experimenting in laboratories, but to all research groups that engage in the dissemination and theory of knowledge and are acknowledged in doing so, such as epistemic communities and research groups found in academia/universities.

<sup>7</sup> The problem of method is complex and multi-faced in the epistemological debate because it concerns issues, among others, such as measurement and individual and collective reasoning processes (Reiss 2017).



I believe that where Harding focuses on contents – as in products of knowledge, she gives less attention to the problem of its justification. To me, Harding’s main problem is that marginalized perspectives do not have a justification strong enough. Indeed, she suggests that perspectives should be embedded in democratic projects, but as Crasnow (2013) argues, the definition of democracy is too loose. Furthermore, one must find a way to detach epistemic privilege from essentiality, and at the same time, ensure that marginalized perspectives retain their epistemic privilege in the course of scientific discussion. On the other hand, Longino discusses scientific justification, yet she misses the opportunity to analyze first how to allow for the entry of subjects other than those belonging to the dominant paradigm and increase diversity.<sup>8</sup> This results in a limited focus on the content of knowledge. Longino admits the importance of having social diversity within scientific communities. But at the same time, when she discusses her criteria, it seems to me that she treats diversity as is already present, or taken for granted, when it is not. So, I will argue that her criteria need a prerequisite to be applied before their execution. Secondarily, I will also discuss the ambiguity I see in Longino regarding her stance on feminist values. I will say more about Harding’s and Longino’s criticisms in section 3.2.

I argue that these problems can be solved by combining the two approaches so that neither explanatory content nor justificatory criteria are left uncovered. Contextual standpoint theory, therefore, grounds a more encompassing solution to the problems of knowledge using both approaches. It also resolves some of the individual criticisms directed at these epistemologies. Therefore, the purpose of this union is to offer a comprehensive theory on scientific objectivity enriched by feminist perspectives.

The method to achieve this union consists of several steps that I am now going to illustrate briefly. Given the length of this crucial problem, I decided to break it up into smaller sections. While all units are propaedeutic to my project and aim at

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<sup>8</sup> Epistemic communities are sites of power control, specifically, the power of cognitive knowledge. Although the situation has improved due to the claims of social movements and the increasing entry of women and marginal subjects into the academy, the situation still remains unbalanced, and we can still find misogynistic niches in this environment.

the same goal, they also address specific topics, so they are also self-contained and can be read separately. These sections are all indispensable for understanding how I built the combination of the two theories.<sup>9</sup>

Thus, the chapter is divided into:

- section 3.1 – Similarities of the two strands: standpoint theory and contextual empiricism
- section 3.2 – Vulnerable points of the two strands
- section 3.3 – Contextual standpoint theory in action: the two strands together

Section 3.1 consists in mending the *apparent* contradiction between the two positions. The contradiction I am talking about is that Longino's project risks pointing to an *undifferentiated* diversity among perspectives in science, while Harding does not place all perspectives on the same plane but argues for the epistemic superiority of some over others. During this chapter, I will argue how it is still possible to aim for a union of the two perspectives, despite this relevant difference.

Hence, in this 3.1 section, four crucial elements in common between the two positions emerge: normative, contextual, social, and political. Moreover, I argue that if there are differences between the two positions, they are best understood as differences in degree rather than quality. Indeed, the three theses typically used to describe standpoint theory are present in every discipline labelled as "feminist epistemology", thus including Longino's contextualism. I briefly resume these here: 1) the situated thesis affirms that "social location systematically influences our experiences, shaping and limiting what we know, such that knowledge is achieved from a particular standpoint" (Wylie, 2003). 2) The epistemic privilege thesis says that some perspectives, specifically the standpoints of marginalized or oppressed groups, are epistemically advantaged compared to the dominant ones (Anderson 2000). Finally, 3) the epistemic achievement thesis points out that knowledge

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<sup>9</sup> These sections are all written because they are functional to the initial thesis and the results it allows me to obtain, yet they are readable on their own. The division responds to a purely pragmatic reason, enabling the most straightforward reading of my project. While I provide an introduction of each section (in this general introduction, I simply mention the main thesis), the conclusions at the end of 3.3 are cumulative of all sections.

accessible from a particular social location is not given but must be struggled for (achievement); moreover, this achievement is better obtained collectively.

The emphasis placed on any three theses will determine whether one belongs to standpoint theory, empiricist feminism, or postmodern feminism (the three initial categories proposed by Harding in 1986b). Therefore, the thesis of epistemic privilege is found in a minor form compared to the standpoint theory also in contextual empiricism, just as that of the achievement thesis is more central in contextual empiricism but very present in standpoint theory.<sup>10</sup>

The purpose of overturning qualitative difference into differences of degree (quantitative differences) opens the door to a fairly long-standing issue and one that is often the very reason why the two epistemologies are considered incompatible with each other. On the one hand, Harding draws attention to the importance of specific individuals and collective who have epistemic privilege by virtue of their social position and their social and political values. These perspectives and their values denounce discriminatory systems and the contradictions inherent in ideological paradigm based on racism, patriarchy, classism, etc. All these discriminatory axes shape also knowledge production, epistemic practices, such as access to knowledge, epistemic reliability, etc. I call this preference for certain values by Harding “value perspectivism” because she emphasizes the epistemic privilege these values and perspectives carry on.

On the other hand, Longino at times does not discuss the types of values directly and prefers trusting the criteria of production and control of knowledge she proposes. These criteria allow all members of a scientific community to be heard and judged on the basis of the argumentative force of their theories instead of by imposition of power, political motives, and discrimination of all sorts. Thus, Longino does not seem to express a particular preference toward the content of the values,

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<sup>10</sup> The understandings of the achievement thesis in Harding and Longino are different. In Harding it has a connotation of class consciousness: through achievement the marginalized categories collectively participate in the formation of a consciousness. In Longino it does not have paramarxist tones. Nevertheless, I believe we can speak of an achievement thesis because Longino focuses on the normative force of social and collective discussion between members of community that leads to the legitimation of belief.

even if those values include feminist ones. For this reason, I call this position “value pluralism.”

Thus, in the following paragraphs, I analyze how Harding opens to value pluralism when it comes to justification between theories, even among marginal perspectives, and how Longino implicitly supports specific values (value perspectivism) at improving science. In other terms, I detect elements of standpoint theory in contextual empiricism and vice versa: more than an incompatible substantive difference, I see a difference in the degree of presence and acceptability of these values. In standpoint theory, the justification of knowledge is linked and dependent on the social locations, yet these social sites are plural and multiple.<sup>11</sup> Furthermore, there is no absolute way to rank these justifications, yet not all the perspectives are equally valid because some values are better than others in science (Harding 1991, 144). The different standpoints that emerge from the different identities have a contingent and relative character, in the sense that “any knowledge is situated, hence depends on necessarily partial and interested perspective” (Ashton 2020b, 76). However, this does not exclude that we can and must arrive from the disunity of perspectives to shareable content that can be called knowledge, albeit never in absolute, univocal, or timeless form.

Longino’s (1993b, 319) analysis is complementary to Harding’s since she starts precisely from the awareness of these discordant and multiple perspectives and the need to reach a shared content, even though there are no foundational approaches capable of placing the various positions in the definitive, fixed hierarchy. However, to achieve a shared core and the success of this objectivity, some values (including feminist values) are better than others because they are not dogmatic but more conducive to critical discussion, open-mindedness, and enrichment of perspectives. Furthermore, historical reasons related to Western culture and patriarchy make these values a good place to begin analyzing, if only because they have been silenced. Longino does not explicitly say every time which values are better than others, probably due to faith that perilous ones will be eliminated,

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<sup>11</sup> Cf. Harding 1993b, 59-61; 1998, 66; 1997, 383.

thanks to her criteria (Crasnow 2013). Yet, tracing back her writings, she hints more than once how feminist values are important and can improve research status.<sup>12</sup>

Section 3.2 exposes the vulnerable points of these perspectives because, even if I believe that the union of these two approaches is a viable and valid way for the reasons mentioned above, the fact remains that both pose questions to be resolved. Harding's problem is that, in my opinion, it does not offer normative force strong enough to justify the contents carried by marginal groups.<sup>13</sup> It is true that the normative force of standpoint theory lies in the dialectic between dominant and dominated positions, but in my view this idea needs to be reinforced and clarified how we move from dialectic and discourse to epistemic justification. Longino's problem, on the other hand, is the limited explanation and inclusion of feminist values and insufficient discussion of how to include categories that are usually discriminated.<sup>14</sup> Including heterogenous values different from dominant framework (for instance marginalized position) is imperative because they serve as counterevidence for positions or perspectives that otherwise will go undetected. Since extra-epistemic values cannot be eliminated, might as well have the most varied pool of ideas to evaluate subjective preferences in the most accurate way.<sup>15</sup>

In section 3.3, I present in detail my contextual standpoint theory project and its methodology. I first articulate the thesis, i.e., what the combination of Harding and Longino entails, especially concerning the vulnerabilities laid out in section 3.2. Next, the analysis focuses practically on how my project takes place, showing (1) how the standpoint theory principle of "starting from below" should be understood and (2) how it interjects with Longino's four criteria. In 3.3, I finally illustrate how to rethink these approaches through their union. I believe it is important to state that the two perspectives (contextualism and standpoint theory) do not stand simply in parallel, but they interrelate. This section, then, culminates in the combining strategy of the two positions begun at the beginning of the chapter to

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<sup>12</sup> Cf. for example Longino 1983, 1995, 1996.

<sup>13</sup> In feminist epistemology's framework, critiques of this type came from Scott 1988, Longino 1993a, Intemann 2010, Crasnow 2014.

<sup>14</sup> Longino's project is called a *feminist* empiricist contextual. It seems odd then how a feminist project would involve ambivalent positions on feminist values.

<sup>15</sup> Cf. Longino 1983, 1990, 1993b, 1997. I also refer to the discussion about feminist values in Longino in chapter two of this dissertation.

show to whether we can have objective knowledge while acknowledging that scientific inquiry is enhanced by marginal perspectives and the outcome of scientific discussions are also value-laden.

### 3.1 The Clash Between Harding and Longino

*Shared Connotations: Normative, Contextualist, Social, Political*

The first step in mending the distance between Longino's contextualism and Harding's position is to list what the two theories have in common, to pave the way to the merging and overcoming apparent contradictions.

Intemann (2010) highlighted three of these communalities, arguing how both positions are close to some extent. In particular, the two perspectives are much more similar to each other, especially if we consider how they were before: contextual empiricism is closer to standpoint theory than contextual empiricism is to other forms of feminist empiricism.<sup>16</sup>

“On this interpretation, standpoint feminism begins to look much like feminist empiricism. Both views are social epistemological views in that they take communities rather than individuals to be the locus of justification and objectivity. They are contextualist in that they recognize that justification takes place within a particular context of background assumptions, methods, and values. In addition, they take diversity within scientific communities to be critical of evaluating those assumptions so as to promote objectivity and achieve knowledge. Both views are normative in that they reject the view of objectivity as “value-free” and recognize ways that ethical and political commitments can help minimize, rather than necessarily cause, bias.”

Intemann 2010, 787

Intemann offers three different features that can be individuated throughout both positions: normative, contextual, social. I will then add a fourth one: political. In addition, for each element, I will elaborate on which aspect of each theory can be compared with the other.

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<sup>16</sup> According to Intemann, Harding's position on values is preferable to Longino's, especially when viewed from a feminist perspective (2010, 791).

1. The first feature is normative. Both positions reject a value-free concept of knowledge: the objective is revisiting the traditional idea of scientific objectivity and detaching it from neutrality. Not only is it impossible to ignore or eliminate the values and biases implicit in every researcher, but the two positions also suggest that values play a (positive) normative role in the scientific reasoning process. Longino and Harding accept the presence of extra-epistemic values in the scientific reasoning process.<sup>17</sup> An important aspect to keep in mind when investigating the role of values in knowledge regarding the justification of scientific judgements is the distinction between causal and constitutive “mode.” Justification is causal when social factors cause our attention to certain evidence over others but do not determine in the first place which our evidence is. The constitutive justification provides that extra-scientific values can affect our evidence (Ashton & Mckenna 2020). Both positions support a constitutive role of values because in both the theories, values contribute to ensuring the evidentiary link between data and theory.<sup>18</sup> For instance, Longino says that

“Social values and interests enter the context of justification as background assumptions that, along with many constitutive assumptions, are necessary for deciding when *e* is good evidence for *h*.”

Longino 1990, 43-45

Then, social values, which may include feminist ones, play a constitutive role in forming knowledge. Harding is perhaps even firmer on the importance of feminist

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<sup>17</sup> Cf. Longino 1983, 1990, 1993b, 1995, 1996, 2004. Cf. Harding 1986b, 1991, 2004a, 2015.

<sup>18</sup> An example can be helpful to clarify this connection between data and theory. Researchers interested in the impact of hormones on sexual behaviour discovered that the sexual behaviour of rhesus macaques reaches a peak when the females are ovulating. The researchers wanted to determine how the males understood when to start the reproductive act and thus obtain the optimum result in terms of procreation. It is now proven that the peak of sexual activity during ovulation is signalled by macaque rhesus females, which initiate the sexual act, but for a long time, the research conducted neglected this fact and focused instead on the behaviours and abilities of the males. Kim Wallen, a behavioral endocrinologist specializing in female sexuality, states that the crucial turning point took place in 1976 - over 30 years after the examples of female initiation had been recorded for the first time. According to Wallen, this reflected a cultural shift due to the increase in female students in endocrinology. An influx of female researchers led to greater scrutiny of the dominant perspective and its justifying resources and enabled the discovery of sexist hypotheses on male sexual proactivity and female passivity (Hasset et al. 2008).

values, because she supports the epistemic privilege thesis. Some perspectives that carry feminist values are more epistemically fruitful for improving our knowledge, asking questions that differ from the dominant one. Hence, they must be included. Both positions focus on the relevance of the social factors that underlie the epistemic differences and can cause what standpoint theory calls epistemic privilege. Hence, it can be argued that the two positions are committed to a form of social constructivism, converging towards an understanding of how to obtain shareable knowledge even if socially constructed (Ashton & McKenna 2020).

2. The second shared element concerns contextualism. The positions are both contextual since they recognize that the justification of theories takes place in the context of certain background assumptions and that these could be moved by different purposes or research aims. Background assumptions are diverse, varied, and influenced by individuals inquirers' social contexts and locations. Harding (1991) defends a type of standpoint in which the epistemic privilege resides in an individual or a collective with a certain set of values that can improve knowledge:

“One’s social situation enables and sets limits on what one can know; some social situations – critically unexamined dominant ones – are more limiting than others in this respect, and what makes these situations more limiting is their inability to generate the most critical questions about received belief.”

Harding 1993, 54-55

Thus, women and marginal groups are better at identifying values and criticisms that would improve knowledge. I believe it is important to underline how, as much as with Longino, in Harding, the relevance given to certain evidence related to different observations or theories is necessarily value-laden. Hence, the identity informed by certain values offers greater clarification or simply a different weight to a set of evidence.

Let us return briefly to the argument on which Longino bases her theory. In that case, she states that there is a gap between observational and theoretical data because the data provide supportive evidence only to certain background



assumptions.<sup>19</sup> According to Longino, background assumptions are formed by epistemic values and by contextual values. Contextual values depend also on social locations that shape and determine what we know, and so individuals have different experiences based on different locations. Hence, we find similarities on these contextual dependence in both Longino and Harding.

3. The third feature is social because communities and not individuals are the locus of justification, i.e., in the communities and collective conscious groups implicit bias are better at recognize and eliminate and, therefore, these can produce more accurate objectivity. As a matter of fact, Longino specifically talks of social knowledge made by multiple and different individuals in a collective, democratic exchange.<sup>20</sup> Harding holds that a way to ensure these voices to be heard is in “intellectual participatory democracy” (Harding 1991, 151). Analogously to Longino, Harding suggests that the discussion given by multiple perspectives (and therefore their ways of looking at the evidence) inserted in a democratic environment is a reliable and required strategy for achieving better science. Moreover, in Harding’s description of the theory, in order to explain how epistemic privilege is acquired, great importance is also given to the collective enterprise of knowledge when groups belonging to the same minority recognize a pattern or phenomenon and elevate it from a single event to a collective systemic experience. So, contextual values do not trump evidence, it is never a dogmatic justification, but it always happens in the context of memberships and communities. My belief becomes knowledge only when it is socially legitimized.

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<sup>19</sup> Cf. Longino 1990, 2002b. The concept of background assumptions can be compared to Hempel’s (1965) auxiliary assumptions. The latter also serves as a hypothesis to imply a prediction. The difference is that for Longino, background assumptions are always present, not only when testing a hypothesis but also when generating hypotheses and research questions. Furthermore, Longino (1996) does not believe that it is still possible to speak of a clear distinction between the context of discovery and the context of justification.

In feminist epistemology, it is possible to find other authors who justify using values in science, cf. Douglas 2000; Intemann 2005; Nelson 1990; Potter 1996.

<sup>20</sup> By democratic exchange, I refer in particular to Longino’s fourth criterion, which stipulates that discussion among the members of an epistemic community should never take place under the imposition of force or political motivation and that all those present should be seen to be able to make a valid contribution to the discussion (cf. Longino 1990 and 2002b).

As mentioned earlier, to these aspects checked by Intemann for the first time, I add to those three a fourth term which is political: Harding's theory has a deep political vein. Nevertheless, it is important to underline that the two positions are closer than one might think from a political point of view because they share the same political direction and reject the political liberalism typical of those who advocate a position of spontaneous empiricism. Longino (2002a, 94) does not speak of liberal (empiricist) feminism, because if this were the case, I believe there would be an insuperable fundamental incompatibility between the two positions. Harding (1986b; 1991; 1993, 51) reiterates her distance and the insufficiency of spontaneous liberal feminism in solving the problem of objectivity, whereas she did highlight how Longino's perspectives entail some similar aspects of standpoint theory. Longino agrees with Harding on this part, rejecting the idea of spontaneous feminist empiricism when she questions both the distinction between cognitive and non-cognitive values and, therefore, that kind of neutral objectivity which continues to be the first condition for adequacy in empiricist liberal feminism. In Longino (1991), she discusses various strategies proposed by feminist epistemology to improve knowledge practices. One of the strategies is to "change the subject" and on this matter, feminist spontaneous liberalism proposes to substitute the male subject with an unbiased subject. However, Longino reiterates that "this strategy, as Harding has observed, is not effective against those research programs which feminists find troublesome, but which cannot be faulted by reference to the standard methodological precepts of scientific inquiry" (Longino 1991, 668). Hence, even though the political aim prevails in Harding, I argue that it is not invisible in Longino. Both Longino and Harding give weight to the non-neutrality of scientific knowledge and argue that neutrality is a political choice too.

Moreover, Longino specifies that her empiricism differs from neoclassical empiricism and the modern empiricism of the logical positivists. Her feminist empiricism proposes an account of knowledge as "partial, fragmentary, and ultimately constituted from the interaction of opposed styles and/or points of view" (Longino 2002a, 94). The empiricism Longino is talking about re-evaluates the relationship between knowledge and social values. It even reevaluates the ideology expressed in the investigation and subtly inscribed in the theories, hypotheses and

models that define the research programme due to background assumptions. So, contextual empiricism by Longino does not share the spontaneous feminist empiricist point of view that objectivity should advance through the elimination of all values or that it is intrinsically neutral. Instead, it gives attention in scientific practice to all historical values and interests present in scientific practice and shared by a scientific community. Our contextual values that form the inquirers' background assumptions cause us to consider certain aspects of evidence as relevant when investigating a given case.

Longino differs from a spontaneous empiricist type of feminism, which believes it is possible to correct objective standards using greater discernment and detachment. On the contrary, she resembles in her reflection precisely the elements of standpoint theory, such as the inescapable influence of social values in the contents of science, which for empiricism, is what should be avoided. Furthermore, Longino explains the kind of empiricism as a form of scientism criticized by feminism is not the same she refers to.<sup>21</sup> She requires that the relevance of the data to the assumptions be somehow demonstrable, but she does not argue that this relevance is sufficient for validation, but that it is necessary.

### 3.1.2 Three Theses of Feminist Epistemology in General

As a second step of my strategy for bringing positions closer together, I take my insight from Hartsock's (1983) characterization of the three theses of standpoint theory. My thesis is that these three aspects are present, with different emphasis, in every position that falls under the label feminist epistemology; this includes Longino's contextualism as well. I briefly list these three theses given already in the second chapter of this thesis:

- The situated-knowledge thesis: "social location systematically influences our experiences, shaping and limiting what we know, such that knowledge is achieved from a particular standpoint" (Wylie, 2003).

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<sup>21</sup> Longino is referring to Harding 1986a.

- The epistemic achievement thesis: knowledge accessible from a particular social location is not given, but must be struggled for (achievement); moreover, individuals contribute to a critical consciousness within an epistemic community. Hence, “the critical consciousness necessary for achieving a standpoint is accomplished by communities, not individuals” (Intemann 2010, 786).
- The Thesis of Epistemic Advantage: “some standpoints, specifically the standpoints of marginalized or oppressed groups, are epistemically advantaged compared to the dominant ones” (Intemann, 2010).

I argue that the preference of a thesis over the other two is a distinctive sign of the different stances forming feminist epistemology: feminist empiricism,<sup>22</sup> standpoint theory, or feminist postmodernism. The goal is to unhinge the qualitative difference usually attributed to these positions, making it clear that it is actually only a quantitative difference. I would therefore say that these three theses are not so much a particularity of standpoint theory but a hallmark of all feminist epistemology with due distinctions.

For example, an intense focus on the first thesis, that of situated knowledge, usually is detectable in a postmodernist feminist approach, because this latter focuses on the situated construction of social understanding, on the particularity and fragmentation of any knowledge linked to the social position of belonging, and on how politically, some positions have more significance than others. Some postmodern thinkers think that a thesis such as that concerning situated knowledge leads inevitably into relativism and the abandonment of any criteria of objectivity. For feminists this may be problematic since the normative force of feminism also lies in its superior ethical and moral beliefs over sexist or racist judgments. Instead, if “everything goes”, it is not even worth questioning the ethical and political implications of our knowledge. The postmodern feminism represented by Haraway (1988) then stands out because it proposes an alternative way to relativism. It suggests that it is situated knowledge that offers the researcher a way to objective,

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<sup>22</sup> I am referring to those feminist positions such as contextualism by Longino (1990) or naturalized by Nelson & Nelson (1996) and Nelson (1990), different from spontaneous feminist empiricism.

albeit partial, knowledge. The epistemic subject, through an in-depth reflection on their own situatedness and on knowledge obtains a “knowledge of the specific part of reality that she or he can ‘see’ from the position in which she or he is materially discursively located in time, space, body and historical power relations” (Lykke 2010, 5).

When we focus on the third one, i.e., collective achievement thesis, the interest will be towards community streams a basis of knowledge, a common idea in feminist empiricism (the revisited one), such as Longino’s or Anderson’s and Nelson’s. However, there are enormous differences between these authors.<sup>23</sup>

With regard to Longino’s and Harding’s theories, we can see that the two perspectives give equal importance concerning the first thesis, that of situated knowledge because knowledge is always linked to the location, and the location is characterized by particular social, political, extra-scientific interests. These extra-scientific factors are, for the two philosophers, ineliminable. In Longino, they are part of the background assumptions that give relevance to the various pieces of evidence. In Harding, this presence is evident when she states that certain values and social location give individuals an epistemic privilege.

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<sup>23</sup> Versions elaborated by Lynn Nelson (1990), Sharyn Clough (2003), and Elizabeth Anderson (2004) view scientific theories as holistic systems that include both facts and values. When empirical evidence offers support to a theory, this evidence confirms both the facts and the values that are part of it (Tanesini 2015). Anderson argues that values are legitimate if they are evidence-based. A famous example she advocated regarding the study on the effects of divorce. One option is to give a narrative of divorce as the failure of the marriage and as a highly traumatic experience for the whole family. Another option provides a different rereading of it when it shows how divorce allows a second chance for the individual to grow. Both stories are driven by value-laden assumptions, one more conservative and may be defined as feminist. For Anderson, the relationship between facts and values is two-way. Facts can offer evidence for or against specific values, while values can lead to discovering new facts. Therefore, values are not only inevitable in scientific research, as Longino had already argued, but some values, the epistemologically productive ones, are also positively desirable. Although the examples discussed by Anderson to prove the interaction between facts and values are convincing, they refer to theories in the social sciences where the facts to be measured concern properties such as well-being that still have an evaluative dimension (Tanesini 2015). As Anderson herself recognizes, the language of these theories is often composed of ‘thick’ evaluative concepts such as ‘well-being’ or ‘intelligence’. These concepts have two inextricable components: one is descriptive, and the other is evaluative. It is unclear whether Anderson’s considerations can be generalized to all-natural sciences such as physics or astronomy. The idea that this generalization is possible was treated with some skepticism by Solomon (2012). In her opinion, it seems rather unlikely that the evidence for or against physical theories, for example, on semiconductor materials, could favor some ethical or political values but not others (Tanesini 2015).

The two authors also agree on the thesis of collective achievement, with particular emphasis on this thesis by Longino, since she grounds her knowledge-process theories on the normative criteria which rule the communal exchange and discussion in the scientific community. The important thing to remember is that scientific inquiry must be understood as human and social practice, an activity in which inquirers actively engage and produce. Moreover, the collective achievement thesis stresses the relevance of the methodology of this social activity. Harding<sup>24</sup> and Longino argue that the method of science must change, and that knowledge is the outcome of a collective enterprise. The subject of standpoint theory, like the one of Longino, is hinged and socially localized. In summary,

“The focus on empirical evidence and ‘experience’ and an emphasis on communities, rather than individuated knowers, has always signalled at least some convergence between feminist empiricism and feminist standpoint.”

Doucet & Mauthner 2007, 38

Finally, with the thesis of epistemic privilege, we will have a theory belonging to the standpoint theory. Marginal perspectives, thanks to this privilege, open new questions and have a distinct look at hierarchies of power. This is used explicitly by standpoint theory which pays close attention to the context and historical circumstances that have shaped the interests of those investigating.

However, I will show in the next paragraph how the aspect of epistemic privilege can be found even in Longino and how, vice versa, Harding leaves the door open for pluralism of perspectives. Specifically, I call “value perspectivism” the attitude of openly preferring certain values over others (Harding) and “value pluralism” the attitude by Longino of leaving (relatively) free the choice between values. This discussion aims to show how the two positions are not always absolutely firm on these two attitudes and how it is possible to create a bridge to make the union of these two approaches consistent and legitimate without “betraying” the spirit of either one. I will begin with Longino openness to value preferences (3.13). In 3.1.4 I will analyze Harding’s coexistence with mild relativism.

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<sup>24</sup> Cf. Hirsh et al. 1995

### 3.1.3 How to Loosen the Contrast of The Epistemic Privilege Thesis: Perspectivism of Values in Longino

This paragraph argues that contrary to what is typically thought, cues of both the concepts, pluralism, and perspectivism, can be found in Longino and Harding, respectively.

Longino's preference for pluralism value can be traced through her idea that the way we attribute the connection between theories and observations is also mediated by background assumptions. Non-epistemic aspects also participate in the latter, and empirical adequacy is not sufficient "to guide inquiry and theory appraisal" (Longino & Lennon 1997, 30). At the same time, epistemic values can also be different, and their preference also depends on the particular cognitive purpose; the justification therefore will be relative to a certain practice. For example, someone who shares feminist interests is likely to use feminist values as they are appropriate to their purpose. What is more difficult to argue for is how there is an openness to value perspectivism in Longino, and here I will illustrate how.

Longino states that to produce socially satisfying knowledge, we need a

"community with means of disseminating and responding to criticism, whose members hold themselves answerable individually and collectively to set standards and reach consensus as a result of discursive interactions including *all relevant* perspectives and uninhibited by political or economic power."

Longino 2002b, 145, emphasis added

Thus, a sufficiently differentiated scientific community must be able to develop and respond to critiques, and whose agreement on knowledge is achieved through the inclusion of *all relevant perspectives* that are not undermined by extra-scientific reasons, such as political or economic ones. Moreover, she says that *not every interaction* can transform subjective into objective, but only interactions that "constitute genuine and mutual checks", those that "permit transformative criticism" (Longino 2002b, 144). Then, my question rotates around which are the *relevant* perspectives and which *interactions* better invoke these checks. For example, Crasnow (2013, 416), Kourany (2010), Kitcher (2002) have posed the case

of radical<sup>25</sup> perspectives. Indeed, an extremist position is dissident so it would lead to a discussion, probably even a heated one. What do we do in these cases? Should we include it because it causes dissent, and what kind of *mutual checks* would it bring to the interactions? Does the fact that we must accommodate divergent perspectives risk including seemingly racist ones as well?

No, because Longino herself posits a difference between certain divergent but hostile positions (for example racist perspectives and values)<sup>26</sup> and *those* that actually create constructive criticism (2002b, 151).<sup>27</sup> The difference lies in the fact that dogmatic positions such as racist ones are not open to criticism. Thus, in Longino, there is a difference between which values we use in science, glimpsing a preference for values that allow for “constructive criticism.”

Posing this sentence in terms of epistemic privilege thesis, we can assume that Longino has a certain preference for certain values and perspectives compared to others, because they offer new views, relevance on evidence, and permit discussion and exchange that enables the transformative criticism. Those values that contrast dogmatic positions, those that can dismantle generalized and universally acceptable ideas, and those that are productive and conducive to different hypotheses and critical exchange will be “relevant” social values and perspectives for Longino. These values are better at producing objectivity because they respect and promote the critical exchange, and these exchanges are controlled by her criteria. Longino does not explicitly say every time which are these values, as standpoint theory does. Still, she says that these values and perspectives concur with the best explanations and can counterforce wrong explanations, hence banning *de facto* values conducive to wrong explanations.

But which and what perspectives have proven to be historically most relevant to critique and change, especially against sexist and racist explanations in science, if not those belonging to, usually marginal perspectives that also have the epistemic privilege and thus offer different ideas than the dominant paradigms?

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<sup>25</sup> I am referring to extremist positions concerning dominant thought, therefore minor, but not because they belong to minority subjects, but because few people hold them.

<sup>26</sup> Longino herself uses the example of racist and sexist values as hostile to change.

<sup>27</sup> In this text, Longino specifically responds to Kitcher’s (2002).



Following standpoint theory, anti-racist/sexist values are more likely to be present in the perspectives of marginal identities. Socially oppressed people (marginalized groups) are better socially placed to identify certain values that can affect science explanations and practices. For example, since they suffer racism/sexism, they are unlikely to support these racist values and to carry them in science. We include different marginal perspectives because they have a political and epistemic contribution that improves our theories of knowledge and also inspires political change. The goal is not to exclude every value nor to include indifferently, because for standpoint theory some values are conducive to better science.<sup>28</sup> Hence, in this aspect, it is possible to see a correlation with Longino on how certain values are more proactive than others in terms of change. Racist values/sexist, according to Longino, would not be promoters of positive change.

Moreover, Longino<sup>29</sup> herself discusses types of values that can inspire new explanations, accommodate human needs more inclusively, values that prefer explicative models based on complexity versus reductionists or vertical models, calling them the value of complexity and of heterogeneity. These are listed as feminist values, because they meet the goal of unraveling the institutions and mechanisms of women's oppression and so aim dismantling this oppression (Longino & Lennon 1997, 27).<sup>30</sup> Thus, it would sound odd to say that Longino is not interested in feminist values *per se* when she has written about feminist values and how male gender biases have tainted the research, and how feminist views have suggested other, more adequate, explanations.<sup>31</sup>

Furthermore, it is necessary to analyze what is meant when it is stated that Longino supports value pluralism. Does this mean that Longino supports epistemic relativism? If by epistemic relativism we mean the thesis that we are not able to justify the assertion that one theory is objectively superior to another or that the

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<sup>28</sup> Harding harshly criticized this view of all values exclusion from scientific practice as early as 1986b, calling it "weak objectivity."

<sup>29</sup> Cf. 1983, 1990, 1995, 1996, Longino & Lennon 1997.

<sup>30</sup> I would also add that for Longino (1995), one cannot really draw a distinction between epistemic and non-epistemic values; in this sense, it is easier to understand how cognitive goals related to improving a scientific explanation (heterogeneity or complexity) can also serve political purposes such as eliminating the oppression of women.

<sup>31</sup> For example, Longino 1983 and 1995.

empirical evidence and arguments in favor of a theory are not stronger than those in favor of another (Laudan 1988b, 203), then the normativity proposed by Longino clashes with this thesis. Longino presents criteria that control the social activities and critical discourse that produce knowledge precisely to endow the contents produced with plausibility and settle in the event of disagreement.<sup>32</sup> Longino does not accept judgmental relativism but she proposes normative criteria to deal with discussions that lead to an objective acceptable knowledge. Her project of procedural objectivity is precisely designed to provide rational and scientific standards by which to judge various belief patterns and originate knowledge.

The clarification about the role of social values also allows us to overcome the idea that feminist values, or values in general, are acceptable solely based on the underdetermination thesis, which opens a gap between evidence and theory acceptance. Continuing to see values as an interference, as something that if we could eliminate, we would, undermine the basis for the rational acceptance of feminist values in the choice of theories (Intemman 2005).<sup>33</sup> Let us not forget that a feminist scientist is not only a scientist who supports feminist values but also one who, above all, carries them and uses them in her work as a scientist. Both Longino and Harding contend that scientific reasoning with contextual values produces a precise and valid scientific theory and does not constitute a flaw in otherwise neutral objectivity. Standpoint theory is explicit when claims that feminist values and marginal people are better at finding new explanations and reopening old questions and contrasting mainstream masculine distortions by uplifting the explanations of phenomena and giving minorities the tools to know and the explanations of their experiences. While in Harding, this premise is overt but lacks a justification criterion, in Longino, it is supported as a conclusion because multiple

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<sup>32</sup> In the next paragraph, I will explain that Harding supports a specific aspect of relativism, as plurality. She opens to pluralism, but she does not sustain that all these pluralities are equal, exactly as Longino.

<sup>33</sup> Intemann (2001; 2005) also describes different interpretations of the use of values in science, e.g., Susan Haack (1998) talks about values acting in the case of 'tie breaks', i.e., when two hypotheses are equally supported by evidence. According to this interpretation, contextual values act more as reasons rather than causes. But this position differs from Longino, who sees values acting as underlying beliefs in theoretical justification. Thus, values can also operate as auxiliary hypotheses and cause generating evidence for or against a theory and provide us with reasons to justify, interpret, apply, and judge epistemic values.

voices are required in order for her criteria to function. Still, the premise is not as evident and explicit as in Harding.

In summary, I believe value perspectivism in Longino can be recognized in at least three aspects:

1) only certain discussions and individuals with certain non-dogmatic or open-minded values can truly foster critical exchange. Feminist values (antiracist and antisexist included) are part of this group.<sup>34</sup>

2) Longino, in her writings, places importance on the values that distinguish a feminist science, explaining how they differ and what they bring to the research. It would seem odd if she cited them without at least acknowledging their validity.

3) Longino does not support epistemic relativism with respect to the multitude of viewpoints, even though she accepts pluralism (1993b). On the contrary, the possibility of knowledge production is given precisely by the fact that the clash and critique of various points of view, in the end, allows endowing the contents of knowledge with validity and plausibility.

#### 3.1.4 Relativism/Pluralism in Standpoint Theory

In this paragraph, I will conduct a similar operation to the previous one to reconstruct how there is acceptance towards a pluralism of values in Harding's thought. At first glance, the contrast between the famous thesis of the standpoint theory on epistemic privilege and its incompatibility with an aspect inherent in a relativist position, such as the equality among different perspectives, is evident. Harding recognizes the many forms of visions and knowledge that may come from every social location, but she does not imply epistemic relativism,<sup>35</sup> in the same way as Longino. Before discussing how Harding opens to pluralism and *mild* relativism, it is important to specify what epistemic relativism means. To do that, I refer to

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<sup>34</sup> In the first chapter, I not only reconstructed the history of feminisms and its ties to feminist epistemology. I also took a position on the feminism I adhere to, giving a normative definition of it. I am aware of the existence of an approach that calls itself feminism while being transphobic, and I am aware that in the past feminism has been racist (sometimes unintentionally so). The feminism of which I speak and to which these two theories can be applied is an intersectional feminism and therefore in itself anti-racist, anti-class, not transphobic.

<sup>35</sup> Cf. Harding 1986b; 1993, 59 and 61; 1997, 383; 1998, 66 and 120; 2004a and b; 2009.

Natalie Ashton (2019; 2020a and b), Martin Kusch (2016; 2020), and Maria Baghramian' (2004) explanations and definitions of epistemic relativism; pluralism is connected with relativism since the former is a component of the latter.

According to the classification proposed by Baghramian (2004, 2), relativism rejects at least one of the following four philosophical positions:

- universalism (“there could and should be a universal agreement in matters of truth, goodness, beauty, significance, etc.”)
- objectivism (“cognitive, ethical and aesthetic values such as truth, goodness and beauty are independent of the mind”)
- absolutism (“truth, goodness, beauty, etc. are timeless, unalterable and immutable”)
- monism (“there can only be one correct opinion, judgment or norm”).

Since standpoint theory rejects all of these aspects, it leans already towards relativism, but let me expand on this by also using Kusch's description.

According to Kusch, adhering to a relativist position means accepting that the justification of our beliefs *depends* on the system of beliefs and practices within we are immersed. What does this mean when talking of standpoint theory? Ashton (2020a and b) suggests standpoint theory already has a component linked to the dependence of social factors and plurality because if the justification depends on the social perspectives situated, then the justification of the various standpoints and how they are classified will also depend on the contexts. Therefore, the standpoint theory accepts relativistic elements, that one of dependency. Moreover, this standpoint theory definitions are compatible with the rejection of universalism and objectivism components in Baghramian.

But standpoint theory also rejects absolutism because the contingency and contextualism of standpoint theories are inherent in the concept of dominated and dominant groups. P. Collins' reflection (1986) is then helpful when she speaks of the matrix of domination, that is, of multiple and intersectional aspects that combine to

form the epistemic privilege (depending on the case, a class or an individual can be dominated or dominant, or even at the same time).<sup>36</sup>

Lastly, on the monism feature, Kusch suggests that another characteristic inherent in relativism is *plurality*, i.e., there is more than one epistemic system or practice (hence rejecting the monism component). The question is whether pluralism can be supported by standpoint too. I think the answer is yes, since, as Harding suggests, the multiple and valid existence of different points of view, even among marginal ones, and that epistemic privilege can be cashed out differently (Ashton 2019, 332). For example, Harding (1991) identifies certain extra-scientific values (but constitutive of the scientific process) belonging to the oppressing group, P. Collins (1986) shows the ability to compare multiple perspectives for oppressed groups. Medina (2012) identifies epistemic privilege in certain dispositions and virtues of character that distinguish the oppressed group.<sup>37</sup>

Pluralism is required by the metaphysical pluralist assumption that the world is complex. It has many properties. For this reason, we can have multiple theories that describe different aspects of the same object, different theories that might converge, diverge or conflict (Harding 1998, 120). These theories are unstable and in progress because the social knowers that produced knowledge are varied. Then, coherent and stable theories are not always the obvious option.<sup>38</sup>

Moreover, the category of women is not unitary. The proliferation of differences between women brings an analogous addition of points of view that involves two alternatives: either the unique social condition of each person constitutes his/her/their point of view, or the group oppressed by all possible systems of oppression is the most qualified. But in the first case, we fall into

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<sup>36</sup> When we consider the fluidity and changing of marginalization and discrimination and how knowledge changes based on the different points of view, standpoint theory rejects absolutism.

<sup>37</sup> Medina suggests that the experiences of individuals can take hold and change the epistemic character of the knowing agent. Since the oppressed have different experiences from the oppressors, these two classes will develop different epistemic features.

<sup>38</sup> Different aspects cause instability. Firstly, feminist science has shown how the traditional epistemology was mystifying, especially in some areas of research, so feminist accounts created instability by openly challenging wrong assumptions that built previous explanations in science. Instability is also inherent in feminist theories because it is an endemic feature of social life itself. Social relations are our objects of research, which create and define agents of knowledge that are always in transformation. Our social relationships, which are also our research objects, are always on the move.

individualism, in the second in endless disputes over who is the most oppressed. So, how to overcome this paradox? Harding argues that we should recognize the ambivalence and differences and try to fashion conceptual schemes and patterns more alert to the complex layers that form woman identity (Harding 1986b, 164). She holds that “many highly useful but conflicting representations can be consistent with how the world is, although none can be uniquely congruent with it” (Harding 1997, 383). So, not only is there room for pluralism, which can be empirically adequate and useful, but we should open ourselves to the idea of it.

Another opening toward pluralism can be found in another feature of relativism explained by Kusch and also present in Harding. Being relative does not mean that everything is the same. It means not placing a fixed ranking, so we can argue that some perspectives may be better in some situations because they are more profitable in terms of knowledge than others. In fact, Harding affirms that the articulation of women’s experiences does make possible less partial and distorted knowledge, but it does not provide knowledge with firm foundations – it does not ground it” (Harding 1991, 137). In other words, they are starting points not fixed and absolute answers, and they are multiple. Relativism also entails accepting symmetry; that is, it is not possible to make an absolute classification between these different systems (Kusch 2016, 33). Symmetry means that there are no neutral ways to evaluate different versions and practices. What is denied is an absolute and fixed ranking system, but this is not equivalent to saying that can be no ways of ranking.<sup>39</sup> If there are, they will be dependent on the system in which we are embedded: this means that there is a way of ranking different perspectives, which will therefore not be equally valid, only that this way is not always fixed, absolute or timeless (Ashton 2020b, 73).

The inexistence of a neutral way of classifying epistemic perspectives and beliefs is accepted by standpoint theory, given that belief *depends* on our social

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<sup>39</sup> In Kusch’s definition (2016, 34-35), the non-neutrality component is one of the different ways in which the “symmetry component” can be filled. In fact, the general idea is that relativism involves symmetry: that is, different epistemic systems cannot be ranked. Kusch states that this symmetry can be ‘read’ in four different ways. I adopt here the one of non-neutrality following the model suggested by Ashton (2019, 329).

position,<sup>40</sup> yet there are multiple social positions on which beliefs depend; and that there are *plural* perspectives originated from social locations, even among the marginal ones. Hence, mild relativism is inherent in standpoint theory, even though standpoint theory supports the epistemic advantage thesis whereby a socially oppressed location can bring epistemic benefit (some perspectives are better than others). Moreover, since the 1980s, standpoint theory has strongly criticized any essentialist idea of epistemic privilege, so it is not something automatic, but it is always something to be achieved, and the possibility of having an epistemic privilege also depends on our social locations, because the ones occupying oppressed social locations are more likely to develop a standpoint. These social locations affect justification of our beliefs, hence “if justification depends on socially situated perspectives, then so does justification about standpoints and how they are ranked” (Ashton 2019, 335).<sup>41</sup>

Yet, standpoint theory and its epistemic privilege is not doomed. Harding (1991) distinguishes between the idea that different social groups can have different patterns of practice and belief and different standards for judging them and the idea that listening to these voices and how different interests or values can improve our vision and also amend ethnocentrism. What Harding does not accept is “the further epistemological claim that there are no rational or scientific grounds for making judgements between various patterns of belief and their originating social practices, values and consequences” (Harding 1991, 152).

Harding is well aware of the problem of relativism, ever since the discussion also initiated by Haraway on not to fall into the classic dichotomy between objectivism (vision from nowhere) and relativism, restating her doubts on this latter (Harding 2009). But the point here is precisely not to fall into unchecked relativism or weak objectivity (Harding 1995, 340), but to emphasize that it is not possible to make judgments that do not depend on a system. It is true that there are no fixed and absolute ways of judging, but at the same time, this does not mean that it is

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<sup>40</sup> As the situated-knowledge thesis states, different social factors can determine epistemic differences (this also entails different things that inquirers are justifying in belief).

<sup>41</sup> To discuss the dangers of essentialism in standpoint theory, I refer to section 3.2 of this dissertation.

impossible or at least temporarily possible to justify these different points of view in a non-arbitrary way.

It is in this space that I think the discussion between a mild relativism in an acceptable and implicit form in standpoint theory can be inserted, but which at the same time can maintain the most important thesis of this movement, i.e. the epistemic privileging of certain perspectives (the marginal ones) over those of the dominant subjects. Relativism is often used as an excuse to leave everything unchanged. Nevertheless, to me, it suggests the exact opposite. Feminism opens to the struggle, and this is possible only if we admit the non-absoluteness of the positions, giving space to expression of thought.

I believe the challenge is to accept relativism, by offering a system (even if not absolute or fixed) to judge between different claims. In a framework that accepts relativism, saying that a belief is relative does not involve any particular legitimacy damage given that potentially all perspectives are relative and thus no a priori superiority is attributed to one over the others.<sup>42</sup>

By anticipating the third part of this chapter, I will just say that these normative standards of justifications can be found in Longino's criteria, after a re-evaluation that ensures the presence of marginal epistemic positions, for judging competing theories and evidence to observations in the scientific community. Hence, even if we are in a relativistic framework, there are ways to judge epistemic beliefs. This epistemic framework we are in can be used to distinguish between different beliefs. The point then will be to make sure that our beliefs are justified in the system in which we are embedded and which we adopt.

If, on the contrary, we accept the absolutist idea that there is one, single, and immovable standard for the justification of theories, and this does not accept the view that the standpoints of marginal individuals can be epistemically superior to those carried by dominant perspectives (the thesis of epistemic privilege in standpoint theory), then there is no appeal that knowledge can be improved by the heuristic perspectives of marginal individuals, usually historically excluded from

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<sup>42</sup> Rather, Ashton points out how accusing a perspective of being relativistic with the purpose of undermining validity is a typical move of those who hold an absolutist viewpoint (Ashton 2020a, 96).



science. Moreover, we fall into the contradiction of another thesis of standpoint theory, namely that of situated knowledge, whereby all knowledge also depends on the social location it occupies, and it is the latter that forms and constrains what we can know, hence also the starting point for the standpoint of marginal individuals.

In this perspective we should then find a unique and superior standard by which to judge the most “suitable” marginal standpoint of all, ignoring the very temporality and mutability of the position of marginality, its non-essentiality (Collins 1986), and ignoring the fact that standpoint theory is not something automatically possessed by those in a position of marginality but is something always obtained due to a singular and collective work of reflection. To not fall into this contradiction, then we need to find a justification of our beliefs that includes (for real) the heuristic potential of marginal standpoints, albeit temporary and dependent on a certain epistemic system. The normative criteria of this justification will manage to “save” the characteristic of situated knowledge with the idea that not all perspectives are equal.

To summarize, mild relativism (in the form I explain) may be found in standpoint theory because:

1) By using definitions of relativism such as Baghranian’, Kusch’s, and Ashton’s I have shown how relativism is compatible with standpoint theory, since it rejects universalism, objectivism, absolutism, and monism. On the contrary, bringing a position such as a standpoint theory closer to epistemic absolutism would do more harm, since it would be necessary to find a fixed and absolute justification, in the face, however, of the non-essentialism of epistemic privilege affirmed since the earliest developments of standpoint theory, and the dependence of our epistemic practices and ways of knowing on our social location. Standpoint theory is compatible with a form of mild relativism which does not posit all positions as equal but only knowledge as dependent on the system framework.

2) Moreover, standpoint theory opens the door to pluralism when it affirms the multiple and valid existence of different points of view, even among the marginal. These marginal perspectives are heuristically valid, but they cannot be evaluated in a fixed and absolute manner, because they are plural, hence depending on different social locations, and they are also historical and material. How should

we adopt the ranking and which ranking is, will be the object of section 3.3 where I precisely discuss my contextual standpoint theory. In particular, what I consider most important is to justify how marginal perspectives still retain their importance in the face of relativistic justification, i.e., not absolute but 'merely' system-dependent and therefore contingent.

## Chapter Three: Rethinking Objectivity: How to Maximize Two Approaches of Feminist Epistemology 3.2

### 3.2. The Lack of Normative Justification: Standpoint Theory and The Distinction Between the Logic of Discoveries and Justification

In this section 3.2, I focus on standpoint theory and contextual empiricism by discussing their limits and incompatibilities, which I will later reprise and amend in section 3.3.

I believe the most vulnerable point of standpoint theory lies in the lack of an epistemic sufficiently solid epistemic justification that would secure the marginalized perspectives and their epistemic usefulness, by impeding them to be dismissed on purely ideological grounds.<sup>43</sup> Thus, in this section, I focus on highlighting what the most exposed points of the individual theories are, when taken individually. I firstly discuss Harding's problem.

As I show in Chapter 2 and section 3.1, Harding argues that multiple and plural standpoints depend on different marginal identities. However, she also left some questions unanswered when deciding through which criteria we should judge which values are more conducive to others in each situation, even among different marginalized points of view. I believe, in this respect, standpoint theory lacks normativity, and we need a better account to justify the theories brought by standpoint theory or we risk losing its heuristic advantages.

To explain how the only way acceptable even by standpoint theory itself is plural and relative coexistence of marginal positions and that epistemic privilege cannot have an essentialist and *a priori* justification without risking damage to standpoint theory itself, I propose a series of five justificatory hypotheses. I hypothesize possible scenarios of justification and discuss the implications derived from these justifications until I show what kind of consequence we have, if we accept

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<sup>43</sup> For critiques of standpoint theory within feminist epistemology of this kind, see Longino 1993b, 314-315; Crasnow 2013, 418; Crasnow 2014, 151. External critiques are Haack 1998, Pinnick 1994, Koertge 2000.

these hypotheses. The first case imagines an essentialist solution, while the second argues for a “separation” in types of knowledge, for example a typically feminist and a mainstream one. However, I argue that the first two cases are unacceptable, as they would invalidate standpoint theory’s premises and epistemic strength.<sup>44</sup> The last two cases, on the other hand, represent epistemic justifications used within standpoint theory, respectively discussed by Harding and Wylie. For Harding, privileged viewpoints need to be embedded in democratic projects that allow for the listening and advancement of these viewpoints.

The fourth hypothesis instead discusses Wylie’s solution of re-elaborating epistemic privilege. In this section, I also explain why I do not consider it sufficiently suitable for my aims. For Wylie, epistemic privilege is contingent and tied to the given research context. Finally, I reconnect with the pluralism value discussion I had in the previous section, showing that the only viable path for standpoint theory is to accept a plural and mild relativistic solution in case of justification. The idea proposed by Harding on the democratic projects to enhance marginal epistemic perspectives needs a conclusive extra step. I argue that these two latter cases are not sufficiently successful either and I believe it is necessary to imagine a “fifth and contextual”<sup>45</sup> justification that can ground and justify the cognitive importance of standpoint theory. I will explain this in section 3.3.

As far as Longino, the problems are mainly two: (1) a sort of ambiguity on the contents of values and (2) the inadequacy of the diversity required by Longino herself for the success of her justificatory criteria. In section 3.1, I have addressed the question of the ambiguity of Longino’s position on values in order to show how, in her thought and writings, she sometimes suggested to the use of certain values

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<sup>44</sup> Standpoint theory has been accused of essentialism, especially in its first formulation. The decline of Marxism, to which standpoint theory is partly inspired, and the birth of postmodernism posed the problem of using categories such as reality, truth, and woman. So, standpoint theory overcame the idea of women as a unitary category, opening up to the plurality of marginal points of view and identities. This is also demonstrated by Harding’s works (1998; 2015), which reflect greater importance on diversity and difference, such as gender and ethnicity, class, sexual orientation.

<sup>45</sup> The adjective *contextual* serves here to anticipate my idea that a suitable epistemic justification for standpoint theory can be found in Longino’s project of *contextual* empiricism.

instead of others, insofar as they are more functional for the achievement of critical and wisely informed scientific discussion.

In section 3.2, I argue why I consider this ambivalence a problem: for an epistemology that wants to call itself feminist to leave ambivalent this consideration can weaken the theoretical framework and its premises since the idea is that doing feminist science does not automatically lead to bad science, just because biased. On the contrary, the inclusion of minority subjects and the end of discrimination<sup>46</sup> can improve our scientific practices.

The second critique expands the concept of diversity in the composition of the scientific community, not only in terms of the values carried forward but also in the identities carrying different positions. Diversity is one of the cardinal ingredients of Longino's project, and I think a reformulation of how to best achieve it is needed. For this second criticism, I refer to her two most important books (1990; 2002b) in which she presents and then revisits her criteria years later, to explain how the diversity required by her project is not sufficiently achieved. The purpose of this section 3.2 justifies why is important a rethinking for both theories.

### 3.2.1 The Problem of Essentialism

I start with the essentialist justification since it has been a frequent critique made against standpoint theory.<sup>47</sup> In this first hypothesis, standpoint theory presupposes an *a priori* condition that the standpoints of marginal subjects, such as women, are more suited from an epistemic point of view. And this foundation is enough to justify the theories of knowledge produced by these standpoints.

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<sup>46</sup> It is not up to question that there are several feminisms and not just one. Yet, generally speaking, we can say that all feminisms point to the end of all discrimination based on sex, gender, the social, political, economic and cultural inclusion of the excluded. What distinguishes the various feminisms are how they achieve these goals and the reasons that explain the dominant system (for some, it is material, for others, it is ideological, for others, it is both). Moreover, the feminism to which I adhere (see chapter 1), is an intersectional feminism, whereby in addition to ending sex and gender discrimination, it also fights for an end to class, race, sexual orientation, non-conforming bodies discrimination, etc. Standpoint theory can be applied intersectionally; see Harding's texts and her ongoing dialogue with postcolonial theories (e.g., Harding 2006; 2009; 2011). Longino's project presses for as much diversity as possible so intersectional feminism fits well with her idea.

<sup>47</sup> See Pinnick et al. 2003. For a defense of standpoint theory see Anderson 2012.

From an essentialist point of view, we could argue that these perspectives are epistemologically superior because they start from marginalized identities. As a woman immersed in a patriarchal society, I have an epistemic privilege, and this is enough for my knowledge to be justified as acceptable in the scientific community. But this is not an acceptable argument for standpoint theory. Standpoint theory could never pursue such an essentialist perspective since the same marginal perspectives do not become privileged simply by belonging to marginals. Standpoints are always the result of a meta-reflective and meta-scientific discourse applied to science. As Haraway already pointed out to Harding, marginal perspectives are not *innocent*. They need reflection, both individually and collectively, on what they learn and know, avoiding romanticizing the standpoints because they do not produce immediate knowledge (Haraway 1988, 583-584).

In response to Haraway's criticisms, Harding (1993) clarified that we should not take the perspectives of marginal groups as absolute, fixed, and essentially superior, but there are historical and methodological reasons behind starting from the marginal voices. Still, these voices are diverse and rich; they are not universal and do not speak for all marginal groups. Moreover, they do not stand for a normative criterion for the justification of points of view, because they belong precisely to the "logic of discovery" (Harding 1991, 56), in the sense that they suggest new problems to investigate, but not the solutions.<sup>48</sup>

Moreover, from my point of view, the essentialist view entails two more dangerous consequences:

- If we justified these perspectives *a priori* but they turn out to be inaccurate, it would be the golden opportunity for the feminist antagonists to argue for its uselessness and justify once again that we must eliminate all political and social values because they invalidate knowledge (even if, in the neutral ideal, political values are also present but pass as universal and innocent).<sup>49</sup>

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<sup>48</sup> Harding reiterates this heuristic (and not normative) aspect of epistemic privilege elsewhere, cf. Harding & Hintikka 1983; Harding 1991, 137; Harding 1993, 58 and 62. Hartsock also agrees on this point (1998, 237-240).

<sup>49</sup> It is important to point out that feminism does not want the male point of view to disappear forever. What is alarming and is reiterated by feminism is that given man's greater accessibility to power circuits, even the same narratives or explanations of other identities' experiences, such as those of women, are entrusted to the (white) male gaze.

- The case of what I call the paradox of function. The danger I am referring to is that those marginal perspectives are used only in an instrumental sense without endowing them with either a theoretical justification or a change in the social and political fabric so that the living conditions of these marginal positions change.<sup>50</sup> Suppose we bet everything on the marginality niche of these perspectives. In that case, the risk is that they are taken because they perform the function of being marginal and therefore can better grasp the contradictions between the dominant and oppressed systems. Yet, even if this is true because they are contingently in a patriarchal society, they should not be admitted just because they have some function, especially if this function is not requested for the dominant counterparts. Sometimes a body and identity are just a body and an identity, and they do not have to perform a function, a duty, a task to be respected. Being marginal is a consequence of the system we find ourselves in. Instead, these positions and individuals should be welcomed because everyone should be allowed to participate in the production of knowledge that regards them and excluding them is only a strategic and political choice, a power move.<sup>51</sup> After all, the individual white bourgeois cisgender man is not subject to this exact reflection, and he occupies the space without an explicit justification.
- From an epistemic point of view, this paradox of function can also be understood in the light of the following question: to have a critical standpoint, do you necessarily have to occupy a certain social position? I believe it is not strictly the case, or we could not have white men as allies, we could not have white women as allies with non-white women, non-disabled bodies as allied with non-conforming bodies, etc. One must indeed develop a sensitivity and empathy to understand the plight of the other, it is also true

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<sup>50</sup> This phenomenon is also called tokenism, as a marginal person is used as a *token* to distract from actual problems and beneficial changes in society, or to give the false impression that different identities are being taken into consideration.

<sup>51</sup> Harding insists on this point, affirming that it should be a democratic principle that people who are affected by theories and consequences of specific inquiries should have the possibility to express themselves on these theories and consequences, and not be passively subjected to them. Starting with the lives of the marginalized also serves the purposes of social justice (Harding 1991).

that my skin color makes it impossible to know how a black woman feels in this system founded on white supremacy, but I can become an ally. I can listen, I can learn, I can make space for individuals who usually do not have it, using my privilege and this will also allow me to broaden my horizon not only politically, but also epistemically, in terms of knowing about other expertise and other situations that I would not otherwise know about.

So, I believe it is useful to distinguish between the condition of occupying a marginality (what one is subjected to) and the ability of what being on the margin offers to someone (a question of agency). Being in the periphery attacks the credibility and testimony of these identities, but it is not what allows them to have a meaningful impact, or at least not entirely. Therefore, being a subject that does not conform to the heteronormative norm can find itself in a marginal position, be attacked in its credibility, and be excluded from political and epistemic practices. But to get a standpoint, one does not need just to be in a marginal position (especially in the face of the marginal situation's complexity and temporariness). Acquiring a standpoint is an active behavior; it pertains to the individual's agency because it consists of a meta-reflection on their role as a cognitive agent and the way they know. Indeed, the standpoint can also be acquired by those on dominant spots if they undergo a process of serious meta-reflection and deconstruction of their privilege. This is also why it is called feminist philosophy and not feminine philosophy. Everyone can be feminist, occupying a marginal standpoint is neither necessary nor sufficient for having an epistemic marginal perspective and you do not necessarily need to recognize yourself as woman to develop feminist stances.<sup>52</sup>

Moreover, if occupying a marginal position effectively gives you more chances of noticing any discrepancies in a system organized hierarchically and exclusively, it is also true that, even in a utopian and inclusive society that rewards inclusion and equality, different points of view should be required to ensure against

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<sup>52</sup> Confusing the feminist gaze with the feminine one opens the question of who can be considered a woman, risking excluding gender identities beyond the binarism model. The point of feminism is not to *gatekeep*, and it is not dictating from above who is to be a woman and who is not, or who is good feminist and who is not. Dictating standards and limits continue to repeat patterns of patriarchal exclusion and risk chaining the idea of women still to those maternal roles, in an almost mystical concept of femininity. For me, feminism consists of tracing and understanding the complexity and the transversality of the subjects.



our blindness and unconscious biases, related to our nature of fallible epistemic agents. Everyone begins to know from their position, experience, and body; therefore, their gaze will inevitably be partial. The diversity and inclusion of different identities ensure that a less partial picture can be obtained, paradoxically as it may sound, from the overlapping of partial perspectives.

To sum up, the first case represented here does not satisfy the justification for these marginal perspectives. In fact, the essentialist hypothesis flattens marginal identities, eliminating the differences between discrimination and one's own identities. Indeed, one would have to either admit that all minority identities can be traced back to a single nature or choose which among the different minority positions holds the right of epistemological superiority on which to base the justification of the knowledge produced. Moreover, fossilizing ourselves on the precise identity of a marginal position also risks considering minority positions only as tokens, as an instrumental function precisely because of their marginality, and reiterating their difference on the basis of "normed" identities that instead do not need to be justified in their presence. Finally, essentializing identities also makes it very difficult to create solidarity and alliance, typical of third and fourth wave feminism, since everyone could speak and justify their knowledge based on their condition and nature and never identify or confront with others (even among members of the minorities themselves).

### 3.2.2 Second scenario: a Feminist Monolithic and Independent Knowledge

In this paragraph, I explore another possible justification for the knowledge produced by marginal perspectives, that requires creating monolithic and independent feminist knowledge, leaving one portion of knowledge as it is and instituting another form of knowledge that holds women as a privileged (and unique) category, merging feminist and feminine knowledge. I will conclude that having separate forms of knowledge could be pursued but would create impenetrable compartments. Two understandings that do not communicate but that will inevitably continue to compete. And sadly, in the current situation, a

patriarchal type of knowledge would continue to win.<sup>53</sup> Moreover, standpoint theory does not support an equivalence feminine and feminist gaze; but it fights for the heuristic power inherent in the gaze of those who can better grasp aspects of the social and natural world because of a social privilege does not spoil them. A point of view that problematizes discrimination has a greater chance of avoiding a view corrupted by it.<sup>54</sup> Some social situations are therefore epistemically better for investigating the social world.

It is also a question of creating diversity and an alternative narrative to the one passed as universal but that, in reality, corresponded to dominant groups. And this operation is done to improve knowledge and aims at political changes in the social world we know and live in. The contents of knowledge as they are, do not cover the needs and experiences of all the identities of the world, but just of a certain part. Thus, I do not see the point of having a parallel knowledge incapable of achieving systemic changes to overt social injustices, especially if these injustices are partly caused by an imperfect understanding of the world's phenomena.<sup>55</sup> Self-consciousness groups by women only was an understandable and even necessary attitude amid the second feminist wave because finally allowed women to be able to express themselves and tell themselves freely. Now, during the present day, I believe it is essential to create dialogue, by inviting men to dismantle the categories of toxic masculinity that also cage them, to discuss all marginalized categories, analyzing the

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<sup>53</sup> Feminist studies unveil the inherent dominant form of androcentrism, which affected the idea of rationality, and the theory of knowledge in general. However, being aware of the persistence of masculine biases does not necessarily mean for feminists to forego rationality. Some feminist scholars have tried to recover certain concepts, including rationality, and clearly showed that a form of re-appropriation of such ideas in a positive way is possible, cf. Lovibond (2000), Braidotti (1991), E. Lloyd (1995), Alcoff (1995).

<sup>54</sup> There are groups such as those named INCEL (made of mostly white men) who claim to be discriminated against and indicate in the movements and feminist dissemination their executioners. In this sense, however, the cause of discrimination (if discrimination can be spoken of) is wrong. Patriarchy also cages men by adhering to a particular performance, image, behaviors and expectations. Feminism denounces these ideological cages; it does not preach hatred towards other categories.

<sup>55</sup> Privilege is only successful in one's group belonging and does not achieve systemic changes if it does not work in synergy with other social groups. By withdrawing from the confrontation, epistemic privilege holds only for its marginal group. However, it does not contribute to the change of the general situation.

multiple aspects and levels of discrimination that go beyond gender oppression, to make allies.

Moreover, over the years and with the analysis of decolonial and subaltern studies,<sup>56</sup> the concept of marginality has become more and more complex because the hierarchy and the network of social relationships are determined not only by gender but also by other markers (race, sexual orientation and so on), which therefore make it difficult to consider the multidimensionality of everyone occupying a specific subjective niche. Hence, we risk having multiple portions of feminist knowledge that do not communicate.

That is why we need trans-intersectional feminism: identities are fluid, in motion, in a relationship. It can happen that the same identities can find themselves occupying the dominated position and the dominant one. The first white feminism represents a striking case in this regard. White women had utterly ignored their role in dominating black women, especially during American slavery and subsequently in domestic life. The real dominatrixes, in this case, were not the men but the white women who imposed their dominion over the black ones. And Black feminism has revealed to white middle-class feminists “the extension of their own racism” (Hirsch and Keller 1990, 379).<sup>57</sup>

Furthermore, by listening to other identities, the women’s movement realized that many of the demands it carried forward as universally accepted by women were not shared by everybody. White women demanded the right of abortion and reproductive rights. Black women required childbirth assistance because these basic requirements were not ensured for black people as they were for white women (Alcoff & Kittay 2007). A “war” between marginals is not a practical nor desirable path; we ought to be allies, not antagonists, in recognizing an under-representation of minorities.

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<sup>56</sup> See for example Spivak & Harasym 1990 and bell hooks 2000. I have discussed this literature in the first chapter of this dissertation.

<sup>57</sup> See also, Anzaldúa, 1987; P. Collins, 1986; hooks, 2000.

### 3.2.3 Third hypothesis: The Democratic Justification

In this paragraph, I shall examine another possibility of justification of standpoint theory, namely a “democratic” account for the different marginal perspectives. Following Harding (1991) definitions, these perspectives are starting points and as such do not stand for the foundation of knowledge; they are intended as logics of discovery that offer new insights from which to obtain less partial knowledge. Hence, standpoints do not function as logic of justifications, but they must “go through theory to become the epistemological basis for feminist political change purposes” because “generaliz[ing] women’s activity to the social system, would raise, for first time in human history, the possibility of a fully human community” (Hartsock 1983, 303-05).

Yet, even if these perspectives are posed in a non-hierarchical way, the choice between them is not entirely arbitrary. Within the possibility of a relativistic account, one of the ways that Harding suggests judging the values conducive to a good choice lies in the democratic projects that would allow the insertion of multiple perspectives without any exclusion.

“A maximally critical study of scientists and their communities can be done only from the perspective of those whose lives have been marginalized by such communities. Thus, strong objectivity requires that scientists and their communities be integrated into *democracy-advancing projects* for scientific and epistemological reasons as well as moral and political ones.”

Harding 2004b, 136, emphasis added

But this appeal to democracy is still too broad as a definition. As Crasnow (2014) suggests, there are several versions of democracy. Moreover, a democratic project could be conducive to feminist and non-feminist ideals and still liberating emancipatory ideals. How should we choose between an hypothetical feminist and non-feminist competitive projects? Should we choose the feminist one *by default*? And should we *a priori* exclude a non-feminist project, even if we do not know if it promotes better objectivity, which is one of the goals of standpoint theory?

Previously I showed how Harding opens to pluralism; multiplicity is not something to be feared, but a resource for feminist epistemology.<sup>58</sup> But how should reconcile this pluralism with the idea of the epistemic privilege of standpoint theory? This possibility is precisely what drives me to combine Harding and Longino's projects to find a way to provide these contents with effective plausibility.

The criteria to justify this knowledge that have considered so far are not sufficiently strong. We may lose the heuristic importance of these perspectives because they bring knowledge and points of view, and they cannot be eliminated or silenced anymore. Indeed, the methodological assumption of starting from below, typical of standpoint theory, must be valued even more. In section 3.3, I will argue that the democratic-advancing project can be represented by Longino's contextual empiricism and her justificatory criteria ground standpoint theory's marginal perspectives and their heuristic force.

#### 3.2.4 Fourth Justification: Alison Wylie's Contingent Epistemic Privilege

Before proposing my idea to the problem of justification to standpoint theory, I will now address a possible resolution of the epistemic privilege given by Alison Wylie, a feminist scholar who reconciles standpoint theory with a feminist empiricism form, and argue why her solution is not suitable for my goals.

As Alison Wylie rightly claims, it could be argued that the privilege of any perspective is contingent. That is, in a given cognitive situation, these perspectives are better at offering knowledge, and so their privilege is contextually located and not epistemically superior *a priori*. However, this is true but incomplete: Harding always holds firm the idea that the privilege of these perspectives is not linked only to the research context to which they apply but is also important for the identities that compose them. Moreover, I believe Wylie's solution is perhaps too far from Harding's idea of epistemic privilege because the epistemic privilege in Wylie serves to maximize some epistemic virtues (Wylie 2003, 38).

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<sup>58</sup> Cf. Harding 2004a and b and 2009. Other standpoint theorists agree on this point P. Collins 1986; Harding and Norberg 2005; D. Smith 1974.

“Knowledge is objective when it maximizes some combinations of epistemic virtues. A group can have a contingent epistemic advantage in some areas. In this way, standpoint theory explains how objectivity may be substantially improved by certain kinds of non-neutrality on the part of practitioners.”

Wylie 2003, 38

Thus, according to Wylie, the subject is an individual whose contingent position allows her to recognize some evidence in a given scientific context that is more revealing than others but whose political values (in this case, the feminist ones) are also contingent. But in this way, there is a risk that the power relations inherent in these social places, however contingent they might be, do not receive the proper importance. But this political aspect for Harding cannot be obscured.<sup>59</sup> The contingent and localized problem at the time of the research must then also be accompanied by a broader study of the causes and possibly recognition of systemic cases. Thus, for Harding, it is not a question of maximizing the epistemic virtues but rather starting from the lives of marginal subjects to achieve political and epistemic changes. Knowledge is helpful if it contributes to a formulation of reality in which the interests of women are not subordinated to those of men. And therefore, we cannot ignore why we can still speak of standpoint theory and epistemic privilege from this political aspect and the epistemic one.<sup>60</sup>

These marginal experiences would offer both new questions about the world and the answers to these questions. Therefore, we must not limit ourselves to recognizing that power relations exist but study how they are structured, what they are, and how we can address them. If we focus only on contingency, we risk overshadowing the political and social character of knowledge. Indeed, the politician is subjected to the epistemological result they may have, “rather than describing the epistemic requirements as being brought to bear in service of the political” (Crasnow 2014, 154). A combination of productive research and challenging controversy remains inherent in standpoint methodology. The two ingredients of the standpoint, the epistemological one and the political one, cannot

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<sup>59</sup> For what it is worth, it cannot be obscured for me either.

<sup>60</sup> Rolin (2009) emphasized the importance given to the political aspect in Harding’s standpoint theory. Indeed, standpoint theory has a definite focus on power relations that cannot be ignored.

be separated. The political part emphasizes the struggle, how the oldest assumptions of Western ideology affected explanations and challenged the idea that the dominant structures are reasonable and progressive. The political commitment of standpoint theory is already clear from the methodology. Instead of starting from the problems of the disciplines, standpoint theory advocates for the lives of the oppressed, the exploited and the dominated. Standpoint theory is not an ethnographic study but aims to achieve political and social change for oppressed groups.

Standpoint theory does not just want to focus on single, individual discriminations but also to identify what is wrong and change it wholly, taking these premises into account. This is possible because the political value is linked to epistemic inquiries, such as asking whether our inquiries produce knowledge that is useful and acceptable for the most oppressed groups. Some of the most famous questions concern practical and daily problems and experiences of marginal groups, such as why we tend to blame the victim in case of violence? Why is domestic (unpaid) work considered normal for women and not for men?<sup>61</sup> Why were the normal processes of women, such as menstruation or menopause, seen as a disease (Schiebinger 2001 and Martin 1991)? In general, what processes have led to believe that women have not contributed to human evolution?

Thus, the collective meaning of the standpoint is clear: to discover the ideological surface of the social relations that we accept as natural, we need political organization, and collective knowledge (usually translated also in forms of conscious awareness) since the presumed naturalness of the domination of the oppressors' obscures how the social relations run (Harding 2009, 194). As long as social and political injustices exist, standpoint theory will be controversial, as it will be perceived as a constant problematization of questions and topics considered natural (Harding 2009, 199). The essence of standpoint theory is not to start from

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<sup>61</sup> This question about housework has been present in the feminist imagination since the early twentieth century with Virginia Woolf when she wondered if, without the work of women behind men, they would have had time to achieve the great things they got. Her provocative question asks whether our understanding of the world would have been different if the one who discovered the laws of nature was the same who also cleaned it (Woolf 1929).

the disciplines but to start from women's daily experiences to understand how the conceptual practices of the dominants are constructed and maintained.

To summarize, I believe Wylie's theory is successful in special cases (micro-level), i.e., in given research, different points of view suggest different views and explanations.<sup>62</sup> At a macro-level, however, talking only about contingency risks turning marginal positions into vague issues. The political critique of epistemology is a vital one. It serves both to account for epistemic and explanatory limits present so far and improves social law issues, such as finally seeing recognized problems and issues referring to marginal subjects. Therefore, it is not just a matter of maximizing epistemic values to choose between different explanations or theories, but of shedding light on the structures of power and domination embedded in cognitive practices that also operate at the level of the choice of these epistemic values.

### 3.2.5 Problems in Longino's Project: Are Feminist Values Useful Only as Last Hope?

While in previous sections I discussed Harding's critical points, I devote these final paragraphs to analyzing Longino's critical ones. Both of these critics will merge in section 3.3 where I will evidence how these points are surmountable if we consider the two theories jointly.

Longino's main argument concerning knowledge theory is that theories may override data and that the evidentiary link between observations and data is not direct. This gap allows non-epistemic values to enter every stage of scientific knowledge (Longino 1990; 2002b). The problem with her approach is that sometimes she has no particular preference over which contextual values enter, whereas sometimes you can detect a preference.

This gives ambiguous messages if Longino then states, as she does, that not only is impossible to eliminate values, but that we should consider and assess them to get better science, because values are "not an obstacle to knowledge, but can be

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<sup>62</sup> Wylie offers excellent examples in the field of archeology of gender; see for example, 2011, 2015.



understood as a rich pool of varied resources, constraints, and incentives to help close the gap left by logic” (Longino 2002b, 128).<sup>63</sup> Scientists depend on a host of background assumptions that they are (mostly) unaware of when taking data to be evidence for or against a theory. Longino argues, “one can’t give an a priori specification of confirmation that effectively eliminates the role of value-laden assumptions in legitimate scientific inquiry without eliminating auxiliary hypotheses (assumptions)” (Longino 1987, 55). Indeed, in Longino, the values are part of the background assumptions that illuminate the relevance given to the same evidence. As I was mentioning, Longino sometimes gives a positive endorsement of the contents of these values. Longino and Doell (1983) focus on two areas of evolutionary studies and endocrinological research into behavioral sex differences. They argue that feminists have succeeded in warning how sexually prejudicial aspects (hence sexist assumptions) have caused a wrong understanding of sex differences. Longino also gives examples in explaining human behavior, where she calls for more scientists who prefer a non-reductionist and linear model and associates this type of thinking with traditionally male hierarchical thinking.

In “Gender, Politics and the Theoretical Virtues” (1995), Longino speaks precisely of feminist values, such as heterogeneity, complexity, novelty,<sup>64</sup> explaining that the aims of research contexts hinge on contextual values since they have implications for constitutive values and theory choice. Longino defines these values as feminists because they help fulfill the (political) aims of feminism, such as eliminating gender oppression. Hence, when we consider the feminist struggle, attention to these values is justified and promoted by Longino herself.

However, in other works, Longino appears disinterested in the contents of these values. For instance, this happens when Longino must define the criteria that ensure a feminist way of doing science, claiming she prefers doing feminist science, as in practice, because the characterization of feminist contents implies a certain

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<sup>63</sup> Other references of the impossibility of eliminating contextual values from research questions and the justification of theories can be found in Longino 1983, 1987, 1993b, 1995, 1996.

<sup>64</sup> Longino refers to the value of novelty as the value used by Harding in standpoint theory (cf. 1996).

way of seeing the world as feminine (Longino 1990, 188).<sup>65</sup> Hence, when she explains the criteria, she claims that what is important is that a diverse pool of values is present, not so much on that certain contents are present.

I believe that this ambiguity concerning the content of values can be problematic and risks weakening her premises. If values are all interchangeable, contextual empiricism will lose effectiveness since it bases its normative force precisely on the fact that the values that enter knowledge are essential to decide what relevance given to evidence. Longino bases her project on the assumption that the models and the cognitive processes are influenced by contextual values but avoids considering the different contents producing the models. Content values' and relevance to evidence should not be undervalued. Moreover, there is also an epistemic potential in these values, and for this very reason, I do not see why not to discuss the content because the main question on why different values lead to different relevance of data is largely explained thanks to the contents of these values. Based on these contents, we will see the world with different eyes, including how we give certain relevance to evidence.

Longino's solution to avoid affirming the priority of feminist values is justified by a confidence in the progress of community discussion that will lead to the prevalence of the best explanation and the elimination of those points of view that do not increase knowledge or promote positive discussion, including the racist or sexist values. The hesitation on the content of values is probably due to the danger of making the feminine coincide with the feminist. But I believe that we cannot even pretend that the two aspects are entirely apart from each other for the 'simple' reason that women have been socially constructed to occupy subordinate social positions. So, even if you avoid the risk of the traditional characterization of the

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<sup>65</sup> Longino has doubt on the idea of feminist science because it risks being caricatured as soft or anti mathematical and simply "a new clothing for the old idea that women can't do science" (Longino 1990, 188). However, I believe with due caution to the term feminist, it is possible to explain what is meant by the feminist gaze without falling into improper generalizations about what it means to be a woman or to be feminine. A feminist perspective is open to all those who want to problematize their perspective and recognize their partiality. Politically, it also means acknowledging that the social system of patriarchy is a system based on the oppression of women and other identities that do not conform to white man privilege and commit to overthrowing it.

virtues assigned to women, at the same time, you cannot forget that being different and subordinate compared to the dominant group actually *gives* a different perspective.

Longino emphasizes the social relationship between acquaintances (subject-subject) but less on the subject-object analysis and what follows. Therefore the “content” side of values cannot be left open as Longino does. In my opinion, this solution would also be admissible were it not for the lack of a more detailed discussion of this diversity that makes up the research community (who are the scientists), which I will address in the next paragraph.

### 3.2.6 The Risk of Relative Intersubjectivity<sup>66</sup>

In this paragraph, I address another question in Longino’s project related to diversity: the theoretical and normative force of Longino’s project, which is represented mainly by the fourth criterion that I listed in the previous chapter.<sup>67</sup>

The problem of diversity in scientific communities is a well-known issue in epistemology; some scholars tend to differentiate between cognitive diversity and social diversity. The former concerns differences in research styles or different perspectives on the subject in question. The latter concerns the difference between non-epistemic values or differences in social locations and social variables such as

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<sup>66</sup> Crasnow argued that Longino’s account of procedural objectivity “does not take us beyond intersubjectivity” because it moves relativism to the level of individuals to that of rules that govern practices of science (Crasnow 2003, 138). As I understand it, the problem is not so much in the intersubjective transition between individuals and community, but in the fact that Longino risks making all perspectives equally valid, whereas there is a historically evident heuristic potential argued by standpoint theory that not only deserves to be included but also makes the knowledge arising from the critical discussion of members of the scientific community even more ‘objective’.

<sup>67</sup> For argument’s sake I list them here again. 1) Venues for criticisms: criticisms must have venues that are exactly as visible as the theories they criticize. 2) Appraisal of criticisms: criticisms must not only be “seen” but also duly considered. 3) Shared standards: research standards must be established to which theories and criticisms must appeal to avoid misunderstandings and arbitrariness. 4) tempered equality: members of the scientific community must be considered equally deserving and capable of discussing their own vision and point of view, and no position must be abandoned by political imposition or force (Longino 2002b).

race, identity, gender, etc. (Rolin 2019, 158). Cognitive and social diversity<sup>68</sup> can often go together and those non-epistemic values can influence the background assumptions that then go on to illuminate or give relevance to the evidence for certain theories (Longino 1990, 216), and may motivate different research styles. Cognitive and social diversity, however, are not something to be feared according to Longino because instead they are precisely what generates critical exchanges within the epistemic community, for example by pointing out false beliefs, or avoiding dogmatism.

However, I think that diversity is not theorized enough. The addition of a prerequisite, which I will outline later, allows us to safeguard the identities that are the spokespersons of certain values and these values themselves, which are therefore indispensable in the context of the discussion to obtain the diversity we need to achieve better objectivity.

Longino speaks of the duty of inclusion when discussing the third and fourth criteria of valid knowledge in her definition of procedural objectivity.<sup>69</sup> The problem is that she is too cautious about how this inclusion should happen. In *The Fate of Knowledge* (2002b), she admits that previously this notion was not theorized enough. She renames the fourth criterion with tempered equality (instead of equality of intellectual members) because the simple term equality in *Science as Knowledge* was “too crude”<sup>70</sup> (Longino 2002b, 131), especially when referred to the community of scientists, which represents the locus of knowledge, and basically what allows the passage from opinion to actual knowledge.

According to Longino, for this criterion to be fulfilled, “a diversity of perspectives” is required, and she emphasizes that no one can be excluded because of their social or economic position and that consensus must always be the result of reasoned dialogue and never of an external economic or political imposition. Moreover, social diversity will likely identify more values which may affect scientific

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<sup>68</sup> Longino specifically stresses social diversity when discussing that a community must be inclusive of scientists independently of race, ethnicity, nationality, gender, age, etc (Longino 2002b, 130-132).

<sup>69</sup> Cf. Longino 1990, 78; 1996, 40; 2002b. I do not refer to the explanation of the criterion in the first book of Longino (1990), as she revises her criterion twelve years later in *The Fate of Knowledge* (2002b).

<sup>70</sup> Examples of criticism for this criterion are given by Kitcher 2002.

inquiry, because differences are easy to identify when the values in question are different from their own (Rolin 2019, 162). Therefore, consensus must be the result “of a critical dialogue in which all relevant perspectives are represented” (Longino 2002b, 131). This operation has the task of distinguishing between legitimate or illegitimate knowledge. Longino’s emphasis on diversity is obviously appreciable as it fits into the strand of studies in epistemology that strengthen the importance of underrepresented groups and encouraging exchanges with other, not strictly scientific, communities.<sup>71</sup> At the same time, however, it runs the risk of not being sufficient because it does not give prior assurance of this diversity before coming to the discussion. Hence, while the duty not to exclude scientists based on race, class, gender, age, etc., is recognized, I think it is not sufficiently *acted* to ensure that this exclusion does not occur.

Although Longino underlines how “the exclusion of women and members of certain racial minorities from scientific education and the scientific professions constitutes not only a social injustice but a cognitive failing” (Longino 2002b, 132) and that within the community they must be cultivated to the point that they can offer criticisms of the main point of view, I argue that there is no preliminary step through which these intentions can be assured. Longino’s vision is perhaps too optimistic because she assumes that these voices are already present in some way in the community, but this is not the case. Scientific communities are still vastly unequal in identity distribution.<sup>72</sup> The reality of scientific communities must be

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<sup>71</sup> For example, Koskinen (2014; 2017) presents several collaborative practices that I discuss in chapter four of this thesis.

<sup>72</sup> Gender equality is still far from being achieved, and this also concerns the academic and scientific context. In Italy, the disparity is even more evident in the so-called STEM disciplines (37.3% of men have a STEM degree compared to 16.2% of women). Regarding the world of academia, women are also the majority in post-graduate studies: they represent 59.3% of those enrolled in research doctorates, specialization courses, or masters. Moving from university education to an academic career, the situation changes drastically. In 2017, women represented 40% of teachers and researchers and constituted only 23% of full professors. Furthermore, the share of teachers and researchers in STEM areas is low at all levels (36% in total) and especially at the highest level of the career where full university professor qualification is reduced to 19% (<http://www.pariopportunita.gov.it/wp-content/uploads/2020/05/DEF.pdf>). This disparity is even more evident when considering that the education rate is higher than men but lower in the labor market. Women graduates are 22.4% against 16.8% of men. This result also derives from faster growth in women’s education levels and with higher grades than men. Although women’s education levels are higher, the female employment rate is much lower than that of men (56.1% against 76.8%), highlighting a more considerable gender gap than the EU average and other

addressed, and that they are still undemocratic and non-inclusive (Goldenberg 2015). More than describing a real community, the community Longino is talking about represents an ideal. And she admits that this criterion raises doubts about who and what constitutes a scientific community and how the relationship between the scientific community and any external subcommunity. But Longino defends herself against the charge of thinking of a community as too ideal (2002b) by arguing that it will practically never be possible to include all different perspectives, so the perspectives that are likely to be included are those that we have available, that the community is in contact with, and those that share some common goal with the research (Longino 2002b, 147). While I admit that this is true, equally so, in my opinion, is imagining how to expand the pool of perspectives by leveraging the marginal and minority positions that are usually excluded, and that are often so because they are simply “ignored” or are deliberately placed on the margins or are generally only asked about when the research topic is blatantly related to them.

But, in my opinion, this criterion also has another problem. It concerns the wording “*all relevant perspectives*” (emphasis mine). Who decides which are relevant and which are not? My question relates to how we should determine which are the right relevant perspectives and the social values depending on these. The relevant perspectives are the ones that enable inquirers to satisfy her criteria.<sup>73</sup> For example, if you do not hold a dogmatic position, you are willing to change your opinion based on criticisms (Longino 2002b, 155).<sup>74</sup> Hence, there are good values

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large European countries’ (ISTAT 2020). According to Eurostat, by comparing the average gross hourly wage male and female, European women earn around 16% less than men. In 2018, 32.4% of employed Italian women (15-64 years, Istat) worked part-time against only 8% of men. Istat estimates that 60% of part-time work is involuntary. Women working on a fixed-term basis are 17.3% of all female workers. In managerial positions, gender differences in income are higher, equal to about 23% (Istat).

Furthermore, women are less present in the more profitable sectors. And in those sectors that are usually considered prerogative of the female sphere such as cooking and education, once at the top, men excel (top chefs and university rectors). However, where gender quota measurements were acted, women have enormously increased in leadership positions corresponding to the boards of directors and auditors of listed companies. Today, they represent 37% of the members, with a leap forward among the most significant in Europe.

<sup>73</sup> I am referring here in particular to the first and second criteria, which involve taking criticism seriously in relation to formulating a theory.

<sup>74</sup> According to Longino, dogmatic positions include creationist or racist positions, cf. Longino 2002b.

that improve critical discussion, open-mindedness, and ultimately knowledge, and there are bad values that produce “bad” science<sup>75</sup> or not successful science because they are not open to criticism and they do not change in response to them. As I said earlier, there is room in Longino for a perspectivism of values since certain values, such as racist values, will not be accepted in scientific discussions because they do not offer mutual checks and do not permit transformative criticisms. But she is confident that they will be eliminated in the critical discussion.

By contrast, I believe unless you have the forces and identities that can counterforce these values, knowledge will not improve. In the past, scientific explanations were developed and were influenced by sexist and misogynistic values. Who can assure us that this will not happen again if we do not ensure that we have the right perspectives to refute them? And what better perspectives to counter sexist or racist positions (even unconsciously) than feminist and anti-racist ones? And what individuals are more likely to develop anti-racist and anti-sexist positions than marginal individuals who know their condition as oppressed because of racism and sexism, and recognize how it is different from that of other (dominant) individuals?

We need to have these perspectives in question because only then can we have a critical discussion capable of eliminating bad values (values that do not allow transformative criticisms and incorporate sexist, racist stereotypes). Then, the problem to be solved is that in Longino’s project, there is no precise number for which the community is organized to ensure the legitimacy of the contents obtained during the critical discussion. There is no particular proportion nor restrictions about who precisely constitutes the scientific community, but this is a point we should not underestimate. The problem of the scientific community is not just the lack of critical discussion but the lack of critical discussion among heterogeneous identities, bearers of views different from the mainstream milieu. The discussion of

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<sup>75</sup> By “bad” science, I mean science informed explicitly by theories, hypotheses, underlying assumptions, norms, and explanations that fail standards of empirical adequacy or deliberately manipulate or erase available evidence. In most cases, the criticisms of feminist theories refer not to the falsity of the science but its partiality. This constitutes, in fact, good but not successful science. Hence, for science to be good, it is not necessary to go hand in hand with the possibility or desirability of value-free science.

scientific results in the community is something that has always been done. Bad science happened anyway, so it is not sufficient to discuss members, but that the discussion does not happen in the homogeneous framework. The central question is not just the critical discussion, but that discussion is made by different visions that interpret observations differently also due to the different content of external values. Without this consideration, it is difficult to understand why we must support value-ladenness and not fear it from an epistemic and a political point of view.

Furthermore, not focusing explicitly on the contents of values, particularly the feminist values, undermines the normative value of feminism and risks not encouraging feminist aims. Longino acknowledges this necessity, but how diversity is accounted for or realized is not theorized enough.<sup>76</sup>

### 3.2.7 Summarization

Summarizing, in these sections, I have argued what are the most vulnerable parts of these theories taken individually. I believe that Harding's most dangerous problem is the lack of a justification criterion for the knowledge produced by marginal perspectives, which from a heuristic point of view are fundamental, as they offer new insights and ways of researching scientific knowledge. I have hypothesized various scenarios that can serve as modes of justification, but they are all insufficient. The essentialist option (scenario 1) and the creation of feminist knowledge (scenario 2) are hypotheses that standpoint theory itself risked supporting but that over time and with theory's evolution ended up being completely dismissed. The last two scenarios (the democratic one and Wylie's epistemic privilege scenario) are instead scenarios in use in standpoint theory. Nevertheless, I have discussed what I think are the points that need to be expanded

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<sup>76</sup> Longino emphasizes how to assess the consensus we get from the discussion. If diversity is maintained, how do we obtain agreement and, vice versa, if consensus is accepted, will it be at the expense of opposing positions? (cf. Longino 2002b, 146). She, therefore, takes the problem of who constitutes diversity and how in the scientific community as given, or at least not overly problematic, and she prefers to concentrate on the outcome of this discussion.



by arguing that the justification of marginal perspectives should require a fifth scenario that I will discuss in section 3.3.

I then discussed Longino, this time however I did not imagine possible scenarios, but chose to focus on two inherent ambiguities that I find in her project. The first concerns the unclear definition of the content of the values conducive to the formation of better knowledge, and the second concerns the difficulty in achieving diversity in the composition of the scientific community, which is however necessary for the very success of Longino's project.

This discussion of 'exposed' points fulfills the argument I will make in the next section, that it is possible to justify standpoint's epistemic privilege through Longino's contextual criteria, which ground it *a posteriori*, resulting from critical and collective discussion among scientists. At the same time, Longino's criteria are improved and maximized precisely because of the different epistemic privileges brought forward by marginal groups. I will show how these aspects fit together in the next and final sections.

# Chapter Three: Rethinking Objectivity: How to Maximize Two Approaches of Feminist Epistemology 3.3

## 3.3 A Contextual Standpoint Theory

Finally, in this last section of chapter three, I present my project, which I called contextual standpoint theory. Here, I explain in detail how the combination of the two perspectives, standpoint theory and contextual empiricism, works from a theoretical and methodological point of view. With this new combination, the objectivity of research will be neither procedural (Longino's definition) nor strong (Harding's), but it will gather different adjectives and characteristics based on the level we analyze from methods, from contents or specific attitude to the epistemic agent. These attributes will be summarized in the general conclusions of the dissertation.

Theoretically speaking, understanding how Longino's criteria apply to standpoint theory, and which is the place of the epistemic privilege in this interaction is central. Indeed, Longino's criteria are optimized if, in the scientific discussion, we ensure the greatest diversity of perspectives, especially those of marginal groups, which given to their positions and social contexts, can grasp certain contradictions and suggest criticisms of the dominant thought. The criteria, therefore, lead to a shared knowledge content only after the previous inclusion of marginal perspectives. I argue that this diversity is not quite ensured from the beginning unless we use the marginal views of standpoint theory, proving how Longino's project is enhanced by standpoint theory. And this diversity is required by Longino because it is the normative force of the project: without the different points of view and criticisms, theories will not be adequately discussed. These points of view will represent the diversity we need for Longino's criteria to work, maximize, and justify the knowledge produced.

On the other hand, the epistemic privilege of marginal perspectives by standpoint theory is grounded, safeguarded and maximized in the execution of

scientific discussion and the results of this discussion precisely because of Longino's criteria, which explain exactly how to give space to those dissenting but epistemically valid voices that are usually not taken into account. The diversity of perspectives, in fact, ensures that the theories are subjected to the most numerous and varied set of critiques so that most of the (possible) considerations have been made, and therefore the successful idea is actually the one that has survived most points of view. For this to happen, however, we need to make sure that any perspective is dropped only after collective discussion and not before and for scientific reasons only.

Methodologically speaking then, the marginal perspectives of standpoint theory intersect with Longino's four criteria. I argue this happens but in two different ways. First, marginal standpoints must be considered a prerequisite before the theories go through the four criteria. The prerequisite can be achieved through quotas or an external survey on marginal perspectives and marginal individuals related to the research topic.<sup>77</sup> So, I imagine a collaboration also between official epistemic communities and other sites of knowledge as communities from below, voluntary associations close to the problems of minority subjects: discrimination, violence, citizenship rights, health care, residence permits, etc.

Second, especially in the case of Longino's third criterion, the one referring to shared standards for accepting or not a viewpoint in the discussion, the epistemic privilege must be "transformed" into a guideline, a standard of inclusion.<sup>78</sup> That is, starting from marginal lives gives information on the structures of exploitation and subjugation, but also how marginal groups resist and what they put up to survive; this operation is carried in the academic area by minorities studies (women's

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<sup>77</sup> Methodologically speaking, one must also consider the dialectic between local research (the research in question considered at a given time) and the global framework aimed at inclusiveness of underrepresented groups. The choice of which perspectives are considered marginalized is also dictated by local purposes, research, and reasoned choices. Including marginalized categories is never a way or an excuse to encroach on pseudoscience or give voice to extreme perspectives, but it is a way to include groups whose scientific and non-scientific decisions affect them as well and about whom they have something to say but are usually not considered because of discriminatory bias. I will return to this issue when I discuss the shared standards criterion.

<sup>78</sup> Standards of inclusion or sensitivity to diversity are starting to gain more and more attention in areas of work, e.g., in universities through tools such as gender budgeting or requirements to access externally funded projects (e.g., European Union, see MSCA or Horizon Europe).

studies, gender studies, racial, decolonial, subaltern etc.).<sup>79</sup> These disciplines study how social relationships are organized in systemic terms and how these are based on exploitation, misogyny, racism, etc.

Standpoint theory becomes a method through which to explore knowledge and power structures. In this way, starting from minority studies is a practice for reading, interpreting, and reorganizing social constructs and organizing social relations to solve systemic problems.<sup>80</sup> Hence, appealing to a standard of inclusion also ensures that marginal perspectives are not excluded abruptly. The duty of inclusiveness prescribes consideration of the input of these minority studies, especially on issues that also affect marginal subjects. According to a standard of inclusion, when we are preparing to accept or not a point of view and/or begin research, we should ask ourselves: does this research also affect other social groups with respect to whom we intend to research? If so, how? Does my solution contribute to their invisibilization? As for a single point of view: does it repeat discriminatory statements? Minority studies have been dealing with these questions for at least three decades, so turning to them may answer the questions and contribute to the visibility of usually marginal fields of study.

Contextual standpoint theory allows an exhaustive picture of scientific objectivity that embraces the question of knowledge as methods and contents. The standpoint theory offers a concrete example of what a scientific community that benefits from diversity and dissensus can give to general epistemology and theory of knowledge. Contextual empiricism by Longino becomes the theoretical framework in which to examine the validity of the contents supported by standpoint theory.

I will argue that the justification of the best starting point from which to begin is done on a contextual rather than foundational basis. Dialogue then becomes the basis for a process of mutual growth, in which statements are posed as hypotheses

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<sup>79</sup> This does not undermine roots movements and their work of deconstruction from below.

<sup>80</sup> In chapter one, I pointed out how the assumption of epistemic privilege can be equated with the idea of being on the margin codified in Black feminism (hooks 2000). Thus, these studies and standpoint theory share the idea that being far from the dominant center entails material and practical disadvantages yet can also lead to a more comprehensive view of social phenomena, especially if they are affected by ideologies that cause them to be on the margin.

and can be modified by others. This picture will be feminist because it aims to obtain knowledge representing all identity groups (especially marginal ones) and end their discriminations. Moreover, it moderates a type of knowledge that instead represents and was formed by dominant groups, whose system is responsible for the oppression of women and marginal groups. If results and theories also correspond to marginalized perspectives and experiences, knowledge will be more accurate: less biased (epistemically), and more inclusive (politically). Knowledge reflects social positions, so increasing knowledge means increasing social positions usually not admitted in science. Objectivity is heightened by diversified social relations, a democratic<sup>81</sup> increase that allows minorities to enter science. In this sense, contextual standpoint theory transforms into its method the interest in marginalized categories that become a way to increase objectivity. The results of this discipline will confer different attributes through which to define scientific objectivity, which I will present in the general conclusions of this thesis. I shall divide objectivity features' depending on the *nature* of objectivity, the methodology adopted, and the researcher's attitude.

### 3.3.1 Longino's Perspective and How Standpoint Theory's Marginal Perspectives Enhance It

Longino places great attention on the collective achievement of knowledge. What legitimizes the use of contextual values for Longino is that they are accepted and carefully scrutinized through criticisms and several points of view of a scientific community. The normativity that lies in this exchange is Longino's cornerstone that validates her idea of procedural objectivity.

Normativity's force is based on two main assumptions: (1) knowledge is produced through social and interactive processes, and (2) communities and not individuals are the agents of knowledge (Longino 1990).<sup>82</sup> Knowledge becomes such

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<sup>81</sup> For a discussion of the democratic process of inclusion, see chapter four of this dissertation.

<sup>82</sup> The focus on the social aspects of knowledge production and the importance of intersubjectivity among members of the scientific community can recall that of Fleck (1938) on the concept of "collectives of thought." To my knowledge, however, Longino never mentions Fleck. Another feminist epistemologist who supports the view that communities and not

only if it survives and passes a public process of critical scrutiny, and this is possible only in a community where individuals engage with others and confront and analyze each hypothesis and their background assumptions. Only when we understand that science is inherently social, and that scientific knowledge is the result of these discussions and interactions we can claim that a scientific inquiry is objective (Longino 1990, 139). Hence, observation, elaboration of theories, and justification are central to understanding knowledge, yet they are also social phenomena. Longino aims to recover the strap between rationality and sociality as not mutually exclusive and opens the possibility of new ways of interpretations and understanding that consider the interdependence of cognitive agency, the contextuality of our productive practices and justifications, and the plurality of content. In this formulation, having different and even opposite points of view in a scientific community is a resource because the critical discussion will give affordable and reliable knowledge and determine which perspectives lead to better knowledge. Therefore, the regulatory and normative burden of proof is placed in this discussion, capable of distinguishing between good and bad science (or between greater or lesser reliability of knowledge).

To obtain this reliable and affordable knowledge is necessary to follow Longino's criteria, but I argued previously (3.2) how the diversity required by Longino to get the critical discussions needed for better objectivity was not specified enough. Yet this diversity must be presented before we come to use Longino's criteria for inclusive and balanced objectivity. Longino's criteria' success requires that we have in the communities those perspectives that put mainstream theories and visions in the discussion. On the contrary, in a homogenous community subjective, personal, biased interests will likely go undetected. This is because our standard framework is inserted in a system also formed by political relations that create privileged subjects who benefit and less privileged subjects (i.e., the marginal ones) who thus experience both their condition as oppressed and know how the system oppresses them. I argue that the perspectives which form the heterogeneous

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individuals are epistemic agents is Nelson (1990). Louise Antony (1995) defends an individualistic view.

diversity are the marginal ones Harding talks about. I suggest that the marginal perspectives of standpoint theory are the way to achieve the required diversity by Longino, as hegemonic positions are always represented by default. For the criteria to work, a prerequisite for these voices to enter the community is mandatory.

The marginal perspectives, historically excluded from research, offer the friction between several points of view with the specific aim of reaching a balanced and inclusive knowledge. Disagreement is important because it challenges one to consider different assumptions and ask whether they are empirically valid (Potter 2006, 150). Only when we have gathered the different points of view, including the marginalized ones, can the balance be arranged by Longino's criteria. Hence, while the fourth criterion of Longino refers to the equality recognized by all members of the scientific community of being able to argue and therefore be seen in their effective ability to make a critical and valuable contribution to the discussion, I argue that for everyone to be given this chance, they must be effectively present first. Everyone must include marginalized perspectives.

As long as we are talking of white western males, they embody the picture of classical scientific researchers.<sup>83</sup> In this respect, the fourth criterion by Longino seems even redundant: the fact that they are seen in the ability to argue and to assert their ideas has never been a big problem. They receive even more credibility or reliability than anybody else. Moreover, Longino takes for granted that if there are criticisms, they automatically come from individuals with different backgrounds and different social positions. But actually, criticisms can also come from people sharing the same social position. The phenomenon of the standpoint gaze is much more complicated than the simple disagreement that may happen during scientific controversies. It includes perspectives that redefine the entire paradigm or framework, a completely new gaze and starting point of the questions. It is not a simple disagreement between scientists. The improvements given by the encounter

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<sup>83</sup> Criado-Perez (2020), when discussing the myth of meritocracy, also talks about unconscious bias towards teachers or educators, distinguishing between men and women. Male teachers would be more likely to be judged as bright, intelligent, brilliant. According to the genius bias, "male teachers are always considered more authoritative, more objective, more gifted with innate talent". The genius bias is primarily the result of an absence of data: we have erased so many women from history that we can no longer even remember them (Criado-Perez 2020, 224-225, Storage et al. 2016, Banchevsky et al. 2016).

of the heterogeneous perspectives give back a comprehensive gaze they offer on reality. And not because this comprehensive gaze allows an objective look, which is not possible, since the view from nowhere does not exist for feminist epistemology,<sup>84</sup> but because it exemplifies how the traditional gaze was partial and incomplete. Moreover, they can also grasp aspects and idiosyncrasies that those who benefit, intentionally or not, from a standardized framework are much more likely unable to find.

Thus, in the scientific community, the marginalized subject gives us the diversity we need to ensure a critical discussion in a heterogeneous environment that produces scientific objectivity. The “tempered equality” (fourth criterion) must first be preceded by equality in the different social compositions of the community, with the principle of standpoint theory, i.e., starting from the marginal groups. These perspectives offer epistemic diversity, produce valid criticalities, divide cognitive work, and produce a social distribution of knowledge.

To summarize, I have suggested integrating marginal positions with the epistemic privilege to secure and form the diversity of viewpoints that Longino requires for the very success of her project. In this way, it is possible to achieve what Longino (1991) calls “view from everywhere” in opposition to the “view from somewhere” (partial) and “view from nowhere” (impossible). Exactly how to employ these voices will vary also depending on the criterion in question we are using, and I will explain in 3.3.3.

In the following section, I will start from my critique of standpoint theory to show why it can be overcome throughout the use and combination of Longino’s criteria. At the end of these sections, I will show how I intend to organize the project from a methodological point of view.

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<sup>84</sup> In the general conclusions of the thesis, I examine in more detail the kind of ‘objectivity’ achieved through feminist epistemology.



### 3.3.2 A *Contextual* Defense of Standpoint Theory

The main problem concerning standpoint theory, also highlighted by Longino (1996), was the lack of justificatory grounds for marginal positions.<sup>85</sup> Moreover, standpoint theory refutes talk about the epistemic privilege in terms of intangible or transhistorical privilege, nor does it claim that privilege gives the epistemological base for justifications of theories.<sup>86</sup> Standpoint theory claims that we have good reasons to argue that certain social values are better than others through a sociological and historical study on women's situation.<sup>87</sup> Asking questions and starting from the perspectives of these groups throws light on aspects hitherto ignored or misconceived, so they are instrumental from a heuristic point of view. They are strategies for new discoveries, yet not for justification.

However, to be conclusive, a theory must focus on highlighting the ignored perspectives and impose itself as a producer of scientific knowledge, not mere plausibility. The question is whether how to manage dissent and how to choose between different standpoint perspectives. I believe that when it comes to discussing justification and choice of theories, the criteria, such as those expressed by Longino, better regulate the norms of interaction and discussion of subjects' points of view in the scientific community without falling into endless political disputes over which is the most suitable.

The point of view of women and marginal individuals is crucial to discover new content, new issues or reopen old ones, and with Longino's criteria, there is a way in which these contents can be justified not just based on their marginality<sup>88</sup>

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<sup>85</sup> This critique is also known as "Bias Paradox" (cf. for example Antony 1993, Heikes 2011) because feminist scholars based their criticisms in the exposition of androcentric biases, arguing that these are epistemically bad. However, feminists also maintain other biases (such as the feminist ones) can be good for science. To overcome this ambiguity, feminists hold that neutrality does not ensure us the best science, hence we should consider the role of biases and extra scientific values in general, because some of them far from being an obstacle could facilitate the production of science.

<sup>86</sup> Cf. Harding & Hintikka 1983; Harding 1991, 137; Harding 1993, 56, 58 and 62. Hartsock also agrees on this point (1998, 237-240).

<sup>87</sup> I reported various examples and studies by standpoint theories to corroborate this idea, in chapter 2 of this thesis.

<sup>88</sup> Accepting the agents only based on their marginality risks flattening their agency. Marginality is a condition to which the system forces them; what they do and how they use this marginality, for example, to discover and propose new possibilities of knowledge, is another thing. These

but based on the notions that are brought into the discussion. In this way, these positions' heuristic and instrumental meaning are saved, and improved knowledge will be achieved.

Thus, the justification of the contents by marginal perspectives resides in epistemic practices and systems of the communal discussion that do not collapse into relativism understood in an arbitrary sense. Therefore, I deem it necessary to integrate standpoint theory with methodological tenets of Longino's project and obtain a more holistic and comprehensive picture of scientific knowledge from the content and method perspectives. The idea is to *democratize* standpoint from an antagonist to pluralistic position. It is, therefore, a question of inserting these points of view into a democratic system whose justification derives from Longino's criteria capable of demonstrating through the achievement of a balance between different perspectives and better knowledge that some positions lead to better understanding. Thanks to these marginal perspectives, our objective science contents will be the veridical representation of the entities and processes of the world, including views and experiences of marginalized groups. Standpoint theory by openly defying mainstream knowledge carried by identities in top places of hierarchies constitutes a form of *struggle against*<sup>89</sup> the mainstream paradigm of knowledge. By going against it, they offer alternative points of view that were ignored before. They open the eyes to aspects considered natural. This forced awareness is central, pivotal to the serious critical exchange and discussion of ideas that can bring better and improved knowledge.

It goes without saying that it is not an absolute and transhistorical superiority. Still, it is a worthy path in a project for new objectivity of knowledge that has come to terms with knowledge production's inherently social and political soul. Indeed, the emphasis on a thorough discussion on justification and the effective presence of marginal groups in these discussions is important because what is at stake here is not solely an epistemological problem but also a political one. Until

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ideas must find plausibility within the epistemic production of knowledge, not in their marginal condition; this latter is an evident fact in our political, social, economic and cultural system.

<sup>89</sup> Pohlhaus 2002 has discussed standpoint theory in terms of struggle against and struggle within; I apply these two concepts respectively to Harding and Longino.

dominant groups are not considered accountable for theorizing, implementing policies and practices not always inclusive or respectful of others political groups, and until they control women's and marginal bodies in both private and public arenas, marginal subjects cannot flourish. We need social transformations in all roles: theory, practice, policymaking, and this is also possible through the scientific discourse and scientific questions in which perspectives of marginal groups partake, reflecting their experience so that they will be no more ignored.<sup>90</sup>

As I said, the fundamental presence of these disciplines in scientific disputes is then safeguarded by Longino's criteria which enrich the results of these crucial discussions. This second phase constitutes the form of *struggle within* the hegemonic paradigm of knowledge. *Struggle within* is the way to democratize standpoint marginal perspectives. This phase aims at plausibility and justification of these results because the efforts aim to change society and improve accounts by building knowledge communities and members of this community that *struggle within* each other, thus paving the way for critical discourse, individual and community agency that create new and justified knowledge.<sup>91</sup>

To unmask these power structures and partial (but passing as universal) knowledge, marginal groups must have: 1) a voice 2) a platform. The voice is given by the principles of standpoint theory, which ensure its collective recognition and political purposes in mind (*struggle against*). Thus, we need to start from marginalized positions and experience in the first level, which usually wake us from our veil of ignorance,<sup>92</sup> from the power structures that animate epistemic practices and epistemic accounts.

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<sup>90</sup> In my opinion, it is in these situations that the strength of feminist theorizing becomes even more evident when the minority viewpoint is elaborated, explained and shared with other viewpoints, so that it overcomes its initial marginalized status and becomes part of more adequate and inclusive knowledge.

<sup>91</sup> This inclusion, this form of struggle within, is not something that betrays the original contrast of standpoint theory (*struggle against*), since the current standpoint is a theory that has seen itself change and transform in response to the criticisms received over time (Hekman 1997, Haack 1998, Pinnick et al. 2003), both regarding automatic epistemic privilege and its usefulness in non-strictly social sciences.

<sup>92</sup> The veil of ignorance in question is different from Rawls' because other scholars, such as Nussbaum, have criticized Rawls's concept itself as it would lack inclusiveness towards people with disabilities. Rawls would take for granted the idea of social contract and citizenship of the

The inclusion in the scientific communities gives the platform (*struggle within*) and above all by Longino's criteria, which ensure the validity of knowledge in such a way that it cannot be rejected for arbitrary reasons, such as the fact of producing knowledge that is committed "to the view that whether one believes a theory is justified or not solely dependent on the political values that one holds" (Intemann 2016, 277). Longino's criteria ensure that when these points of view are inserted in the discussion, they are given plausibility and are not ignored or dismissed easily. Furthermore, each marginality, each starting point is not a fixed-term; it is fundamentally a relation that constantly changes thanks to other relationships (Harding 1991, 179). Thus, each discussion must be historically located in a certain context and accept knowledge settled by criteria. In this case, Longino's contextual empiricism offers the norms to elevate these marginal perspectives to plausible and justified contents of these perspectives.

The importance of the criteria serves both to characterize a feminist science and give it legitimacy, to avoid accusations of arbitrariness. Beliefs of marginal people, therefore, do not immediately become knowledge, but their validity is assured by the fact that they are truly embedded in a scientific discussion governed by normative and democratic criteria. The distinction between knowledge and opinion is maintained because knowledge is always the result of the social interaction between members of the epistemic community. Hence, this multiplicity between positions, even marginal, should not be read as "each position is equivalent to each other", but that there is no fixed and immutable category to set up permanently which values are preferable over the others. We cannot say a priori that marginal perspectives will lead to better science, but after the scientific and critical discussions, we can say a posteriori and thanks to democratic exchange.

Hence, marginal perspectives are a non-permanent tool justified because scientifically, they are more profitable in terms of knowledge than others, and some

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independent individual who does not have to rely on someone else, as in the people with disabilities (Silvers 2007).

The veil of ignorance, in this case, is about privilege, especially white privilege, a benefit grown and maintained over the generations through erasure, genocide, slavery, torture, segregation, colonialism, exclusion, ostracism, silence, and not some benign gift rained down on us from heaven.

non-neutral aspects enrich objectivity. They constitute multiple points of view that, according to their marginality, can better grasp the center-periphery conditions, and this diversity specifically advocates and leads to criticism, scientific exchange, and discourses. They are a useful tool to study power relations in epistemology thanks to their marginality and the political and societal changes that the knowledge acquires when listening to these voices.

But they are also an epistemic tool because they serve the scientific purpose of scientific discussion and can help with choosing competing theories. The epistemic privilege in this sense remains because, relatively, it does not mean that all positions are equal and therefore, the idea that certain reflections are better or leads to greater knowledge than others is compatible with mild relativism (Ashton and McKenna 2020, 39). Accepting the awareness of the non-existence of a fixed and absolute way of judging the various points of view does not mean abandoning scientific judgments to arbitrariness. On the contrary, I argue that standpoint theory can serve as a tool, which is a non-permanent way to judge in terms of epistemic utility, as it gathers the multiple points of view that animate a scientific discussion and that have historically been excluded.

Yet, for the efficacy of standpoint theory to be maintained, a way must be found that keeps the crucial political aspect of epistemic privilege while at the same time preventing the inevitable proliferation of the various standpoints from the justification of how objectivity is achieved. Longino's criteria give this justification. She puts together the social acknowledgement of scientific inquiry and the explanatory plurality of scientific phenomena and deals with the idea that there are multiple marginal perspectives and how to understand which ones produce the better knowledge based on the research inquiry and scientific discussion that derives. In this way, the position supports relativism, recognizing that each belief is situated, but in terms of justification, just a mild epistemological relativism because these norms justify methodologically which social locations and background assumptions (even among marginal points of view) bring better knowledge.

So, Longino explains the methodological norms that characterize feminist research while Harding explains why these rules are epistemically salient since if results and theories also correspond to marginalized perspectives and experiences,

knowledge will be more accurate and less partial (Putignano 2021a). Thus, contextual standpoint theory has more robust standards for objectivity. It also transforms the epistemic terrain making the reflexivity of research and the subject of research at the center of scientific discourse. This allows to problematize the notion of value-free ideal and make the inextricable social locations of the agents a scientific resource rather than a problem to solve. Objectivity is an operation achieved through critical cooperation and the promotion of heterogeneous diversity among scientists to foster an ideal of positions, values, interests in place as broad, inclusive, and objective as possible. The plurality of perspectives is placed at the service of knowledge and it will also consider as primarily important the questions offered by marginal perspectives, encompassing, and relating to these identities so long ignored, giving them the knowledge and tools to achieve societal advances.

The union of these two perspectives will confirm the contribution that feminist epistemology offers in epistemology, suggesting, on the one hand, the new contents to be studied and questioned about, and, on the other hand, by making changes to methodological practices and to the scientific community to improve the criteria of objectivity. The combination of standpoint and contextualist empiricism provides a historical-political analysis: examining who, where, when, to whom/whose something became a product of knowledge, and an epistemic/normative analysis: why and how knowledge is considered effectively as knowledge.

### 3.3.3 Integrating Equality of Social Composition in Science: A Prerequisite and a Methodological approach

In the previous sections, I have laid out my thesis, motivating my intention to combine the two perspectives. The shortcomings I discussed in Longino's and Harding's specific projects can be resolved by placing the two perspectives together. Starting from marginalized position serves to implement the epistemic diversity desired by Longino and necessary for the success of her project. I argued that in her project, diversity was not achieved, as epistemic credibility in a hierarchical society such as ours is poorly distributed. So, some claims and perspectives that should be

taken into consideration, are not recognized as such. This issue is elaborated in standpoint theory through the thesis of epistemic privilege.

However, I have also discussed how it is not clear in standpoint theory how a scientific community should be capable of endowing this knowledge with justification and how these relationships must be characterized by trust and reciprocity (Pohlhaus 2002). Longino's criteria give a justificatory basis, but only if we previously ensure the marginal perspectives that offer concrete dissenting and critical views.

The question that it is time to address now is how exactly the two perspectives work together. So, in this section, I focus on the methodological part of this union, that is how these marginal perspectives are to be understood, how do I make sure that these perspectives are present. I argue that these marginal perspectives need to be intended both as methodological tools and as the effective presence of marginal identities when possible. Thus, to understand practically how these marginal perspectives are to be included in the combinatory project, I distinguish two ways, depending on the function they entail.

The first way is to consider them as a prerequisite. Marginal perspectives constitute the diversity, propaedeutic for Longino's criteria. But, if epistemic justification is provided by her criteria that manage dissent and knowledge production, it is critical that, for the discernment process to work, marginal viewpoints must be present before (and then during) the discussion. Indeed, these marginal perspectives are needed to ensure greater epistemic diversity, and so they are fundamental for the success of theory's justification. It is possible to produce the critical position and give justificatory power to the scientific discussion is possible within a community that ensures and guarantees diversity and necessary discussion and the questioning of each position. Objective knowledge is found not in the individual identity position but in the partial perspectives, critical discussion, union, and overlapping of these connections. Hence, the first mode to employ marginal perspectives is to treat them as a prerequisite to the justificatory criteria.

The prerequisite can take different forms: marginal prospects can be present in the community thanks to quotas to ensure these identities are included and can

offer their perspectives in this first phase.<sup>93</sup> If quotas are not an option, marginal perspectives should at least be heard before the inquiry to encompass possible research paths, since these marginal perspectives “make the familiar strange which is the beginning of any scientific inquiry” (Harding 1991). It is possible to connect the (ontological) experience and transform them into (epistemological) knowledge in this way. To save the relationship between marginality and creativity/productivity (and what it follows), we must find a way to incorporate them into the subtle connection that interposes between social change and academic contexts, in which these subaltern and minority groups can engage and produce conscious awareness in the form of partial, but objective knowledge.

This understanding of marginal perspectives as a prerequisite combines with Longino’s first, second, and fourth criteria. This explanation will be the subject of the next section.

### 3.3.4 First, Second, and Fourth Criterion

#### **The first criterion states that:**

“There must be publicly recognized forums for the criticism of evidence, of methods, and assumptions and reasoning”.

Longino 1991, 671

I argue that based on each criterion definitions’ the two positions combine to such an extent that they seem almost complementary. Indeed, standpoint theories are

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<sup>93</sup> The gender quota measure is a controversial topic. Although it is an imposition that may seem demeaning, the underlying problem is that without such an imposition, there would hardly be enough women in places of power. Gender quotas in Italy, for example, are set at 30% in boards of directors and parliament. In other cases, unfortunately, women in positions of power are still scarce, see, for example, chapter 4 of this thesis on the under-representation of women in universities in full-professors and rectorship jobs.

Moreover, it is obviously impossible to make quotas of “feminists” since no one asks, nor should, set a standard to be considered a “worthy” feminist. Nor is it my intention to collapse gender with the ability to develop a feminist consciousness. Antifeminist women do exist (the majority happens to be those in positions of power, but that is another story). What I would like to point out, however, is that as more and more marginalized groups are given access, it is more likely that individuals with different values and backgrounds who have developed an anti-sexist, anti-racist, etc. view will enter. While it is true that you do not have to be a woman to be a feminist, the work of self-reflection on oneself and one’s condition may be more related and relatable for those experience discriminations daily basis than those who live in a condition of privilege.



justified through Longino's criteria: her first criterion emphasizes the focus on the venues where criticism is made of methods, evidence, reasoning, and underlying assumptions. Specularly, then, the prerequisite of entering marginal voices provides the security that effective objection arises for consideration in the recognized places, hence standpoint theory is the key for the success of Longino's first standard.

Having marginal voices as a prerequisite means researching how our scientific research affects the lives of marginal groups. It means asking from different perspectives on the research we investigate how a problem can be shown under various guises for one group or another and how the systems of oppression contribute to creating and maintaining these errors (Intemann 2016, 269).

From a practical point of view, it means interviewing and creating relationships between different communities (that are not necessarily scientific) to set research and objectives, as well as choices in the methodological and conceptual frameworks, using a feminist and situated lens to analyze the same problems. For example, questionnaires, surveys, and research investigate minority lives, especially if the research concerns them. Among the publicly recognized places, therefore, we should also add the interactions between the (official) scientific community and non-strictly scientific investigation groups.<sup>94</sup> Opening up different forums of publicly acknowledged knowledge has the positive side effect of starting a reflection on who and what has the status of reliable scientific research or reliable knowledge agent. In addition, it may lead to less invisibilization of certain minority knowledge and places of dissemination of this knowledge usually not well known to the most. This is not about confusing science and pseudo-science; it is rather about initiating a reflection on dominant paradigms of knowledge and the pluri-diversity of knowledge.

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<sup>94</sup> For discussing possible collaborative practices between different communities (scientific and non-scientific), see chapter four of this thesis.

**The second criterion states that:**

The community must not merely tolerate dissent, but its beliefs and theories must change over time in response to the critical discourse taking place within it.

Longino 1991, 671

The second criterion is again related to ensuring that these critiques have visible venues and have modifying power over the exact criticized research. Hence, the first and second criteria allow this knowledge produced by marginal groups, among others, to be taken seriously. To be aware and take on board these controversial perspectives, we need serious consideration of the potential of constructive criticisms. The first prescribes that we need venues for criticism, and the second sets the uptake of these criticisms. So, marginal perspectives challenge mainstream knowledge, but we cannot limit ourselves to seeing these perspectives. The first and second criteria allow us to hear these perspectives and then change our visions thanks to these perspectives.

It goes without saying that the possibility of criticism does not eliminate subjective influences, both communal and individual. But it puts them at the center to be controlled on the formation and production of knowledge. For example, in the case of sexist and racist biases, points of view capable of opposing them ensure greater control and a different outcome. As long as one can put one's influences and biases under criticism, they can be defended, modified, or abandoned in response to these criticisms.

This is why Longino gives so much ground to criticism and discourse, and I believe it can be compared to the same force that Harding places when she illuminates the meta-reflective discourse not only on science but also on the subjects themselves who produce science.

“If the community of qualified researchers and critics systematically excludes all African-Americans and women of all races, and if the larger culture is stratified by race and gender and lacks powerful critiques of these stratifications, it is not plausible to imagine that racism and sexism and values would be identified within a community of scientists composed entirely of people who benefit – intentionally or not – from institutional racism and sexism.”

Harding 1991, 143

Hence, the epistemic utility of marginalized perspectives is evident since it is easier to see contradictions or criticisms for those who do not share the same background.

Moreover, the same alternative perspectives must be ready and aware of an examination on their reflections, as a cognitive agent, and in case of mistake, to be willing to change one's point of view. Effective criticisms produce effective changes, effective criticisms are present thanks to marginal perspectives, and effective changes are made because Longino's first and second criteria precisely prescribe how criticisms that lead to better knowledge are ensured.

**Finally, the fourth criterion specifies that:**

“objective communities must be characterized by equality of intellectual authority. What consensus exists must be the result not of the exercise of political or economic power, but a result of critical dialogue in which all relevant perspectives are represented.”

Longino 1991, 671

To avoid personal, political impositions and to limit personal biases or preferences to interfere with scientific discussions, the fourth criterion is used to handle the outcomes of confrontation between different visions (Longino 2002b, 155). The fourth criterion is the one that controls the critical discussion and ensures that every perspective is ruled out based on the force of arguments and not by political or economic imposition, and finally provides content to their objective character. There is no pre-given superiority among different perspectives, but the critical scrutiny to which all perspectives are subjected will decree which produces better knowledge (Longino 1991, 674). Thus, knowledge must be acquired in the context of a collaborative and collective cognitive process, where knowledge is assured through a critical discourse that challenges the views and corrects the existing biases in every member of the scientific community (or at least ideally, the discussion serves to illuminate the implicit and unconscious biases of the community members). In order for this process to work, however, we must seek to gather the most numerous and qualitatively diverse points of view, and marginal perspectives that have always been isolated but have a better idea of the dominant-periphery system are a valuable, valid strategy to call upon.

In the standpoint theory, this usually takes the form of group collective consciousness, striving first to know and then dismantle power structures and how they are intersected in epistemic practices. In standpoint terms', our social identity systematically influences our experiences because they build and constrain what we know (Clough 1998). A particular standpoint, therefore, affects our knowledge. Longino shares the assumption with her discourse on background assumptions and the non-eliminable non-scientific factors responsible for the evidence's relevance. Hence, having marginal perspectives as a prerequisite is important because they give assumptions about the cognitive authority of individuals associated with different stereotypes. In fact, credibility negatively affects those who suffer from epistemic injustice. This leads to the disqualification of contributions, especially by underrepresented groups.<sup>95</sup>

Broadening the gaze, we immerse ourselves in a dialectical context in which the exchange is important, and the conclusion is persuasive for everyone. Hence, once we have diversity and different perspectives, Longino's criterion shows us how the discussion should be maintained to obtain the most productive outcomes in knowledge terms. With the presence and assumptions of marginalized positions, we ensure diversity, which will challenge knowledge perspectives. Longino's criteria are the way to control the production of these contents by ensuring that marginal knowledge will not be disposed of easily thanks to (1) venues, (2) uptake of criticisms, and (3) tempered equality.

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95 This phenomenon is called the Matilda effect (Rossiter 1993, 364). In 1993, the scientist Rossiter coined the term "Matilda Effect" in the name of the suffragette Matilda Joslyn Gage. The Matilda Effect is the phenomenon whereby, especially in the scientific field, the result of a woman's research work is wholly or partly attributed to a man. Rossiter supports this hypothesis by analyzing more than 1,000 articles published between 1991 and 2005 in various scientific journals. In addition, she points out that papers by female scientists had fewer citations than similar papers by male colleagues. The gender of the author would therefore have influenced the dissemination of research work. The most critical example mentioned by Rossiter concerns Rosalind Franklin, the scientist who researched X-ray diffraction imaging of DNA, which led to the discovery of the DNA double helix. Her data was used to enable James Dewey Watson, Francis Crick, and Maurice Wilkins to formulate the hypothesis regarding the structure of DNA in 1953. However, her work was never valued as highly as that of her male colleagues, who won the Nobel Prize for it in 1962. Other similar examples can (unfortunately) be found in history; see, for example, the stories of Alice Augusta Ball, Esther Lederberg, Nettie Stevens, Lisa Meitner, etc.

### 3.3.5 The shared standard of inclusion in the third criterion

In this section, I propose the second-way marginal voices and their epistemic privilege can be understood. In particular, I will place marginal insights side by side with Longino's third criterion, that of shared standards. The second way in which the epistemic privileging of marginal items can be understood and incorporated into Longino's procedural system takes the form of a methodological precept as "duty of inclusion".<sup>96</sup> It forms a standard of evaluation that finds similarities in Longino's third criterion.

This second way is inspired by Hennessy's definition of standpoint theory (1993). She defines the role of standpoint theory as not the identification with a particular group, but as a method to state a set of unidentified criticisms, a kind of unified position constructed through the analysis of the social productions of differences, to obtain, among other things, a less partial and more inclusive knowledge. There is no predominant or favorite marginal group, but marginal voices are used to witness different information on the structures of exploitation and subjugation and how they resist and what they put up to survive.

Starting from below represents a method because the marginal perspectives are used as a "technique for (or way of proceeding in) gathering evidence" (Harding 1987, 2). This method does not aim to make an ethnography of each marginal group but always to understand how social relations are organized in systemic terms and how these systemic terms are based on exploitation, misogyny, racism. It is not just a question of describing power relations and social relations but also why they exist, understanding power systems broader.<sup>97</sup>

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<sup>96</sup> This duty of inclusion is present in many academic project requirements. Nonetheless, there is a *malfunctioning* between this mandatory but also *tokenized* duty of inclusion and being willing to hear a point of view that often ultimately challenges the system you took for granted. It is not easy to give up your privilege if it means to rethink and reconsider your position, merits, and successes within the system. In my understanding, the duty of inclusion is to include not only different social identities but also scientific paradigms to cooperate with the dominant one.

<sup>97</sup> We cannot fossilize ourselves on the specific preference of one particular group, because knowledge of a particular group, of a singularity, will be linked to reforming those structures that subdue it and not to a generalized action (Hennessy 1993).

“Our voices have considerable power, and that is a resource; unfortunately, the world is hierarchically organized, [...] and that we do have power relations; but given that we do, I think that those people who do have classrooms to teach in, and whose papers get accepted in journals all over the world, and whose publishers do publish their books, are a local resource that we can use in scientifically and politically progressive way.”

Hirsh et al. 1995, 206

Starting from the life of women and marginal perspectives is then a method, a practice, for reading, interpreting, and reorganizing how social relations are organized to solve systemic problems through significant systemic changes. Thanks to the importance placed on women and marginalized subjects' multiple identities, the standpoint theory should be presented as a generalized theory on marginality, an epistemology of double consciousness and interrelated between the different axes and identities, an epistemology of diversity and plurality, rather than a particularistic epistemology.

The idea, then, is to use the knowledge produced by feminist studies, postcolonial and subaltern studies which represent marginal voices giving their epistemic privilege. These studies methodologically describe the places of production of social differences, epistemic authority, the different paradigms of research and lead to encounter disciplines that are usually ignored and diverse from the dominant places. The importance of these studies is demonstrated by their success in representing social and natural relationships more accurately and inclusively.<sup>98</sup> In practice, it means knowing about marginal groups' health, life, and well-being and studying how race, gender, sexual orientation, etc., impact and influence objects of knowledge and epistemic practices. And since these groups have been deprived of access to knowledge over time, they now have priority on an ethical and political level (Intemann 2016, 269). Following Harding's assumption, we will obtain knowledge capable of mapping the forces of power also inherent in

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<sup>98</sup> Studies on race, subalternity and colonialism have illuminated entire fields of knowledge that were taken for granted, or worse, were invisible. Race studies, for example, studied the kind of identity construction of the racialized subject (Fanon 1962, Davis 1981). Lugones (2010) showed how gender binarism was an ally in colonialist practices, especially in Latin America. Spivak 1990 reasoned on the part of the subaltern and the agency of which these subjects were, in fact, deprived. More recently, Disability Studies and Fat Studies have studied the discriminated experience of those who have a non-conforming body for Western standards.

knowledge practices aimed “at producing empirically and theoretically more effective research” (Harding 2004a, 31). Therefore, standpoint theory’s method to start from below is a resource necessary to understand and illuminate the functioning of power structures and then produce knowledge that is better and able to benefit even marginal groups (Intemann 2016, 263).

Confronting with minority studies means identifying the stakeholder for each research, exploring problems, understanding how the research affects different cultures and identities, how it manifests itself differently compared to the dominant group, and how oppressive systems play a role in contributing to the problems. It means recognizing the systemic nature of racism, patriarchy, ableism, classism and how these axes of domination interact with each other. In this case, then, the question for judging validity will be whether a certain discipline makes it possible to emphasize the study of epistemic practices, methods, and contents that involve scientific reasoning, to improve knowledge and to obtain more fairness in the descriptions of everyone’s experience and inclusiveness in central ganglia. Consequently, including these studies will also serve political expression since their inclusion means recognizing the existence of these individuals and discipline and the breakthrough from the invisibility the dominant system forced on them.

This methodological precept that includes and considers fundamental to confront minority studies can be regarded as one of the shared standards offered by Longino in her third criterion:

“there must be publicly recognized standards by appeal to which criticism is made relevant to the goals of the inquiring community. While there need not and probably is not a set of standards common to all communities, the general family of standards includes such cognitive virtues as accuracy, coherence, and breadth of scope, and social virtues such as fulfilling technical needs.”

Longino 1991, 671

Indeed, given the diversity of reported and debated content and the risk with which minority voices are often diminished and forgotten, Longino’s third criterion on shared standards serves to prevent these views from being dismissed without a valid reason. Longino guarantees that these perspectives will be heard by deciding shared standards so that nobody can dismiss marginal voices for arbitrary reasons.

For a criticism to be considered relevant, it must appeal to something accepted even by those who support the criticized position. Thus, shared standards serve to create a basis for discussion allowing anyone to reject a point of view if it has nothing to do with the discussion. The underlying principle is “have a bearing to obtain a hearing” (Longino 1990). However, it must be said that the standards do not offer a pre-deterministic model based on the choice of theories and that, above all, they are not absolute and permanent. They change according to the issues and objectives. However, contextually to the single and local discussions, everyone must refer to these standards to avoid taking positions or abandoning epistemic positions without genuine reasons.

Therefore, it would be helpful establishing between the relevant research standards a duty of inclusion, especially in scientific research that has clear relevance to societies and individuals that belong to marginal groups. This commits to an account of how research may affect different social groups. This aspect would be part of the social virtue standards. Ensuring that the principle of inclusion of marginal groups is present both in the form of a prerequisite and a research standard also serves to avoid another criticism that has been leveled at Longino’s project by Intemann and de Melo- Martín (2014). Indeed, the two scholars acknowledge a problem between the diversity required in the community and the research standards that ‘establish’ which perspectives can be heard or not because they are relevant to the research in question. A very different perspective may therefore not share many research standards and there is a risk that perspectives are excluded for this reason. Instead, the duty of inclusivity among standards is a constant reminder to consider marginal studies to understand how certain inquiries impact the lives of marginal groups; once this is ensured, one can proceed more confidently to exclude those perspectives that have no bearing, even if marginal.

An excellent way to keep this standard high is to become familiar with minority knowledge that has always studied how political and social factors interfere, even unconsciously, in research practices. In this way then, marginal viewpoints are not excluded as they lose validity or credibility. Making sure, therefore, to maintain an inclusive standard even in a methodological sense preserve the plurality of perspectives that form and enrich objective knowledge.



Initiating this kind of discussion with the help of feminist and postcolonial studies is essential to the achievement of a society that aspires to democracy and social justice. It is not that feminism in science has led to the entry of politics into otherwise neutral science, but feminist studies have unveiled the gender and other discriminatory politics already present in science that shape every stage of scientific research but are often invisible. The goal to always keep in mind, however, is how not to fall into “corrosive epistemological relativism” (Harding 2008, 146), how to reorganize Western science and technology with non-Eurocentric science and technologies and practices.

Therefore, there is a need to integrate different systems of thought, while allowing them to “flourish on their own terms” (Harding 2008, 149). The aspect of integration and different collaborative practices will be expanded in the next chapter. What is important to emphasize here is how incorporating a standard of inclusion that forces reckoning with minority and usually unconsidered perspectives broadens the object of research, benefits the subjects for whom the research is operated, and is conducive to the most epistemically inclusive science possible. It also allows studying the relations of power inherent in scientific practices. Starting with these studies reflects standpoint theory’s imperative to “start research and politics from women’s lives” rather than from the conceptual frames of disciplines, in order to create the knowledge that women and other excluded subjects need. Imperialism, racism, and sexism are “discovered” precisely from the lives of those subjected to these systems, and thanks to these studies, the role of scientific rationality and Western technical expertise in maintaining these systems is revealed.

To summarize, it is crucial to start from marginalized positions to ensure that we have relevant diversity because marginal perspectives work with Longino’s justificatory criteria through “comparative evaluation of scientific theories and research programs” (Longino 2002a, 94). Thus, they participate in the context of justification. Longino’s criteria provide a way, not absolute, but relative, contingent, and system-dependent to select, rank, and discuss perspectives, even marginal ones and to bring out how are fundamental due to their epistemic privilege over certain contexts. This also makes more evident that non-neutral positions can lead to

knowledge contrary to the value-free idea. This is possible both through empirical research-by-research study and through the critical discussion and exchange that takes place in the scientific community, provided marginal perspectives are included and the discussions follow Longino's normative criteria.

However, I also argued that one must somehow make sure that these marginal positions are included, as they are the easiest to exclude for social-political reasons. Marginal perspectives should be intended in two ways. The first one is a prerequisite because Longino's criteria do not work at their best if we do not have social diversity. The second one is a methodological precept; it is a shared social standard through which people decide and dismiss different views. To ensure we do not cash out minority's perspectives because of their less credibility, I proposed the shared measure of "duty of inclusion". This means that research should carefully consider their impact on marginal perspectives and commit to a confrontation with studies and disciplines different from the dominant paradigm.

This can be done through internal examination if there are enough various members within the community with different values, or through external review, in which case we make use of minority studies, such as gender, race, class that have consistently highlighted how social and political aspects also influence our knowledge and how we know. In a Western system organized around the axes of patriarchy, classism, racism, and other discriminations, these studies, insofar as they study from the perspective of the dominated, offer enlightening considerations but are usually regarded as unimportant or unsuitable for the problems of science.<sup>99</sup>

On the contrary, if we take them seriously and re-visit our epistemic practices and systems, epistemic communities can have more chances to secure the participation of those voices that are usually excluded, enabling two outcomes.

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<sup>99</sup> This can be explained because we are in a historical moment in which we still have to convince the interlocutor that the world is actually and structurally organized according to axes of power that create discriminated categories and a dominant category, whose dominance is also maintained thanks to the invisibilization of these forms of discrimination (otherwise one's own privilege would not be so difficult to accept to an attentive conscience). The work for change is long and difficult (but not as difficult as in the early days) and it is global: it must include culture, politics, sociality, etc. Yet, one can still find oneself faced with interlocutors who have no intention of deconstructing their own situation and that of others and deconstructing their own privilege. In that case, my strategy is to desist and save one's energy for those who are willing to do some work on themselves and their surroundings.

1) From a political point of view, the aim is to produce adequate knowledge and that marginal groups will benefit politically from this knowledge by investigating and learning how to recognize the power structures. Therefore, epistemic privilege and marginal groups produce knowledge capable of making political and social change, “the extent to which research produces social benefits is the extent to which it advances its epistemic or cognitive aims, and vice versa” (Intemann 2016, 272). The methodological thesis of starting from marginal groups involves asking how power relations are integrated in science and how this can direct the execution and outcomes of research differently.

2) from an epistemic point of view, marginal voices can find biases more efficiently since they have a different view than the dominant one.

“Drawing from the strengths of an insider-outsider positionality, a feminist practice of research agenda choice is not meant to completely discard or erase all of the traditional activities of scientific inquiry, but rather to provide the feminist scientist with the necessary tools to produce interruptions or positive disruptions in the processes of scientific knowledge-making. It is a practice that can transform anxiety-producing dilemmas into the ability to ‘ask different questions.’ This ability ultimately translates into her power to produce different scientific knowledge, which at the end of the day, is the goal for every feminist scientist.”

Roy 2008, 154-155

Marginal positions, therefore, precisely constitute those perspectives that serve to identify and analyze the background assumptions of Longino, which give different relevance to certain evidence in the context of observations and theories. These voices encourage us to produce new content from scratch or revolutionize old ones.

This potentiality in marginalized positions cannot be known *a priori*, and history has shown that it can have relevance even in areas where gender is not blatant. Hence, these marginalized positions must be heard because it is not good to exclude women from certain places just because their only epistemic intake is related to gender issues. According to standpoint theory, to be considered adequate (to have heuristic power), the epistemic privilege does not necessarily have to refer to all objects of knowledge. Usually, the epistemic privilege offered by standpoint theory is readily accepted in matters where gender ideology seems glaring, whereas,

in topics ascribable to the so-called hard sciences, the validity of epistemic privilege appears to fade away. Standpoint theory reiterates that the advantage can vary from domain to domain of knowledge. The domain in which it is easiest to hold is social relations (Harding 1991, 46 and Wylie 2003, 37).

Nonetheless, the world of social relations is huge, and gender relations are all-encompassing. The Western world and its meaning are organized according to gender and sexual relations, so I think it is important to analyze how feminist reflection can illuminate aspects of knowledge, natural ones included, where social factors influence seem irrelevant. It is true that hard sciences have less to do with human relationships and therefore put less relevance to the question of how or even why bother to justify the use of values or their role. But it is impossible to assume a priori that extra-scientific values are never useful in hard sciences or that their entry does not change relevance given on data and observations.<sup>100</sup> So, the creativity and diversity brought by different people are always an added value to the discussion.<sup>101</sup> If you do not include social identities or include them only for certain issues, you risk not changing academic communities and only exploiting that diversity when you need it and leaving the status quo intact.

Contrary to the assumptions of classical empiricism, prejudices are not eliminated by better adhering to scientific methodologies, and empirical adequacy is necessary but non-sufficient to determine the evidentiary link between observations and data. Feminist epistemology is well aware of the question of empirical adequacy, so much so that it argues that some theories and scientific explanations proposed by feminist theories are, in fact, more empirically adequate than other theories that do not share feminist values.<sup>102</sup>

Harding supports this idea when she argues theories proposed by marginal and oppressed positions improve knowledge. Knowledge should reflect the world

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<sup>100</sup> Intemann (2001) reports the case of cosmologist Vera Rubin and her hypothesis on dark matter. Contextual values influenced value judgements concerning Rubin's identity and testimony. The problem is that these judgements explain why her working hypothesis was not adequately considered and explored, for more details see chapter four of this thesis on epistemic injustice.

<sup>101</sup> See chapter four of this thesis discussing diversity, how to optimize it and not exploit it without changing the status quo.

<sup>102</sup> Cf. Bleier 1984, Fedigan 1992, Hrdy 1995, Longino & Doell 1983; Longino 1996, 45.

as a whole, and the views of women and marginal subjects are more empirically adequate when they add new pieces of information, previously missing or incorrect (Harding 2004b, 136). Standpoint theory also emphasizes social diversity among identities since “different experiences that individuals have from different social positions give them access to certain types of evidence” (Intemann 2010, 785).

It is possible to note a similarity with what Longino (2002b) says when describing her project of contextual empiricism, explaining that it offers a type of objectivity whereby “scientific theories provide a veridical representation of the entities and processes to be found in the world and their relations with each other” (Longino 2002a, 97). It is an empirical operation combined with careful discussions that make evident which social locations are better and relevant to certain inquiry.

Besides, Longino (1983; 1995; 1996) maintains the value of empirical adequacy when she includes it in feminist values (in common with the traditional value set). Feminist values, therefore, increase knowledge because, like for Harding, they generate critical perspectives and reopen old questions. A new convention of objectivity regarding empirical adequacy and how knowledge is achieved must recognize how social locations and power structures limit and shape what we know. It reveals the ideological dimension of the construction of knowledge.

Understanding these social aspects inherent in scientific reasoning explains why the absence of women and marginalized identities is political damage and a cognitive failure that follows in distorting or hiding entire epistemic parts and experiences of certain groups, falling short on empirical adequacy. To avoid this, starting from below is the best methodological resource for understanding how this exclusion works. On the contrary, having different experiences will give access to the diverse relevance on evidence and they will constitute the cornerstone’s diversity on which the success of Longino’s objectivity is based. Their interaction will lead to epistemically and politically responsible knowledge since it will produce beneficial knowledge even for marginal groups.<sup>103</sup>

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<sup>103</sup> Kourany suggests that feminist perspectives on science can bring “a new program for the philosophy of science, a program for a socially responsible philosophy of science” (Kourany 2003, 1).

Hence, the combination of Longino and Harding endorses the standard for objectivity, arguing coherently for science informed by feminist values by developing an account of objectivity without being necessarily value-free.

### 3.4 Cumulative Conclusions of Chapter Three

I called my integrative approach “contextual standpoint theory”. As a summary, I believe it is useful to explain why I chose this expression. The word *contextual* maintains the contextual, social, and situated character of knowledge. *Standpoint* refers to the methodological connotation of standpoint, that is, of employing different and minority voices and starting from them to broaden knowledge. The *theory* refers to the feminist theory of knowledge, i.e., what it means to do feminist science, maintaining a critical eye for the voices feminism advocates.

This epistemological approach is part of a more general one that rejects the idea of knowledge as value-free and re-evaluates the tie between observation, evidence, elaboration, and justification of scientific theories. In addition, the feminist lens studies how the causes of political and social discrimination of women and marginal subjects could also be found in science, through the phenomenon of the sexual division of labor, exclusion from the places of production of science, testimonial or hermeneutical injustice, and in the ways of conceptualizing science as abstract and neutral, adjectives compatible to the descriptions usually attributed to the male gender.<sup>104</sup> For all these reasons, feminism has something to say about the long-standing problems of epistemology, such as that of scientific objectivity.

In particular, my contextual standpoint theory project re-discusses and combines two of the most famous solutions – contextual empiricism by Longino and strong objectivity by Harding. To describe exactly how my project works, I divided the sections into three parts.

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<sup>104</sup> Cf. first and four chapter of this dissertation.

In section 3.1, I selected the characteristics that share the two approaches, highlighting four of them: contextuality, sociality, politics, and normativity. These four commonalities also serve to clarify the (shared) premises in which the two authors move and propose their solutions. Thus, the normative nature reaffirms that we cannot continue to wish for value-free science as our contextual values and background assumptions enter and affect knowledge production. Instead, the point is to understand their role and possibly how best to control them in the data/theory connection. Contextual character reiterates the central role of one's social position and how it influences the formation of our contextual values and background assumptions. The social character reminds us that our cognitive practices are social, placing importance on us as a collective subject and producer of knowledge. Finally, the political aspect underlines the insufficiency for both authors of political liberal feminism: it is not by better adhering to existing scientific methods that we improve them because sometimes we have to subvert them completely. The political character also leads to considering the knowledge-power relationship as intrinsically connected, rather than imagining knowledge (neutral) and acted upon politically or ideologically in some way.

But this was not enough; I also added that the two positions are perfectly analyzable if we use the classification of the three theses, usually combined with the standpoint theory. By shifting the discussion to a matter of quantitative degree rather than qualitative difference, I believe it is much easier to understand how similar the disciplines are and how the other makes up for it where one is missing. This is the case of Longino's justification with her preference for the thesis of collectivity achievement and Harding, who instead reinforces the heuristic side of knowledge with the preference for epistemic privilege. The last part of section 3.1 has been dedicated to smoothing out a contrast between the two disciplines, showing how in Longino there is a preference, albeit implicitly, for certain values, in which we can also include feminist values. Similarly, through the deconstruction of the typical attributes of epistemic relativism, I show how some components, including the pluralism of values, are accepted by Harding. The characters of standpoint theory suggest that it is much closer to a relativistic system than universalism.

In section 3.2, I felt necessary to specify what are the points to be strengthened in the two projects. In the case of Harding, the goal is to show how even though various hypotheses of justification are examined, standpoint theory at present has a problem with a criterion sufficiently capable of validating their epistemic contribution. Harding's standpoint theory, while opening to democratic project, lacked a justification, even if only semi-prescriptive, on how to consider which values are more conducive than others to include in cognitive practices. For an approach that considers certain values epistemically superior to others, this, therefore, risked considerably weakening its argumentative power.

In Longino, on the other hand, the problems were mainly related to (1) basic ambiguity between which values lead to successful science. This underlying ambiguity also caused a lack of clarity about (2) how to achieve inclusion of differing viewpoints, especially those that counter the dominant view. This is a fundamental point correlated to the normative burden of objectivity. Longino's fourth criterion presents a risk since there is no adequate discussion of how to have prior within the scientific community a diversity that is truly a bearer and representative of marginal communities that have been underrepresented.

The final steps are to understand how the intersection between the two disciplines adequately occurs. As I said initially, I do not want these two disciplines to go in parallel but to intersect consistently. If the two solutions alone present problems, I advocate combining them to take the best of both and solve the problems. Section 3.3 then shows how combining these two perspectives improve the difficulties mentioned in 3.2.

Starting from marginal lives becomes the way to ensure that there is effective diversity in the scientific community. Only in this way, Longino's criteria of justification can fully express their potential since they allow an adequate recognition of the criticisms and integration of these criticisms because of a knowledge that is respectful of several points of view. Standpoint theory satisfies the need to include researchers with different experiences, interests, and values. Then, as community members, these researchers must be given the same opportunity and authority to scrutinize the research. Standpoint theory also prescribes to start from scientific phenomena of different perspectives, that is, the



experiences of marginalized groups that influence research or questions to start on, making sure that gender, ethnicity, class, and geopolitical location are always visible and use them as categories of analysis when appropriate.

If one formulates these ideas in words and terms typical to Longino, we will obtain that the observer and the observed are placed on the same level. The causes attributed to certain behavior patterns in natural and social life, such as limitations or resources due to gender, race, sexuality, must be examined as part of the background assumptions, which then function as evidence for certain hypotheses. Longino's criteria constitute the normative recommendations on critically identifying and managing social and political values and the critical discussion to strengthen scientific objectivity. Epistemic privilege remains because marginal perspectives must have a preferential channel given their epistemic and political contributions and are not currently considered by default.

In section 3.3, I also dealt with how this union works in practice; what exactly does it mean to start from the bottom? And how does this precept intersect with Longino's four criteria? To answer this question, I believe that marginal perspectives should be understood in two different ways, depending on the function they represent.

The first form is to understand perspectives as a prerequisite, and this translates into practice with the use of quotas, external scientific analyzes and surveys not necessarily made by the same scientific community that investigates the given problem, exchanges, and information with other communities (political and social). The prerequisite goes well with Longino's first, second and fourth criteria. As they are indicated to consider, safeguard, and use the points of view, especially the critical ones, which in the collective discussion led to better knowledge. The second way to understand the marginal perspectives turns instead into a methodological precept of inclusion. Imposing such a precept also at a localized level allows sparking changes, even minimal ones. Every effort counts.

The duty of inclusion and diversity does not refer in this case to the presence of different identities but refers to the use of research paradigms and knowledges that in mainstream theory are not always used or taken seriously. These minority studies examine the relations of power and hierarchy and aim to dismantle them,

describing the systemic nature of patriarchal, racist, classist, abilistic ideologies highlighting how they too are interconnected with science in content and methods.

I reflected a lot on why my contextual standpoint theory is one viable and more profitable way for feminist epistemology to approach the highly debated problem of scientific objectivity. There are at least three reasons that should be highlighted.

1. Firstly, the two positions I chose allow me to analyze both the contents that feminist research may suggest and the methods through which knowledge is objective. The analysis of objectivity can be centered on two *targets*. Objective may refer to the products of science as well as to the processes of objectification:

According to the first understanding, science is objective in that, or to the extent that its products—theories, laws, experimental results, and observations—constitute accurate representations of the external world. [...]. According to the second understanding, science is objective in that, or to the extent that, the processes and methods that characterize it neither depend on contingent social and ethical values nor the individual bias of a scientist.

Julian Reiss 2017

The products of objectivity refer to theories, observations, experiments that are objective, and for they correspond with the external and social world. In the feminist epistemological framework, this side is adequately represented by the case studies of the standpoint theory that show how marginal and feminist perspectives raise the epistemic level and the contents of science due to the adequate representations of experiences of the groups usually ignored. These experiences typically contrast with the dominant framework and motivate new inquiries or reopen old questions. Therefore, they are the contents of our knowledge. In Harding's standpoint theory, the relationship between a certain type of understanding and the object she knows is one of the principles of standpoint theory. Through epistemic privilege, an understanding can illuminate different

aspects of the same research object that is known. This aspect, although contingent, is linked, in standpoint theory, to the researcher's historical and cultural identity.<sup>105</sup>

A second sense for objectivity refers to the methods and processes through which knowledge becomes objective (Reiss 2017). One of the dominant epistemological ideals to pursue is called value-free theory, meaning the claims, theories, methods, and outcomes of science should be free of any non-epistemic perspectives, values, personal interest, or bias of any kind.

Popper<sup>106</sup> (1934) for one, acknowledged that the objectivity of scientific statements also lies in the fact that they are tested inter-subjectively. There are several aspects involved in this methodological process to be taken into consideration. Longino pays a lot of attention to these aspects by saying that our objectivity will be the most adequate as we can set up regulatory and normative criteria for the social processes in which knowledge is generated. Yet, it should not be forgotten that these criteria are not transcendent or ahistorical but are always the outcome of a cultural and historical context and that each theory cannot be developed independently of its social context. Objectivity, therefore, lies in the problematic relationship between theory and facts and in the process of revision and criticism, where scientists arrive together at a certain result. The subject of scientific knowledge is not the individual but the scientific community as a collective.

Considering the products and processes of objectivity under the lens of feminist epistemology means that objectivity is not just a matter of improving the methodological tenets of scientific objectivity, such as studying the probatory link between data and observations in the scientific community (a major concern of Longino's), but also find and study the recognition of those mechanisms in which power structures limit and shape what we know, by adding new contents to science related to phenomena of the world which are usually ignored. Standpoint theory

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<sup>105</sup> Unlike the usual precept of analytic philosophy, the relation of the knower to the object, is not simply "S knows that p," where S is interchangeable. Especially in feminist theory, S is an embodied, relational subject and cannot be detached from its relations.

<sup>106</sup> I mention Popper here because he is an author Longino refers to when explaining her idea of intersubjectivity (cf. Longino 1990). But in philosophy, we can find other authors who give importance to this aspect in an epistemological theory, cf—Bogdanov (1913) but also the psychology of the nineteenth century.

fulfills this task explaining why the absence of women is a political shortcoming and the cognitive failure that follows in distorting or hiding epistemic parts and experiences relatable to marginal groups.

2. Consequently (and secondarily), the combination of these two perspectives makes it possible to obtain a real and more accurate contribution of feminist epistemology to the debate of objectivity in the philosophy of science, through both an all-encompassing consideration of the scientific process and with the correction of some vulnerable points within the individual theories (standpoint theory and contextual empiricism) that risk diminishing the solidity and importance feminist epistemology can contribute to the philosophy of science.<sup>107</sup> My intention in bringing the two perspectives together is to avoid choosing between them as both relevant to knowledge's analysis. Indeed, I put them together to get a clearer picture of what a feminist science offers in terms of contents, but also of what it means to do *a feminist science methodologically* (Longino 1987, 53).<sup>108</sup>

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<sup>107</sup> It is no coincidence that feminist epistemology, like all theories bearing the burden of feminism in their name, does not attract immediate success. Code contents that feminism in epistemology was seen as unjustified interference with something political that dirtied the pure descriptions of knowledge. There is a specific resistance from mainstream epistemology to accept feminism because it centered on previously moral and political problems. Therefore, it was believed that epistemology, as neutral, did not have these kinds of issues (a sort of naive realism separated from the moral and epistemic aspects of research) (Code, 2007, 216). Feminism has indeed started from the margins to the center, where centrality is directly proportional to the level of abstraction that a field of knowledge possesses. But feminism moved gradually towards the center, showing how the problem of androcentrism was also present in epistemology. The recognition of political commitments and the effects in each philosophical position has led to a choice to reconstruct epistemology on a more self-conscious basis. This restructuring also widens the boundaries between epistemology, political philosophy, ethics, and other philosophical areas that previously seemed very distant.

Fox-Keller has also underlined how feminist aims are usually misunderstood when applied to science: the feminist investigation of the gendered approach in science is confused with the feminine approach to science and the feminine way of knowing. Alternatively, the feminist exposé is trivialized: sexism in science is usually considered ancient history but, as Michèle Le Dœuff puts it, '[sexism] it has all been over since about the day before yesterday, and yet I experience it just this instant' (Le Dœuff 2007). On the marginalization of feminism from epistemology in the mainstream debate, see also Schienbinger 1987, Haslanger 2008, Harding 2015.

<sup>108</sup> When I say to use a feminist lens to analyze phenomena, I mean there is a feminist way to do anything. Feminism is not born initially as a theory, but it is always practiced because it always starts from a need, a necessity, an action. For this reason, feminism is also inclusive and not vertical. The first action is always to listen and create shared networks and solutions, broadening our gaze on epistemic practices considering how gender has carved the concepts of

3. Thirdly, with this union, I propose to reassess the same notion of objectivity that will enrich the debate in question, joining those sympathetic theories towards considering social factors, but which do not place the feminist lens as central in the analysis of objectivity. By feminist lens, I mean that feminist epistemology uses and studies the analytical category of gender, namely the idea below assigning metaphors, meanings, tasks, rights, and duties to the masculine and feminine spheres that, although based on sexual differences, have nothing to do with them. The category of gender has affected access to knowledge, knowing, and how cognitive authority is distributed. Therefore, gender, socially constructed, has shaped access and knowledge production of the epistemic knower. In general, therefore, where there are significant social stratifications, there will be different epistemic effects, such as the distribution of cognitive authority and underlying beliefs taken into account to compose the link data observations (Grasswick 2011).

We must then consider the social and political impact that changes based on the body and position. Therefore, we can better understand the discrepancies that we obtain once marginal voices are added to knowledge (Harding 1986b). I began to know from my own experience and being a woman in a patriarchal society is interconnected with epistemic practices at such a permeated level that It is not enough to speak of sexist assumptions as mere biases because the typically Western thought system is inertly fueled on and by a sexist and racist system.

Feminist epistemology is aware of gender factors that interact with our epistemic practices and uses them to analyse knowledge. Educating our gaze to

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science and how our epistemic practices have evolved. For example, science has been constructed as hardly compatible with descriptions of femininity, since it has been built around the characters of transcendence and control, but also how the division of gendered social labor has also been applied to scientific work (for more details, see Chapter One of this dissertation). Moreover, faced with the accusation of reprimanding old sexist stereotypes (Haack 1993, 32), feminist epistemology responds by saying that one cannot speak of a single point of view of women. We cannot and must not confuse the feminist adjective with the feminine one. Feminist epistemology is not a science expressed in a particular cognitive temperament of women, but that it says that science was imbued with male prejudices (Severini 2015, 134).

consider gender as an impacting category will give us a more comprehensive look at how it affects and works within how science was built.<sup>109</sup>

Furthermore, the objectivity does not fall into arbitrariness and relativism. Feminism is interested in the relationship between subject-object relationships, and it treats scientific knowledge in a participatory, inclusive, and partialized manner to correct and drop exclusion schemes. Ultimately, therefore, the analysis of objectivity within feminist epistemology and the union of the two perspectives serves to endow objectivity with a series of characteristics that are more proper to its complexity and concern the *essence*, method, and attitude of the scientific researcher.<sup>110</sup>

In summary, the two solutions of standpoint theory and contextual empiricism create a symbiosis that shows how the two parts of objectivity (contents and processes) work, including the contents, carried forward from marginal perspectives and endowing them with eligibility criteria to justify them.

Finally, it is important to clarify that the absence of women, gender data and other marginal identities in epistemology is not always malicious or premeditated but is the consequence of a way of thinking that has existed for millennia. However, the lack of data means a lack of information, and if we are to design a world that works for everyone, we also need women and marginal subjects. Not to mention that the exclusion of the female perspective feeds a sort of involuntary propensity for the masculine that often passes itself off as universal, while female experience passes as niche. In a male-friendly culture like ours, prejudice against women is inevitable (Criado-Perez 2020, 25). The exclusion of women from positions of power and cultural history are excuses to justify teaching history that focuses almost exclusively on men. Being recognized as woman means there is the risk of being recognized as the perfect person to clean the toilet, or being paid less, or abandon the career etc. It is a paradox of being women, all too visible when there is a need for

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<sup>109</sup> Haraway's studies of the evolution of primatology exemplify how the entry of different perspectives and identities into these sciences has led to the re-evaluation of paradigms and explanatory frames used to describe primate behaviors and sociobiological theories. See also Timeto (2020) for an analysis in Italian.

<sup>110</sup> The summary of these adjectives about objectivity can be found at the end of this thesis, in general conclusions. I decided not to place it immediately at the end of section 3.3 because, the results are the conclusion of everything discussed in the thesis and not just that contained in chapter 3.

a subordinate class,<sup>111</sup> and invisible in the moments that count (Criado-Perez 2020, 444).

What we must therefore focus on is that certain stories are presented to us as objective facts. Still, in reality, they hide a deception since they are distorted by the lack of perception of half the human race; they are altered by what we think we know about ourselves and feed the male myth. The white male is an implicit datum; it is predefined, the world is designed for his identity and needs, so it does not need to be expressed. MacKinnon calls the male point of view an undeclared perspective for the simple reason that it is not presumed to be subjective but objective. But a white male is an identity, just like the others. Collette Guillemin (1977) denounces how actually the whiteness does not really represent a color; it is more an invisible attribute that works precisely because it seems uncoloured.

The lack of women and marginal actors is present also in the academic world and it is not just a gender problem; it should concern us all since relates to quality of the research produced by our universities and theory of knowledge. The quality of academic research has a significant impact on government policies, medical practice, and workplace health regulations. It affects everyone's life, so we must not be forgotten (Criado-Perez 2020, 147). If more women question gender prejudices, then the more women publish, the more the gender gap will disappear. And to get to know women and minorities more, the path is "relatively" easy:<sup>112</sup> give visibility,

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<sup>111</sup> The paradox of female identities is that in certain circumstances - for example, assuming positions of power - they are almost invisible. In other situations, they have hypervisibility. This is the case with the sexual character attributed to female bodies, often in situations that do not require this attribution, such as the phenomenon of objectification. The root of sexual objectification is what Laura Mulvey (1975) calls the male gaze, to identify all those narratives in which the gaze is dominated by male pleasure, projected onto an erotically stimulating and stereotyped image of women. Our value would depend precisely on our watchability and, therefore, on the attention we receive from the male gaze. From this also derives habitual body monitoring (i.e., the regular monitoring of the body, a woman's tendency to think about how she looks constantly) and self-objectification.

<sup>112</sup> Educating and informing oneself about postcolonial, feminist, subaltern studies is relatively easy in Italy. Scholars are dealing with these topics, and many popular texts are translated into Italian, so no other language is required. In other places, educating oneself may be more difficult. But precisely because some subjects possess a privilege, I believe it is increasingly vital that dominant ones also recognize it and use it to become aware of situations that they took for granted and that perhaps unconsciously contributed to the invisibility of marginal subjects. Giving up privilege is not easy, as it requires a profound work of self-consciousness, but at the present state, it can no longer be an excuse.

give representation, leave space, because when women are involved in decision-making processes, for example, in academia, women make their part in the production of knowledge.

The objective knowledge proposed by feminist epistemology directly confronts this invisibility and tries to make up for it. From an early phase of existence in which feminist analysis had to find its way into a sometimes even hostile environment, feminist epistemology has grown to establish itself as a legitimate producer of knowledge, highlighting how both the interests and values of the researcher can act as a trigger in the relevance to empirical evidence and in the importance given to diversified social identities, which allow minorities to enter science. Feminist epistemology allows defining an alternative form of knowledge based on the importance of one's position, which determines my knowledge, validity of this knowledge, and the importance of collaborative and inclusive practices between research groups.

One should not fear dissent; it is foreseeable that the friction between different points of view can lead to struggle and discussions, but the dialogue is productive if we commit ourselves to respond and argue and learn more about the perspectives of others, challenging our background assumptions (which entail even social values and biases). Dissent can and must lead to elimination in the case of dogmatic or bigoted positions. What must always be avoided is to continue to ignore or remain utterly oblivious of the different perspectives far from mainstream. The alternative to arbitrariness is partiality, locality, and possible connections in solidarity to obtain epistemic shared conversations.

Standpoint theory and contextual empiricism join forces to build a trading zone,<sup>113</sup> a paradigm and method to obtain a different objective knowledge from the traditional one, which I have denominated contextual standpoint theory.

This is the epistemological promise and premise of this dissertation.

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<sup>113</sup> The concept of a trading zone was inaugurated by Galison (1997) in the social sciences. It represents an interdisciplinary alliance formed by two or more different approaches. One can also distinguish between forms of trading zones based on how the union of approaches occurs (Collins et al. 2007). Lorraine Code (2011) speaks of feminist epistemology as a multidisciplinary approach, which borrows concepts developed in other contexts, such as the 'trading zone' as I have done, calling this methodology the "scavenger approach".



## Chapter Four: A Feminist (Political) Epistemology Broadening the Scope of the Analysis

The dominated live in a world structured by others for their purposes — purposes that at the very least are not our own and that are in various degrees inimical to our development and even existence.

Hartsock 1998, 241

### 4 Introduction

In the previous chapter, I focused on presenting my project: contextual standpoint theory, which integrates two perspectives in feminist epistemology, standpoint theory and contextual empiricism. Through my project, I have explored both the contents and processes of scientific knowledge enterprise, clarifying what it means to science with a feminist gaze. The research covered both *theoretical* and *methodological* aspects. In this last chapter, I wish to broaden the focus from the concept of objective scientific knowledge to a wider look at academia and their practices in general and how feminist reflections fit in practically. The intent is to show how to intervene practically in the academic communities, which are not at all abstract entities but vivid and interactive bearers of knowledge. I think it is necessary to reflect in this last part also so that the consequences that I have argued so far do not completely displace the reader on what to think about knowledge and not to remain in abstract. My intent is not only to deconstruct and paralyze but also to initiate a constructive change always keeping in mind the feminist imperatives to decimate any kind of discrimination. In this way, I also reprise the general framework of the first chapter. Moreover, the previous theoretical framework of chapter three is now integrated by a survey of the practical schemes of academies to improve them. Some of these schemes are also exemplifications of the methodological ideas I discussed in my contextual standpoint theory.<sup>1</sup>

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<sup>1</sup> For example, collaborative practices or inclusions standards.

To study academic practices, I argue that it is necessary to adopt a feminist-political epistemology. This position shares plenty of assumptions with the original feminist epistemology discipline (the originated in the 1970/80s), such as intersectionality and other tools, but it expands the original scope of the discipline. I suggest studying epistemic academia through the lens of a feminist-political epistemology because a feminist-political epistemology considers the two poles [*episteme* and politics] to be entirely and mutually integrated and influenced and it investigates this pair with a specific feminist intersectional approach.<sup>2</sup> Feminist-political epistemology means learning the intimate connection between science, politics, and the structures of power. In general, this means addressing both the analysis of the material dimension of science, institutions, and academies as constituent forces of production, but also the cultural dimension and how therefore the products and cultural forms of science are influenced by forms of power. The gender approach<sup>3</sup> is fundamental to study the function of science but also the justification and legitimacy of the contents of science. To this matter, the feminist scholar Elizabeth Anderson already used the expression ‘political epistemology’ as the best and appropriate practice for studying academic research. Indeed, we cannot have a theory of knowledge that is not political epistemology as knowledge research is a social practice governed by social norms, with political goals (Anderson 1995c, 188-89).

To investigate the epistemic practices, I also use some recent reflections that appeared in the debate which share feminist concerns on the social and political intrinsic aspects of knowledge. Some of them are also grouped under the label “political epistemology”.<sup>4</sup> I wish to point out that my feminist-political epistemology

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<sup>2</sup> An intersectional perspective is important because no matter how hard we try, we are forced to start from ourselves, from our own experience, and therefore, I must contextualize my experience, and in our Western society, gender and other discriminations have a central role in shaping our experiences. So, it is necessary to consider the social and political impact of the body and social position of the epistemic knower. These are interconnected with cognitive practices, such as access to knowledge, credibility, and communication of results. Our life, body, and identity are influenced by the asymmetrical category of gender divided into what is natural and what is social.

<sup>3</sup> As I did in the previous chapters, I will use “gender” “embodied” perspectives as synonymous of intersectional simply for better fluency.

<sup>4</sup> See for example, Landemore 2013 or Omodeo 2019. For a more analytic approach, see Hannon & Ridder (2021). They have gathered a compendium where they identify four macro-topics

is characterized by an indispensable intersectional gaze to study political factors in science production, which is not necessarily in other political epistemology stances. Not always in approaches that consider social and political factors is proper emphasis given to how gender, sex, race etc., overwhelmingly influence the organization of our society (including epistemic practices).

The analysis on the practical dimension of academic culture is necessary because even if one does not have to be a revolutionary to recognize that one's racial or gender identity in our Western society can influence epistemic experiences and circumstances, scientists do not always receive the proper training to recognize the social dynamics that inhabit their field of study and therefore are led to believe that their scientific perspectives are perfectly objective (Wyer XIII, 2001). Instead,

“The objectivity of research requires an effective recognition of inquirers' equal status in the sense that all are equally entitled to speak, be heard, and be respectfully responded to. Currently, entrenched informal norms of communicative interaction in the university and society at large fail to meet these norms of civility and equality. Instead, they systematically suppress or discount the voices of women of all racial groups and of men and women of color. Teachers at all levels of education ask more, and more challenging questions of men than of women. Men talk more often and at greater length than women in the hierarchically and competitively structured classrooms that are the norm in higher education. They influence the topic of conversation more than women do. They interrupt women more often than women interrupt them, and do so more often by making inappropriate personal comments that shut women up. Teachers pay more attention to white men than to women, more attention to white students than to students of color, and least attention of all to female students of color. They also offer more encouragement to white men than to women and expect them to achieve more, especially in mathematics coded “masculine”. Similar patterns of interaction occur among faculty members, and disadvantage male and female students and faculty of color and white women.”

Anderson 1995c, 199

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investigated by political epistemology: (1) the concept of truth and consensus in democracy; (2) the role of experts in democracies and the growing distrust of them; (3) the theme of epistemic injustice and (4) the epistemology of vice and virtue. Other scholars I refer do not adhere openly to political epistemology, for instance A. Moore (2014; 2016), but they show interests in political and social factors in epistemology.

Here, Anderson talks of exclusionary patterns in university and place of knowledge, showing science and rational norms have been used to exclude women and “other different” from the centers of knowledge. The response to these exclusionary practices is not to give up the powerful claims of scientific knowledge, but to claim them, to re-appropriate them. Hence, a feminist-political epistemology that understands to what extent knowledge depends on the institutional structures that make it circulate is certainly necessary to create a more virtuous epistemology of everyday life.

This chapter will be organized into two parts. In the first part, my investigation starts from the topic of epistemic injustice and the epistemology of ignorance. Both can be connected to a central topic in academia: the status of the expert. Thus, I will be reflecting on the role of experts, the main protagonists of epistemology that forms the epistemic communities and validate scientific knowledge. Knowledge produced by these communities and agents plays a leading role and influences almost everything. It is therefore not surprising that scientists, experts, are called into question as advisers on political matters.<sup>5</sup>

However, the social constructivist turn in science studies<sup>6</sup> has indeed struck strong; it has opened a debate on knowledge from a sociological point of view, questioning whether scientific experts have special access to the Truth<sup>7</sup> and why

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<sup>5</sup> The relationship between science and society is highly debated and has never been a straightforward view. With the escalation of the covid-19 pandemic, this has been increasingly evident, because several experts have spoken out on the issue, or have been called upon to make decisions. The experts cover different areas: virologists, but also philosophers (e.g., on the issue of quarantines), historians, etc. For a broader reflection on experts and intersection of science and policy, see also Omodeo (2019), especially third chapter.

<sup>6</sup> Perhaps one of the most extreme positions in the past was represented by the sociology of scientific knowledge, particularly by the Edinburgh school (Barnes et al. 1996), which attributes social and cultural factors in the genesis of knowledge. The laboratory studies represent another strand that pays particular attention to the micro-sociological and ethnographic explanations, (Latour et al. 2013) (Collins & Pinch 1993) (Cetina 1995; 2009). Today, the sociology of science has also developed by intersecting with other disciplines such as the history of science, anthropology, natural sciences. In anglophone countries, it is also referred to with the general label of STS (Science and Technology Studies) (Bucchi 2004; 2010).

<sup>7</sup> The use of a capital T is no accident. The capital T represents the concept of truth as univocal and indisputable. But today, epistemology and its classic themes such as ‘consensus,’ ‘expertise,’ ‘truth’ are in crisis, aggravated by the clash of two characteristics inherent in scientific knowledge but in contradiction with each other. On the one hand, the scientific method by definition proceeds through errors and reiterations. On the other hand, generally, scientific knowledge is distinguished from other types of knowledge for its character of reliability and

trust experts if they do not. Feminist reflections also incorporate sociological elements<sup>8</sup> since they investigate the problems of expertise, especially relating to problems of epistemic trust and distrust. But, even if sociological studies and feminist studies pose a problem on our epistemic practices, the intent here is neither oversimplifying the processes of science nor falling into complete arbitrariness and abandoning science altogether.<sup>9</sup>

Science should not be seen in black or white, as a choice between two absolute alternatives. Science has been built pragmatically and not just ideally, independently of what ideology claims. It is precisely by following this warning that I think it is indispensable to reconnect theory and practice, via praxis.<sup>10</sup> If we cannot detach ourselves and reach the view from nowhere (Nagel 1989), then we must return to an objective vision of our scientific knowledge as fallible subjects.<sup>11</sup> Being objective, then, means to renounce any absolute foundations and to evaluate knowledge in a never absolute or definitive way. If science is not black or white, then

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objectivity, which is largely motivated using a (scientific) method that would make the content objective. By being objective, this knowledge also assumes the characteristics of neutrality, i.e., neither its content nor its methods are affected by subjective preferences or interests, and, for the same reason, it also possesses the characteristics of universality, as the contents are verifiable and shareable without any distinction. Abandoning these unique attributes of science largely belongs to postmodern reflections, which cast doubts on the idea of scientific progressivism and other certainties of science. For some examples, on the work of scientists, historical substrate, and modes of representation of the universe see Ciccotti et al. 2011.

<sup>8</sup> Cf. Whelan 2001, Sismondo 2010, chapter 7, Wyer 2001.

<sup>9</sup> Postmodern feminism has led to a rethinking of some typical concepts of feminism, such as the category of woman (Butler 1990, De Lauretis 1999). Women do not belong to a unique and undifferentiated category. But postmodernism, denying any legitimacy even to the concepts on which feminism has established itself, risks erasing any legitimacy of any type of reality. By reducing everything to roles, we risk fragmenting any attempt at reasoning, even if temporary. The problem is that those occupied by women even if socially constructed roles, they document real differences in the condition of social and cultural life. More recent work on the notion of woman in analytic feminism is by Haslanger (2000).

<sup>10</sup> The reference to *praxis* is to the Italian Marxist thinker Antonio Gramsci (1976), who has always considered Marxism a revolutionary *praxis* [practice] which, since it must continually come to terms with reality, is never rigid in dogmatic categories, but must adapt to contexts. In this sense, I mean that from praxis one reconnects to theory. For a reconstruction of Gramsci's philosophy in a political epistemology framework, see Omodeo 2018; 2019.

<sup>11</sup> As argued by Collins & Pinch, human error is usually used as an excuse or scapegoat for post-accident inquiries. Instead, the human error should be the signal that brings us back to the reality of science, namely the fact that it is a human activity (Collins & Pinch 1993, 142). Since it is a human-made activity, it is normal to have human error. See also Douglas (2000) and Koskinen (2020) on risk assessment.

experts are not gods nor charlatans. Their knowledge is no more sacred or immaculate than others.

The topic of epistemic injustice is connected with expertise, because it studies the phenomenon of attribution of epistemic trust or distrust to experts, underlining how the logics of power are structurally connected to these epistemic operations.<sup>12</sup> From the political epistemology perspective, I will use reflections on epistemic filters to analyze how epistemic injustice and epistemic filters may interrelate with each other. These two levels are complementary because epistemic injustice represents and explains what happens to the speaker affected by the dynamics of power that intersect with epistemic aspects. On the other hand, the epistemic filters represent and explain what occurs and how the listener is affected by these same dynamics of power interrelated with epistemic aspects.

Both epistemic injustice and epistemic filters' reflections suggest cognitive diversity for improving epistemic practices. Excluding certain profiles and identities is not only injustice from a purely social point of view, but it is an error from the epistemic point of view, given that it lacks certain visions and perspectives, which also contribute to knowledge. The diversification is important because the heterodoxy between the different points of view produces rejection of dogmas and pushes towards more innovative and creative thinking.<sup>13</sup> Therefore, the identities afflicted by epistemic injustice deserve to be seen in their expert status. In fact, by warning of the phenomena of epistemic distribution and excessive unequal crystallization of specific epistemic agents based on their social identities, the winning strategy aims for inclusion and respect for social and cognitive differences. This leads to a diversification of the experts' profile who had been predominately

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<sup>12</sup> Exclusionary patterns or discriminations only because of the identity they represent are present in science. For example, the Italian physics professor, Alessandro Strumia in a seminar on Physics and gender equality argued that women are less skilled in studying and researching physics than men, reiterating his idea in a recent article entitled "The data does not lie, women don't like physics". Unfortunately, these are not new positions, especially in science. No more than three years ago, Nobel laureate in medicine Tim Hunt claimed that the problem with women in the lab was that they start crying as soon as they are criticized (Dotti 2019). During my brief experience in academia, I had a taste of misogynistic assumptions as well.

<sup>13</sup> For instance, the standpoint theory includes and brings into the process of knowledge those marginalized groups that have been excluded, and recognizing their epistemic privilege, standpoint theory makes the scientific community more inclusive and welcoming.

confined to a very specific political, social, identity image and damaged the testimony and expertise of other identities.

The second part of the chapter studies how to maximize this epistemic and social diversification through three interrelated phases: democratization, inclusion, and collaboration. These three phases study the operations that lead to the theoretical and practical phases of knowledge, such as organization, collection, discussion, compromise, vote, consensus. For each level, I present a discussion and examples to properly analyze how these phases should be achieved.

To summarize, a feminist-political epistemology is aware that epistemic issues, processes, and knowledge products cannot be distinguished from their intrinsically sociopolitical character. Hence, the issue of the goals, foundations, and functions of science is one of the central questions of political epistemology. And it reasons precisely on this awareness to not condemn science to a pure relativism and arbitrariness. For feminist-political epistemology, striving for reliable and shared knowledge means reflecting on how epistemological commitments are elaborated and subverted by individual and collective studies of a social and political nature and how certain preferences for political and social ideas are also expressed in the domain of those practices and methods that help to determine in the scientific community (and beyond), which priorities and success criteria to adopt and which subjects to exclude. Applied on the role of the expert, feminist political epistemology analyses the knowledge produced by them, avoiding the dichotomies and political dynamics that have contributed to raising its status for some identities and making it inaccessible to others.

#### 4.1 Agnotology: Why Do Not We Know?

Knowledge is power.<sup>14</sup> This power is obtained and exercised through epistemic strategies in different ways. In this section, I unpack the power inherent in

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<sup>14</sup> The quote can be traced back to the English philosopher Francis Bacon (1597), for whom knowledge gives us the ability (and therefore the power) to understand, manage and anticipate complex phenomena that would otherwise threaten and disrupt our lives.

knowledge by analyzing the voluntary and established production of ignorance (the object of agnotology) and through the qualification of epistemic credibility.

Agnotology is a term devised by Robert Proctor and Londa Schiebinger (2008) to describe ignorance's active and cultural production (and to study why it occurs). Plenty of philosophical reflections have devoted attention to knowledge, but little is known about ignorance. The authors' aim, however, is not to discuss what is not yet known, but what is not known because it is structurally and intentionally produced, challenging the presumed naturalness of ignorance, its causes, and its distribution.

Proctor classified ignorance into three ways: one as a native state, one as ignorance of certain concepts (why do we know certain things and not others), and the last one as deliberately organized ignorance.<sup>15</sup> The third option represents the interesting case for my discussion since ignorance is not seen as omitted but deliberately constructed. Proctor's (1995) famous example concerns the operation made by the tobacco companies. In keeping asking for more evidence, tobacco companies concealed that smoking was a cause of lung cancer. The tobacco industry aimed to create ignorance, false knowledge, and ultimately doubt the outcomes of medical studies about the negative impact of tobacco on health.<sup>16</sup>

Thus, ignorance is not just the lack of knowledge yet to discover, but it is often built, maintained, and disseminated through practices related to cognitive authority, doubt, trust, and silence.<sup>17</sup> Londa Schiebinger expanded Proctor's idea highlighting how entire bodies of knowledge have been canceled. For instance, this was the case of midwifery knowledge.<sup>18</sup> The reason behind this concealing and manufactured

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<sup>15</sup> Nancy Tuana (2006) will expand this classification, by establishing five negative state of ignorance, and one "positive" state of ignorance.

<sup>16</sup> See also Oreskes & Conway (2019) on how some scientists have purposely maintained misinformation about the harmful effects of smoking.

<sup>17</sup> Deliberately obscuring books and information is an ancient practice, just think of the operation conducted by the Catholic Church during the confessional struggles of the modern period, with the lists of banned books. Valuable contributes are Ginzburg 1976 and Prospero 2009 (in Italian) and Marcus (2020).

<sup>18</sup> When obstetrics became a full-fledged medical branch, most of the doctors were men, while until then the knowledge of childbirth had usually passed verbally through the method of knowledge-how. Formal obstetrics involved the transition to certain techniques such as that of C-section, to the detriment of others, such as natural birth (Schiebinger 1991).



knowledge are well explained by postcolonial studies that analyses of who benefits and who does not from this ignorance (Proctor & Schiebinger 2008, 196).

Proctor and Schiebinger's reflections on agnotology are deepened and expanded by two other feminist philosophers: Miranda Fricker (1998; 1999; 2007) who will develop the concept of epistemic injustice and Nancy Tuana (2006) who will clarify the epistemology of ignorance, with a detailed insight to gender and racial categories.

#### 4.1.1 Epistemic Injustice: Who Cannot Know?

The topic of epistemic injustice in feminist reflection (Fricker 1998; 1999; 2007) is a versatile topic that analyzes both ethical and epistemological aspects, long underestimated by traditional analytical epistemology. The expression 'epistemic injustice' does not simply refer to a gap in information or access to education but has a more specific and complex scope.

Epistemic injustice refers precisely to the condition in which a subject is harmed in their capacity as an epistemic agent and it can manifest in two ways. The first is called testimonial injustice while the other is called hermeneutical injustice. Testimony injustice is caused by prejudice in the listener that prevents from giving the right level of credibility to the speaker. Epistemic credibility is a fundamental attribute that concurs to define the status of expert, but this attribution is not only governed by epistemic operations, such as the actual possession of knowledge, but it also depends on power relations. In Fricker's words:

“Notably, if the stereotype embodies a prejudice that works against the speaker, then two things follow: there is an epistemic dysfunction in the exchange—the hearer makes an unduly deflated judgment of the speaker's credibility, perhaps missing out on knowledge as a result; and

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Another typical know-how concerns knowledge on menstrual cycle, a perfectly natural process that still today women are taught to hide or be ashamed of. Regular medical studies, moreover, are more interested in studies for erectile dysfunction rather than those (almost non-existent) on dysmenorrhea (painful menstruation in the first two days of the cycle from which at least 50% of women suffer) and premenstrual syndrome (Brochmann et al. 2018).

the hearer does something ethically bad—the speaker is wrongfully undermined in her capacity as a knower.”

Fricker 2007, 17

On the other hand, hermeneutical injustice represents a preliminary stage to any discussion between individuals because it occurs when there is a gap in the interpretative resources that prevents the epistemic subject from making sense and explaining their experiences (Fricker 2007). To clarify

“Such collective cognitive failings do a hermeneutical injustice to those whose experiences are excluded from collective understandings. When our practice is uninformed by people’s experience in a given social position, we are collectively in a position fully to understand neither the experiences in question, nor any other areas of the social world to which they have interpretive relevance. Thus, some people’s social experience remains obscure and confusing, even for them, in a way which limits or distorts collective social understanding more generally. [...] But we should not fail to acknowledge the likelihood that in any given society—where there are (always?) systematic relations of power and powerlessness— it is the social experience of the powerless that is most likely to be left out in the hermeneutical cold. If so, then it will most typically be the powerless who suffer hermeneutical injustice.”

Fricker 1999, 208

These two types of epistemic injustice are not only complementary but usually consequent. If I do not have the means to understand my experiences, I am not given enough consideration to the knowledge I can give (and my ability to be an expert) and that I deserve to know. Moreover, the fundamental trace of the cases of epistemic injustice is that this credibility deficit is not random, but has a structural and systemic nature, based on a prejudice on identity, which reflects how power relations intersect with epistemic practices, giving new information on the patterns of social injustice. The main means by which prejudice corrupts the listener’s judgment of the speaker’s credibility is the stereotype, which is generically a set of associations (which implies a certain cognitive commitment to make generalizations) between a certain social group and one or more attributes. Hence, epistemic injustice is a systematic and often unconscious degradation of the level of credibility of a particular epistemic subject as a witness or as an agent whose social experiences are conceptualized and interpreted in an unjust way (Croce 2018, 11).

Therefore, if we consider that the structurally disadvantaged identities are subordinate groups, epistemic injustice is a discriminatory epistemic practice, intent on maintaining a solid system based on systemic racism and sexism, thanks to the devaluation of some subjects rather than others.

Hermeneutical injustice is also linked to structural aspects of identity. It has illuminating epistemic implications because it highlights how certain forms of understanding are made structurally prejudicial to the content, consciously leaving certain subordinate groups unable to give themselves an explanation of what happens.<sup>19</sup> Consequently, studying epistemic injustice means focusing on the underlying social and epistemic conditions that are the bearers of some hermeneutic lacuna.

One of the causes of epistemic injustice has been attributed by feminism to traditional epistemology, which for a long time analyzed knowledge according to the “S knows that p” model, assuming that all S were interchangeable and that probably any person in the same situation and with the same access to data would reach to the same conclusion. Feminism, always attentive to individual bodily experience and an embodied type of knowledge, has opposed this idea by supporting the tangible nature of the knower.<sup>20</sup> The subject is rooted in their own body, in presence, concerning social relations.<sup>21</sup> This rooted subjectivity cannot be abstracted from its

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<sup>19</sup> There are several examples of this type, for example, being unable to understand that you are experiencing sexual harassment (term coined in 1975) because the concepts to define it did not yet exist. Until recently, it was perceived (especially by men) only as a form of flirting. However, it is not that before 1975, sexual harassments did not occur. Another case is the postpartum depression diagnosis, an understanding of a female experience, previously misunderstood by the same subject because it was collectively ignored or pointed to as a form of hysteria (Fricker 2007). These examples show that giving a name allows one to speak about phenomena more coherently, recognize the trauma suffered, and fight it. To undermine these labels instead means to uphold the system that creates marginalized categories in the first place.

<sup>20</sup> See chapter one of this dissertation for the discussion on situated knowledge.

<sup>21</sup> It is easy to abstract from all material conditions when the privileged position allows to do so, but it is not by denying gender and ethnicity that the sexual division of gender and racialization will disappear. Indeed, it is only a method that patriarchy uses as an instrument of power. A woman, with their subordinate position, dictated and justified precisely by her gender, cannot afford the luxury of seeing and living as if the world were a-gender, because gender and ethnicity impact every aspect of society and life. Recognizing the privilege is the first step to open the mind and consequently the very boundaries of knowledge. Dealing with your own privilege can be uncomfortable (for example, as a white woman I am privileged in many ways, such as the color of my skin, but also my social position, my sexual orientation, my being able and cis), but

material conditions. Therefore, one cannot exempt oneself from considering geography of the epistemic terrain, taking into account the various social positions and identities and the socio-political structures that produce them and according to which logic of power. This is because different social positions generate different constructions of reality and different perspectives on the world (Alcoff & Potter 1993). This idea thus overturns the classic definition of 'view from nowhere', into 'view from somewhere'.

However, the fact that the judgment is related to social position does not determine a relativistic conclusion, because feminist studies do not abandon the idea of epistemic justification but expand it. Objectivity requires considering subjectivity. This means studying the sites of epistemic disadvantage and advantage, with an analysis of the epistemic implications of the various subjects, underlining both the structural character and investigating the causes, connecting how epistemic trust and distrust are linked to the networks of social relationships also marked by relations of power and domination. In other words, feminism has analyzed our epistemic practices in an ethical and political key, placing apparently neutral concepts such as reason and knowledge at the center of contexts of social power, answering the question "what do power relations do to our thinking?"

On this matter, epistemic injustice has brought an essential aspect into focus: the trust and credibility of an epistemic agent do not depend solely on effective knowledge, but also follow and imitate the relations of power. And these relations of power act upon sexist and racist ideologies. Thus, the epistemic practices are never totally indifferent to socio-political considerations and, at the same time, are not solely a power function.<sup>22</sup>

This reflection affects the role of experts since to be an expert, we need to consider two components: (1) rational authority and (2) credibility. One can have rational authority without being recognized or credited, and the presence or absence of one does not ensure the other. What epistemic injustice studies suggest

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it is a small price to pay rather than pretending to live in a post-racist and post-gender society. It enables one not only to initiate political but also epistemological change.

<sup>22</sup> The topic of credibility to epistemic agents and expertise is also central in the Science and Technology Studies. Already in 1994, Shapin underlined how the moral and political value of our knowledge can be summed up in the word *trust*.

is that when credibility is denied, especially in the case of marginalized people, despite having actual cognitive authority, they are denied their role as experts. Some identities, on the other hand, are granted a form of excessive trust and credibility, in Code's words "the rhetorical spaces that a society legitimizes generate presumptions of credibility and trust that attach differentially according to how speakers and interpreters are positioned within them" (Code 1995, 60).

In the next section, I will use an example presented by Intemann (2001), to explain how central it is the attribution of credibility, not only for an identity to be recognized as an expert but even to see how the lack of trust in the testimony of an identity slows down the investigation of the cognitive hypotheses suggested by that identity.

#### 4.1.2 A Practical Example in the So-Called Hard Sciences<sup>23</sup>

The case of Vera Rubin, the cosmologist who advanced the hypothesis of dark matter is exemplary to understand the impact of these previous reflections on science. Her work was presented to the American Astronomy Society (henceforth AAS) but was only taken seriously twenty years later. Intemann (2001) explores the role that value-judgments concerning Rubin's identity and testimony have played in justifying the belief in Rubin's hypothesis or not. If Rubin's measurements and testimony were considered reliable, she would surely have cast doubts on the theories in use at that time that did not explain the phenomenon of the displacement of galaxies at different speeds for which dark matter was hypothesized in the first place. Intemann investigates how come she was not believed, and her hypothesis

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<sup>23</sup> The (alleged or not) genderized aspect of physics or logic is still a controversial point in feminist analysis. It is difficult to justify what might bring viewpoint of women or other social groups on questions concerning logic (for a feminist analysis of logic see Garavaso 2016, Nye 1990). To better settle the question, in my opinion it is useful to consider the inclusion of marginalized groups always keeping in mind the two aspects: the ethical and the epistemic. While the contingent nature can be argued for the latter (epistemic privilege will not always be present in every issue), the ethical aspect of inclusion is difficult to gloss over. Political inclusion is non-negotiable, asking why we feel the urge to always justify the utility brought by certain groups and not others? Why does no one then ask what point of view men brings in order to be in the lab by default? Why do we have to include women? Because the choice to include men instead of women is purely arbitrary, and the idea that men are better than everyone else at doing science is not based on the epistemic point of view they bring but on political grounds.

did not receive enough attention to be explored. She hypothesized that the members of the AAS unjustly believed that women were generally inferior and incompetent to men, which would have led to a distrust of Rubin's expertise and the consequent rejection of the Rubin hypothesis.

This hypothesis explains how certain value judgments play a role in supporting certain theories, through the belief given to the role and testimony (and consequently to be seen as an expert) of female scientists (Intemann 2001). Now, it is obvious that the evidence for the existence of dark matter does not depend on what one might think of Rubin's testimony or not. One would have analyzed the evidence and data and in the case would have agreed or not with Rubin's hypothesis. Nonetheless, this example puts attention to the fact that it cannot be argued that theories could be justified without relying on someone's testimony as evidence.

Relying on testimony is an essential part of generating evidence in a theory, and therefore "our judgments about whom we take to be reliable will have implications for what will count as evidence for or against a theory" (Intemann 2001, 516). Hence, in hard science, which is usually considered the perfect example of objective knowledge, extra epistemic factors are central when determining who is a reliable source. When these value judgments are justified in believing a testimony is reliable then they play a fundamental role in creating support for evidence for a theory, otherwise, they can create ostracism to support some evidence for a given theory. Hence a sexist ideology that believes women are generally less competent than men cannot explore or provide enough relevance for hypotheses and theories proposed by female colleagues because they are not seen in their role as experts as other identities are usually seen. This means that in rational choice of which theory to choose, power relations and the identity in question have a very significant role in sciences.

#### 4.1.3 Epistemology of Ignorance: What Cannot We Know?

Another piece that broadens the studies on agnotology and epistemic injustice is carried out by the feminist philosopher Nancy Tuana (2006) on the epistemology of ignorance. According to Tuana, epistemic injustice is in fact conditioned by social

power, which structurally practices a form of ignorance. Ignorance does not simply indicate the lack of something, but ignorance is often constructed, maintained, and disseminated for exploitation and domination, through epistemic practices linked to concepts such as cognitive authority, doubt, trust.

The epistemology of ignorance is the idea that certain social identities and belief systems are produced by structural background conditions, which are epistemically disadvantaged. Conversely, then, studying the phenomenon of ignorance means revealing the role of power in constructing knowledge and offering a lens for extra-epistemic values (including racism and sexism) at the service of our cognitive practices. In concrete terms, it means illuminating how entire bodies of knowledge have been erased. For example, sexism has long been a means of maintaining ignorance of phenomena such as female sexuality. The epistemology of ignorance, however, also questions what knowledge was first common and later abandoned. For example, Schienbinger 2004 focuses on studying the abortive knowledge of enslaved black people.<sup>24</sup>

Moreover, ignorance can also be classified into various types (Tuana 2006). The first type concerns those things that we know we do not know but do not consider necessary and important to learn. Tuana uses the (nonexistent) male contraceptive pill studies as example. Assuming it would have no market, the scholars chose not to continue the research. The second kind of ignorance concerns what we do not know we do not know, because various interests or implicit assumptions hinder the development of such knowledge. This is the case of the study of the anatomical structure of the clitoris, obscured by how female sexuality was considered. Feminist studies have shown that at least until the 1900s, the male

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<sup>24</sup> Abortion was a method for fighting slavery, effectively nullifying the future production of workforce. These methods for abortion represent a body of knowledge that was not transferred to Europe and has in fact been forgotten. Yet these techniques were well known by Europeans since the first encounter with Caribbean peoples. In particular, the peacock flower was known to many explorers, and the plant in question was also transferred to Europe. What did not move was instead the abortive knowledge linked to this herb.

This lack can be explained both because the major actors of knowledge and power were men, and because cultivating an attention to abortion methods went against the interests of mercantilism and workforce production. This opens the question how much knowledge has been lost because cultural policies have canceled it. See also Balzano (2021) on abortion practices.

body was seen as the proper form of the human body and represented the standard against which to compare the female one. As Irigaray (1985) says, through the speculum, the female genitals appeared reversed to the male ones. Another reason was the fact that female pleasure was not important to study since female sex was only taken into consideration in the case of reproduction (Martin 1991). Thanks to feminist studies of the second feminist wave (Koedt 1968, Shulman 1980, Tuana 2004), these ideas have been rejected.<sup>25</sup>

The third kind concerns the activities and forms of knowledge of institutions, groups and individuals who deny knowledge to other individuals. The actions of doctors and pharmaceutical companies did not transparently disclose the now notable side effects to the women who used the contraceptive pills (Seaman 1969). The fourth type, 'deliberate ignorance', concerns those activities of a group that refuses to know certain things and prevents other groups from learning about them. This is a classic example of what is meant by 'privilege': individuals in socially privileged positions prefer to ignore that many of their successes are obtained thanks to the unjust privileges from which, unconsciously or consciously, they have benefited. Not only do they deceive themselves, but for this to work, other people must remain in ignorance.<sup>26</sup> Finally, the last type of deleterious ignorance involves the construction of epistemically disadvantaged identities. In this case, consciously or unconsciously, individuals belonging to certain groups are classified as ignorant, stupid, not authoritative.

In the next section, I will present the studies on epistemic filters and cognitive belief-formations to expand these feminist topics by seeing which epistemic mechanisms concur to maintain in the listener to maintain these injustices and deliberative ignorance. While epistemic injustice precisely unveils the power

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<sup>25</sup> For a long time, the female reproductive organ has been assigned two types of orgasms one clitoral and one vaginal. While the clitoral could be achieved without the male organ, the vaginal one was linked to penetrative sex, which is the form par excellence of heteronormative sex. It goes without saying that in the androcentric tale the vaginal one was considered "superior" to the clitoral one because it could be reached only through penetration. This idea has now been disproved.

<sup>26</sup> White ignorance is a type of ignorance that is not fortuitous but chosen and is one way to support white supremacy (Mills 1997).



ideologies, the studies made on epistemic filters and echo chambers show the epistemic mechanisms that underlie certain beliefs' maintenance.

#### 4.1.4 Epistemology of Virtues and Epistemic Filter

To fight against these epistemic injustices, Fricker (2007; 1999) and Tuana (2006; 1999) consider it necessary to cultivate two intellectual virtues: that of witness justice and hermeneutic justice by appealing to the epistemology of virtue.<sup>27</sup> These virtues require the development of some self-reflective ability and can be used as a corrective to one's prejudices. The person who possesses these virtues acquires a sensitivity that allows to ignore or reconsider the immediate judgments on the credibility of others that are often influenced by common prejudices. These virtues act as a crossroads between ethical and epistemic virtues, thus giving importance to ethics in our lives as knowing agents. Yet, I argue that self-reflective work is not enough to change these dynamics, so it is necessary to investigate in more detail what happens in the processes of belief formation. I will use Ferrari and Moruzzi's (2020) proposal to consider two types of belief formations: the first concerns the formation of a belief that occurs in the face of evidence. The second type concerns a norm for the revision of beliefs, which occurs precisely in the event of counterevidence that misleads the initial view.

These belief formations are also connected to the phenomena of epistemic filters and echo chambers that concur to modify these belief formations (Badino 2022, Ferrari & Moruzzi 2020). Echo chambers, epistemic filters are yet another important vehicle in producing active ignorance thanks to the circulation of certain

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<sup>27</sup> Epistemology of virtue has developed since the 1980s. According to this theory, excellent character traits, if adequately developed, allow us to know in a virtuous way. There are two main versions of this theory: virtue reliabilism and virtue responsibilism. The origin of virtue epistemology is associated with Ernest Sosa (1980), who used the concept of virtue to discuss the theory of knowledge (reliabilism). Lorraine Code (2020) and James Montmarquet (1993), on the other hand, trace the second type, responsibilism. Code's work focuses on the notion of epistemic responsibility, an expression of the individual freedom to determine cognitive activity, making choices about epistemic goals and the most suitable methods to achieve them (Croce 2018, 3). Code also pays attention to how we justify our beliefs and other fundamental questions such as who to trust in the cognitive field, the value and inevitability of epistemic dependence, and the community dimension of our intellectual activities.

distorted ideas, such as prejudices, which silence subjects and make certain things invisible. But, contrary to epistemic injustice which acts on the active-epistemic agent (the speaker), these mechanisms act on the passive-epistemic agent (the listener). If epistemic injustice concerns the credibility and trust attributed to an epistemic agent, the notion of epistemic filter instead serves to better understand the mechanisms in place that tend to preserve the consideration that one has to an epistemic agent, even in the face of evidence demonstrating the speaker's actual ability and rational authority. The notion of epistemic filter limits the validity of application of the rules that regulate the investigation in such a way as to render ineffective a certain set of evidence and counterevidence. Epistemic filters complementarily explain what happens to the listener when struck by power dynamics: our belief formations tend to act differently based on the identity we face and willfully omit and/or discredit evidence. This limits the ability to review and criticize the investigation. In fact, they produce the inability to see and hear certain things and therefore causes insensitivity, limiting communications with certain members and precluding a genuine understanding of experiences.

Epistemic filters can be by omission or by discredit (Badino 2022). The epistemic filter by omission regulates the investigation such as excluding some evidence and counter-tests from it. The filter by discredit limits the scope of epistemic norms by discrediting – rather than omitting – a certain set of evidence. So epistemic filters operate within a specific area of investigation by regulating and limiting, in a variety of articulated ways, the flow of information available to the epistemic agents participating in the investigation. These filters are also influenced by the identity they face. Some minorities will then not be considered or listened to because of their identity and not for epistemic reasons, and because an epistemic filter by discredit impedes trust in any information.

One of the immediate consequences of applying epistemic filters to the investigation is that of generating an epistemic bubble, within which certain sources of information are left out in favor of others judged more appropriate and/or reliable in relation to the specific purposes of the investigation. These epistemic filters are ways that can reinforce stereotypes. Therefore, it is necessary to act on

these cognitive practices, to accustom a change of scenery, a new social imaginary, and cultural changes, which will be the aim of the second part of this chapter.

Through reflections on our condition and the encounter with the other, we learn more about power relations, the political and physical sphere of knowing agents, and how power dynamics play an important variable in knowledge, if only because the gender or racial identity of an agent plays a significant role both in accessing knowledge and in acting as cognitive.<sup>28</sup>

#### 4.2 Second Part: A Diversity to Preserve: Democracy, Inclusion, Collaboration

The reflection offered so far has served to pave the way for analyses and approaches capable of improving our epistemic practices, especially in academic communities. I propose activities that reflect this dual nature of science: epistemic and social. In other words, science is unable to transcend its production boundaries, as sociological reflections have shown, but at the same time, scientists and experts must not be reduced to political machinations and desires of their own, undermining the credibility of the science itself.

The starting strategy of the first part was precisely that of retracing the criticisms of those who challenged the claims of expertise, such as the feminist critique of the epistemology of ignorance and epistemic injustice, also supported by Science and Technology studies (STS) and recent reflections in political epistemology on post-truth, epistemic filter, echo chambers etc.

Now, I elaborate reflections on expertise precisely in the light of these criticisms, giving authority to knowledge and experts, while still recognizing the social nature of the scientific enterprise. As discussed in chapter three, one of the key ingredients to improve epistemic practices is cognitive and social diversity (which often coincide). In chapter three, I also discussed inclusion as a standard to

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<sup>28</sup> This does not mean that there is a typically gynocentric way of knowing, but that the gender divisions have an impact in knowledge practices.

be placed on research and both collaborative practices between external surveys, and exchanges with other epistemic communities. In this remaining part of the chapter, I want to offer existing examples of how to organize these methodological principles in academic circuits. Hence, the reflections are centered on (1) the democratic way of our cognitive practices, whereby I do not mean a specific form of government, but the deliberative and collective process that leads to a formulation and decision, according to the principle of cognitive diversity (Landemore 2014; 2016). The underlying idea is that the intelligence of the heterogeneous group is better than that of the individual. However, it is essential to underline that not only many individuals are required, but this large number must also be qualitatively diversified (Landemore 2014).

“Democrats do not deny that social order requires some hierarchies of office; they deny the need for hierarchies of persons. Upon vacating their offices, persons must lose the powers of office; while in office, their special powers must be limited to what they do in their official capacities. A general can order his soldiers into battle but cannot order his wife (or soldiers) into bed. In epistemology, too, we should recognize a person/office distinction: considerations of classroom order may obligate students to refrain from usurping their professor’s plans, but this does not mean they cannot think that their professor is an idiot.

Democracy is also compatible with honoring merit in persons, with recognizing that some people are more skilled, accomplished, intelligent, persuasive, interesting, and trustworthy than others, and with supporting them for these reasons. In a democracy, however, merit must be demonstrated to the satisfaction of those who offer their support: they must be persuaded by arguments and evidence, not bullied into submission by those who claim epistemic superiority as a birthright.”

Anderson 1995c, 205

The use of democratic expedients must allow the entry of all members recognized in their ability to contribute knowledge, without allowing to a system of power or force imposition to prevail. But, given that epistemic injustice, epistemology of ignorance, epistemic filters happen in our current Western practices, it is a clear sign that something in the democratization process is not working. Moreover, the fact that everyone should be given the same access and ability to produce knowledge does not mean that all views end up being relative and

that there is no way to come to knowledge. Hence, the first level is dedicated to exploring in detail how can democratize our epistemic practices.

The second level of this methodology will focus on (2) inclusive practices, trying to fill the gap that epistemic injustice had revealed. Including the diverse voices, especially those hitherto ignored, is necessary if we want to ensure cognitive diversity in our decision-making processes, as well as give back to agents epistemic unjustly penalized for their expert status, only because they represent an identity that, according to the logic of power and domination, was not deserving of it. This also allows diversifying the image of experts, usually anchored to a certain identity.

Finally, I close with a focus on (3) the practices of collaboration and dialogue, as cognitive diversity is transient, in the sense that it must lead to a core of shared knowledge, in which everyone feels represented and listened to. The foundations of knowledge and epistemic practices are improved and maximized thanks to the dialogue between these differentiated perspectives, because only through inclusion and then collaboration will it be possible to identify more immediately, the homogeneous or simply erroneous perspectives or subjecting any hypotheses to more thorough and well-rounded criticisms. Knowledge does not collapse into each knowing agent's subjective and individual perspectives but is always socially legitimized by the dialogue between members of the epistemic community. However, it is this latter that requires both a qualitative change between the identities that compose it and at the same time methodological strategies that start from the experiences of those who have been ignored for a long time to remedy a cognitive framework that has so far been partially.

Only in this way can our epistemic resources, linked to the inclusion of new representative profiles of expertise, be truly mobilized towards a constructive response to our initial question, facing the consequences of what happens to science, once we engage with a feminist perspective.

### 4.3 Democracy as First Step: Allowing Different Voices

The requirement of cognitive diversity opens a reflection to review our democratic epistemic practices, the only ones that aim at the real inclusion of all. Since the phenomena of epistemic injustice occur precisely in our democratic practices, a thorough reflection is required in the first place.<sup>29</sup> As feminist theories have argued, in the past, having placed trust only in experts, meant that marginal groups were misrepresented or underwent decisions that did not fully respect their situations and points of view, precisely because the points of view of the experts was also linked to a specific identity and social position. For this reason, it is necessary to diversify the role of the expert and ensure heterogeneity, integrating exchanges between official scientific communities and other groups or methods of research knowledge is needed.

Opening the ranks of different profiles will increase the key ingredient obtained by democracy, cognitive diversity. Cognitive diversity implies a way of seeing the world differently, which emerges clearly within a heterogeneous group: the more complicated the question is, the more it benefits a group and a variegated intelligence. Hence, according to cognitive diversity, it is better to have a different group of average intelligence than a less inclusive group, even if made up of more intelligent people (Landemore 2017, 90). On this matter, Hong & Page (2001; 2004) show that problem-solving cognitive diversity exceeds individual diversity, so a large group expands the set of ideas and information, eliminates the bad arguments

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<sup>29</sup> Before referring to democratic practices and its feature, we must acknowledge the tension between the fact that some citizens may be more informed than others (the so-called experts) and the ever-present democratic principle of equality and freedom for all. Historically, we have examples of both discussions on the public use of reason. Some doubt a decision is highly epistemic if subjected to a democratic exchange, so the participation of citizens would not automatically generate an excellent epistemic decision, at most what it certifies is that the decision took place through the rational agreement of all participants. For this reason, one might think to the role of experts and how they are better at making decisions than the rest of citizens (epistocracy).

There is also the opposite idea which I pursue that the open, collective decision is better than the one made by few expert individuals. The literature on this subject has spread since ancient Greece. Some historians think that Athens was superior to other cities because of its ability “to process the distributed knowledge and information of its citizens better than less democratic regimes” (Landemore 2017, 2). Other proto-democratic systems are present in Protagoras, Aristotle, Machiavelli 1532, Spinoza 1670, Rousseau 1762, Mill 1861, Dewey 1938.

from the good ones and finally comes to a reasoned consensus. This is because you will have different people approaching the problem from different points of view. The cognitive diversity scheme allows us to consider the different tools humans use to deal with problems and include diverse perspectives, interpretations, and even predictive models (how to infer cause and effect). Other examples of collective intelligence are the Condorcet theorem, the miracle of aggregation and studies on cognitive diversity. These are probabilistic and statistical reasons that justify the use of a large group.<sup>30</sup>

Cognitive diversity has positive results both at the level of inclusion in knowledge and at epistemic return, as the contents of this knowledge will also reflect the most varied groups. Hence democracy is the first step of epistemic process and procedure, allowing welcoming groups and embracing the principle of cognitive diversity to obtain better epistemic results (Landemore 2017, 90).<sup>31</sup> Hence, democratic system, is not the political system that establishes the equality of rights, but refers precisely to the decisional operation. In this sense, democracy is the type of decision-making process that takes place collectively and therefore includes all the groups for which decisions are made. It represents a collective decision-making procedure for which the intelligence of the group is better than that of the individual.

These democratic collective decisions also relate to the norms that can endow our decision-making system, our beliefs, and our knowledge with reasonableness and reliability, for instance everyone must have the opportunity to participate, influence the decision-making process, everyone must have the opportunity to be heard (Christiano 2012, 27). Furthermore, the democratic and inclusion aspect also considers the structural hinderances that prevent accessibility in science for marginalized groups.<sup>32</sup> Recent political epistemology themes study which mechanisms are suitable for promoting discussion and democratic collective deliberation, which respects a favorable and equitable understanding and

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<sup>30</sup> Cf. also Leuschner 2015, McLeod & Lobel 1992.

<sup>31</sup> This theoretical hypothesis assumed is precisely supported by feminist reflections and studies on epistemic injustice and standpoint theory that push for greater inclusion and diversity.

<sup>32</sup> Notable studies on these structures are Foucault 1978, Bourdieu 1986, and scholars from Postcolonial and Subaltern Studies (see chapter one for an extended explanation of these).

knowledge.<sup>33</sup> Therefore, a critical eye is necessary towards these collective decisions that have an epistemic and practical purpose because knowledge will have to assist good decisions in terms of policy and society.

To better understand the interrelation of cognitive diversity with the different principles (democracy, inclusion, and collaboration), the epistemic methodology that leads to knowledge can be analyzed through various phases: organization, collection, discussion, compromise, vote. In particular, the initial stage (organization) pertains mainly to the democratic principle, collection and discussion to inclusion, and compromise and vote to collaboration.

Phases of methodology

Organization of deliberative processes	Democratic processes and cognitive diversity
Collection Discussion	Principle of inclusion: career advancement, myth of meritocracy
Compromise Vote	Principle of collaboration: transdisciplinarity, subcommunities, robust relativism
Consensus	Transient diversity
Verification	Public interest and scrutiny

To be truly democratic, the organization-phase requires that marginal groups' interests are taken into consideration, for instance, with the preliminary interviews that certify interests and perspectives not belonging to dominant perspectives. The experts will then be tasked with implementing these goals with their specialized knowledge. The organization phase aims to broaden the pool of existing ideas and ensure that no voices have been silenced or canceled due to power dynamics. No one should be diminished as an expert or treated as a second-class speaker just because of their race or gender, also because this discrimination harms the objectivity of research.

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<sup>33</sup>The reader might pick up on the similarity to Longino's fourth criterion that required everyone to be heard for their ability to produce knowledge and never silenced for reasons of politics or force.



So, democracy is needed to ensure the diversity and multitude of statements, since without contesting, an option could be accepted just because it was the only one on the table. Having diversity maximizes the deliberative voting process formed not only by pre-existing opinions because it is assumed that at least some of them are developed during the deliberation. By voting, you make certain explicit positions, which are not necessarily individual but can also be collective. Deliberative democracy aims not for full regulations unanimity but rather at developing disagreement to the extent that those who find themselves in the minority are willing to concede that their arguments were given a fair hearing even if they did not prove persuasive (A. Moore 2013, 309).

#### 4.4 Inclusion: How to Avoid Diversity Exploitation

In this section, I address both the collection and discussion phases. In collecting the different voices, marginal members who are usually silenced are included precisely to obtain the diversity I mentioned earlier. In a nutshell, social diversity also entails *effective* academic justice and diversity.

For these different voices to be fruitful, the marginal groups must really be allowed to grow and participate equally in the discussions and scientific academies. Hence, we must avoid exploiting individuals and members of marginal communities without acting on the inclusion and change of formal epistemic communities, which, as committed to producing epistemology, are among the agents and channels of production and communication of knowledge. It is not enough to use and collaborate with informal communities without working on egalitarian employment schemes, leaving the formal academic communities intact.<sup>34</sup> It is not convenient to

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<sup>34</sup> This problem is related to “tokenism”, in which a person belonging to marginal communities is invited to the panels or hired as a token to simulate inclusiveness and change, and mistakenly thinking that a marginal member is valid for everyone, thus flattening any form of individual agency and oppression difference. To tolerate does not mean to accept but simply to endure the presence of others.

treat the scientific community as an abstract canon. Communities are vivid and social places where knowledge is made. As such, they are also entangled and caused by political reasons and forces.

Hence, feminism focuses attention on the role that politics have in academies. This is not something that they invented, but feminist movements in the academies have obtained more justice for the minorities: assumptive diversity, codes against sexual and racial harassment, revise some topics and pedagogical styles. Individuals belonging to subordinate groups must have the right space in the communities and the same opportunities for growth and work, their interests and subjects must receive the same attention, etc.<sup>35</sup>

For this reason, it is necessary to study the power relations organized on different axes and study the obstacles that marginal people experience, to make a difference in culture, knowledge, and employment. The following section will deal with the cultural scientific framework that panders to discrimination and practical obstacles (career advancement problems, unbalanced domestic work, etc.) minorities usually deal with in epistemic communities. Cultural mindset and practical constraints are two faces of the same medal.

#### 4.4.1 The Cultural and Practical Obstacles to Inclusion

An increase in the ranks of undergraduate women does not automatically lead to a rise in the highest and most prestigious positions, we have known this for some time.<sup>36</sup> In the last century, women got an increase in the lower echelons but insignificant changes at the top. Discrimination and ghettoization work vertically and horizontally, i.e., men are in the majority in disciplines such as natural sciences and technology, which benefit from higher social recognition and are deemed superior. But even in the cases of disciplines or activities more populated by higher

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<sup>35</sup> These rights that seem to be taken for granted are not. One of the reasons is that conservative groups still think that these politically active and engaged groups meddle with politics in the pure and neutral picture of epistemology. Other times, people in positions of power simply want to maintain these seats and not share them.

<sup>36</sup> See the survey on underrepresentation of Women in philosophy in Italy, Ervas et al. 2020.

numbers of women (education or kitchen), the higher positions are overwhelmingly occupied by men (Morley & Walsh 1996, 20). Therefore, it is important to study how society and power relations underlie this resistance in placing women in positions of power.

The inclusion of other voices is opposed through different expedients, called glass ceiling, chilly climate, and general cultural mindset. The glass ceiling<sup>37</sup> impersonates men's resistance to concede places in high ranks to women usually considered their prerogative, since the division between public and private relegates women to the private spaces. Chilly climate represents the different treatment that a person receives based on their gender or race. These behaviors can include lack of encouragement, devaluation of academic performance, calling attention to a person's gender or sexuality inappropriately and even sexual harassment in the workplace (Hall and Sandler 1982). According to an international survey of more than 1,000 women in physics in 55 countries, one-third of women felt they have progressed more slowly in their careers than their peers (Rolin 2008).

Finally, the general cultural framework stands for a set of shared values, social realities, beliefs, traditions, and practices transmitted between generations of scientists (Morley & Walsh 1996, 59). This cultural milieu is connected to the current masculine environment in science denounced by feminism, which includes a certain style of doing science<sup>38</sup> predominantly in scientific circles, and the myth of meritocracy (Rolin 2008, 1112).

One example of masculine style is understanding physics as a quasi-religion, which also summarizes the four elemental forces.<sup>39</sup> This transcendent quest is more typical of an identity that recognizes itself as masculine rather than feminine.<sup>40</sup> This

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<sup>37</sup> The set of barriers (invisible and not) that women face to reach the highest peaks is also called leaking pipeline, just like a leaking pipe, so women "get lost" as they advance to more prestigious positions. Moreover, Jewson & Mason (1994) argued that the immobility of women would be explained more by a stone floor where women are kept, rather than a ceiling that prevents them from climbing.

<sup>38</sup> A style of doing science is characterized by a mix of emotions, imagination and experience and can be personal or even cultural.

<sup>39</sup> Gravitational, electromagnetic, weak, and strong forces (Rolin 2008).

<sup>40</sup> The Western ideal understood natural science around two primary purposes: control and transcendence. Sexuality serves similar purposes, especially regarding control. It is not difficult to imagine that these two are united in the Western ideal if one thinks of the image of nature as feminine. In a phallic imagination an aggressive manipulation of nature is possible. The fact that

sort of search for the theory of everything is what unites most of the world's famous male physicists (Hawking, Davies, Lederman, Tipler, Polkinghorne).

‘The idea that there must be one force ultimately responsible for all action and form in the universe can be considered a scientific parallel of monotheism’, Wertheim suggests (1995, p 209). The physics of immortality: modern cosmology, God, and the quasi-religious understanding of a ‘theory of everything’ is perpetuated in a number of popular physics books: Stephen Hawking’s *A brief history of time* (1988), Paul Davies’s *God and the new physics* (1990) and *The Mind of God: the scientific basis for a rational world* (1992), Leon Lederman’s *The God particle* (1993), Frank Tipler’s *The physics of immortality: modern cosmology, God, and the resurrection of the dead* (1994), and John Polkinghorne’s *The faith of a physicist* (1994).

Rolin 2008, 1116-17

The search for transcendence, for rational and non-material knowledge is a trait that has been associated with male and non-female figures.<sup>41</sup> As long as a certain style is seen as predominant and connected to the sphere of masculinity, then a masculine way of doing science will be possible.

On the contrary, pursuing the diversity imperative is the way to explore multiple lines of research at the same time. Different styles of doing research and science therefore contribute to the success of science, as they suggest different approaches with which to consider research. Science and technology are not purely speculative activities, what counts as knowledge also depends on many social and historical factors. In Harding’s words, science and politics have a political unconscious (Harding 2006). Technologies are also political, because they allow and constrain actions, so the gender assumptions built into technologies, then as a vicious circle, reinforce gender structures.

If shared values are shaped according to a masculine image, a woman must adapt as much as possible to these masculine qualities or try to change them. It is

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these contributions were not recognized before, casts doubts on traditional science and those who defined these contributions (Keller 1995).

<sup>41</sup> Not all-male scientists embrace a concept of masculinity that involves detachment and domination, but it is true that the metaphor of union between mind and nature is not the same between men and women and that is precisely the point. In a science defined around the object (nature) as feminine and the subject (mind) masculine, being a woman means dealing with this contradiction (Keller 1984; 1995). It does not mean that men cannot feel contradiction, but it does mean that their identity does not require that they go through this contradiction.

therefore not only the practical constraints, but the general cultural climate that maintains a gender disparity.<sup>42</sup> Universities have intervened with policies and procedures that rarely change anything, given that they do not analyze this real cause of the institutionalized male hegemony.

The institutionalized male hegemony is also connected to the legend of meritocracy,<sup>43</sup> a dangerous myth, used to cover the institutional prejudice in favor of the white male (Perez 2020, 133). I call meritocracy a myth because it promotes a belief and conviction that only works for particular individuals rather than others, but it pretends to apply for all. Meritocracy makes you believe that if you acquire merit, work hard, and maybe even outperform your opponents you will be rewarded. This does not consider that people are unevenly distributed in their starting social situations, with big advantages for those who, coming from a wealthy background allows to do internships (unpaid) that serve to gain experience, aspire to higher-paid positions, and build networks. On the contrary, those who cannot afford to work for free do not have the same chances of reaching the top as those who do, not to mention all the subtle biases and discriminations (gender, class, race, etc.) that make the situation even worse on the selection. In a neoliberal system, everything is transformed into a competition, an obsession with results, penalizing those who cannot keep up with tayloristic rhythms, increasing the sense of inadequacy and perpetuating social and economic inequality. Unfortunately, however, the meritocratic system is considered the dominant system and as such also passes for “natural” and “impartial”.

Indeed, a myth that makes those who take advantage of it believe that all the successes achieved are due to personal merit can only be seductive. So much that we can encounter gender negationists, even if gender discrimination exists and is well documented.<sup>44</sup> The masculine propensity causes masculinity to be considered

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<sup>42</sup> Arlie Hochschild (1989) coined the term “the second shift” (known also as “double workday”) to capture the impact of gender norms that maintain traditional divisions of labor in the household and even ramp up the domestic demands on women as they moved into the wage labor market in increasing numbers.

<sup>43</sup> System of evaluation and valorization of individuals based exclusively on the recognition of their merit. It is characteristic of liberalist society (Cambridge dictionary).

<sup>44</sup> We could refer “simply” to the fact that ending gender discrimination is present in the goals of the European 2030 Agenda. This should already be evidence that gender discrimination exists

universal, and it also helps explain why female authors of scientific studies are less likely to appear in curricula. Male professors are more likely to be considered sharp and brilliant. The bias of genius is part of the absence of data. We have erased centuries of women with genius that we cannot even imagine one.<sup>45</sup> And if we do not solve the gender data gap in school curricula, future generations will not be educated about this prejudice.

Furthermore, numerous studies worldwide show that female university students and teachers are less likely to obtain research funding, make appointments with teachers, find a mentor (Criado-Perez 2020, 137). The speed of a career in academia largely depends on the number of works that each researcher manages to publish in peer-reviewed journals. The problem is that getting published is not equally easy for men, women, and marginalized people.<sup>46</sup> But getting published is only half the battle. Being cited in the works of other scholars is also a determining measure for the impact of one's research. However, many studies have shown that women are systematically mentioned less than men. Over the past two decades, men have referred to other men 70% more often than women have done to other women, and women tend to refer to other women more often than men (Criado-Perez 2020, 138).

As if this were not enough, it is common practice to report the authors' first names not by full but only by initial; the gender of the academics is not immediately

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and has not been eradicated. There are also many official statistical tools, for example in Europe the GEI (Gender Equality Index) is used to measure the level of gender equality achieved by different member countries. This index studies different domains in which women are disadvantaged: work, money, knowledge, power, health, and time. The one on money for example is one of the best known and concerns the Gender Pay Gap, i.e., the difference in average annual salary received by women and men for the same work. In addition, a distinction must be made between the raw Gender Pay Gap, which is based on the average difference in gross hourly pay, while the overall Gender Pay Gap considers, in addition to hourly wages, the average monthly number of hours paid and the female employment rate.

<sup>45</sup> In chapter One and Two I have presented several examples on studies of "forgotten" women. Nowadays, in university we are increasingly witnessing the birth of network circles that connect women scholars and conferences that "rediscover" thought and studies of women from the past.

<sup>46</sup> Peer review is the system through which all knowledge is accepted and published, but also what is funded in research. Peer review, however, is not so even when you think about young researchers being judged by successful older researchers, and only they decide who will be supported.

guessed and for this reason they often pass for men (ten times greater).<sup>47</sup> Besides, women are still excluded from informal circles and tend not to have mentors at their disposal. In science, success breeds more success. Famous mentor leads to study in prestigious schools. So, another aspect to consider is network and reputation. Men prefer to promote men,<sup>48</sup> which is why mentoring systems for women have recently been activated to smooth out the difference in height places (Heward 1996). Women in this system are still under-represented and under-quoted.<sup>49</sup>

Moreover, productive research is crucial to obtaining permanent positions in the academy, a pressure that occurs when women think about having children. Hence, this opens a new problem about the disproportionate domestic work for women (Sismondo 2010).<sup>50</sup> Domestic work and caring work are activities that includes everything we do to be in our world so that we can live in it in the best possible way (Tronto 2013).<sup>51</sup> Academic females, to the time dedicated to unpaid work at home, which takes away time for research, must also carry out unpaid work within the institution they operate. Women are asked to attend to a greater amount of trivial administrative tasks, and they usually accept because otherwise they are considered unpleasant.

Beating the gendered division of roles in the academic world means improving the quality of the research produced by universities. Women and marginalized communities could thrive, publish, and expand our knowledge in significant impact on government policies, medical practice, and workplace health

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<sup>47</sup> See note 96 on the Matilda effect (chapter three). The term is used to capture persistent patterns of cumulative disadvantage that arise when “micro-inequities” operate unchecked in supposedly meritocratic systems (Wylie 2012, 10).

<sup>48</sup> Research demonstrates that male job applicants are deemed more hireable than female applicants, despite their having identical curricula vitae (Steinpreis et al. 1999). Similar effects occur for white persons versus African American applicants (Bertrand and Mullainathan 2004).

<sup>49</sup> In the economic field, joint research works are the norm. Men are given equal credit for single-signature and collective-signature articles, while women who sign together with other colleagues get half the credit given to male colleagues, which is why female economists are 50% less likely to get tenure positions (Criado-Perez 2020).

<sup>50</sup> Thus, when I say that gender is a social construct, we do not mean, however, to diminish its hold on reality. Gender is real as it creates constraints and resources that people recognize. Gender encourages behaviors that increase or decrease people’s tendency to act as if gender differences really exist. They are real social aspects, contiguously real. Gender has causal powers, so it is real in all respects (Sismondo 2010).

<sup>51</sup> Gender studies offer a large literature on the so-called care work, cf. for instance Gilligan 1982, Tronto 2013, Fraser 2016.

regulations.<sup>52</sup> Therefore, feminist analyses help uncover aspects, we take for granted but are highly affected by power and hierarchical dynamics.

So, policies of justice aim first at giving the same access and opportunities to different groups, and respect in different subjects of study. The academy must rethink a way to allow a culture of discussion that is free, open, and adapted to the new times, without falling back into the rhetoric of politically correct,<sup>53</sup> otherwise the inclusion of underrepresented groups is not liberating if it does not lead to a revision of the dynamics of research.

“Changing structures and cultures that give authority to a very particular type of person is not likely to be impacted by merit-based equal opportunities strategies, where seniority may only give the illusion of power. A genuine desire to enable women to progress requires a thorough review of professional practices. [...] Equal opportunities policies must shift their focus from procedures and processes to culture and attitudes before barriers can be thoroughly challenged. Even when put in place with a formalized equal opportunities statement and structure, fine words are not enough. Deeply embedded ideologies in management, combined with casual interchange and spurious judgmental value positions, still serve to undermine women who seek to move to the top in higher education.”

Kettle 1996, 70

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<sup>52</sup> A study on the quarantine programs for Ebola by feminist scholars has explained why people, even with the quarantine continued to get infected. In this program, the need for food was foreseen but not for water and fuels. As a result, women kept leaving the house and got infected. Other possible questions investigated by feminist perspectives relate to why during natural disasters women victims were significantly more numerous than men. In India and Sri Lanka, males are taught to swim and climb trees, women are not taught due to social prejudice, so the female victims were four times greater. Furthermore, usually people are warned of natural disasters in public spaces (markets and mosques), but women are forbidden to stay in public places, therefore, they never know anything. These phenomena in the academic world have been analyzed through a gender perspective (only in a ridiculous percentage). When women are involved in decision-making processes, in the academy, in the production of knowledge, women do not remain buried, because women tend not to forget other women (Criado-Perez 2020).

<sup>53</sup> Lately we hear about “dictatorship of the politically correct”, usually established by the formula “nothing can be said anymore”, but there is no such thing. The request of minority groups is to have representation, an alliance in the defense of their existence by those who have the means to do so and who theoretically occupy an ideological position that exclude them. What for some is just the umpteenth use of the N-word or goliardic joke, for minority categories is the constant signal of a world in which their traumas and desires for space and fulfillment still have no place in 2022.



To produce an effective change, we must commit to a cultural-systemic-practical revolution. Given the vastness of the problem, the solutions to be devised must be different and act on several fronts, globally and locally and preferably simultaneously.

A first targeted measure concerns the establishment of quotas for minority groups. Quotas are not the solution to the problem, but they perform their function of accustoming to cultural change, to seeing oneself represented by marginal groups. Above all, they aim to rebalance the imbalance that has occurred for decades, especially in certain ganglia of power.<sup>54</sup>

Another targeted measure concerns the supervisory bodies in institutions that are primarily public but also private. At present some committees ensure equal opportunities, but they are not always sufficient. For example, universities should focus on both the research and teaching side, for example with the creation of departmental centers and with the adaptation of curricula considered mandatory that also include gender studies,<sup>55</sup> often considered a second-class topic,<sup>56</sup> or at least update programs of history of philosophy by also including women and BiPOC representatives. On the other hand, from a financial point of view, prudent allocations of funds should be adopted towards those committed to gender balance and the adoption of gender budgeting.

Other measures, on the other hand, must act in a more global way. I am referring, for example, to a school and education global reform that envisages the encounters with gender issues well before university. This encounter can no longer be left to the individual case. At present, at least in Italy, gender issues tend to have little visibility, representation, and communication and they are not included in high

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<sup>54</sup> I am aware that asking for inclusion is a palliative and not the solution to the problem, because it still presupposes a patriarchal power system that can decide whether to include subordinate groups. That system should not exist, and the ultimate goal remains to tear it down. But now, unfortunately, it still exists, so asking to be considered is important to put it in crisis and bring it down.

<sup>55</sup> In the Italian university system, which organizes the various branches and fields of study in scientific disciplinary sectors (also known as SSD), there is no sector under which gender studies can be classified. Poor visibility or little importance also pass from these forms.

<sup>56</sup> Especially in the scientific field there is still a lot of hostility towards feminist arguments, sometimes treated not as legitimate academic research but as angry women who want revenge against patriarchy (Morley & Walsh 1996, 132).

school curricula. Yet, the division of gender is the most ancient and most profound form of social division in Western world. Moreover, it is necessary to provide programs that deviate from the Eurocentric and androcentric vision and get used to a less partial view and represent the actual multifaceted society.

Another broader provision concerns the rebalancing between domestic work and extra domestic work. Housework is essential, and it encompasses everything that makes it possible for us to be in the world and deal with other matters, including working. However, domestic work is taken for granted and is made invisible on purpose and disproportionate primarily to women and marginal groups.<sup>57</sup> Rethinking the world means rethinking it starting from these lives.<sup>58</sup>

Thus, inclusion is not a strategy to do nothing and put people in a racist and misogynistic system without changing things, inclusion must go hand in hand with structural transformations.

#### 4.5 Collaborative Practices

Finally, the phases of compromise and vote should be regulated by practices of collaboration. In analyzing cooperation, I will use both purely feminist research and reflections within recent political epistemology, in such a way as to present once again the intersections of interest between the two fields. As for feminist research, for the compromise phase, I rest on studies by Koskinen (2011; 2014), Wylie (2015), and Intemann and De Melo (2010). As far as political epistemology is concerned, I

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<sup>57</sup> The basic problem is that the Western world is so far built by making this essential form of care invisible. Dominant subjects believe they have a right to be taken in care without feeling the need to care for others. As a result, the gender imbalance is very disproportionate. In Italy, according to ISTAT data, women spent at least 5 hours unpaid per day versus less than two hours for men. For a more in-depth study of how racialized categories are even more affected by domestic and care work, cf. Vergès 2020.

<sup>58</sup> Especially with the spread of the covid-19 pandemic, the neoliberal system has shown all its shortcomings on the system of care now increasingly privatized and charged to minority women. There are many feminist studies that are now committed to rethinking the world starting from what is a fundamental prerequisite for the very success of human life: care. We are not independent and autonomous beings, but we are dependent on others, we are also vulnerable to others, and we can flourish because of others. Feminists investigate different systems to ensure the rethinking of our lives (see Tronto 2013, Fraser 2016).

will turn to A. Moore (2013; 2014, 2016). These are examples of external surveys or collaborations with different communities which recall the ones mentioned in chapter three.

The compromise phase is required because, once marginal groups are finally included, it is also necessary to devise collaboration practices between different members, to avoid that (1) the two knowledge go in parallel without meeting and (2) to manage dissent and reach a shareable knowledge.

Several scholars have shown practice of collaboration between scientific communities and extra-scientific communities. For instance, Koskinen (2014) proposes possible exchange between scientific researchers and informants or extra-epistemic agents in general: local communities, patient associations or indigenous groups.<sup>59</sup> To manage these participatory and collaborative practices, the imperative is to not give up on critical appraisal altogether or refuting in the suspension of judgment principle,<sup>60</sup> otherwise local communities will be excluded again.

Effective dialogue is the form of respect and collaboration to follow. Only in this way are extra-epistemic communities seen in their function as part of an enlarged epistemic community. If knowledge and external community methods are not studied and subjected to scrutiny, they cannot be appropriately used and adopted by all researchers.

Not proceeding with verification or criticism is fine for situations in which researchers do not have realistic access to theoretical debates or those forms of only moderate collaboration. But suppose the goal is to promote forms of participation and cancel the line between researcher and other communities, in that case, it is necessary to proceed with dialogue and verification, as if it was a normal situation.

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<sup>59</sup> For example, thanks to the political vindication of the LGBTQIA + movement, homosexuality, and transsexuality (the latter just in 2018) have been eliminated from the list of mental illness (ICT). The active and ever-present encounter with society and political groups is fundamental for science and medicine since they are human and social fields are not alienated to prejudices and vectors of power such as heteronormativity and gender binarism. A non-conformity to what is culturally considered “normal” is not the same as being “not healthy”.

<sup>60</sup> In philosophy, the suspension of judgment can be traced back to the Greek Cynic school, in which suspension, or *ἐποχή* was necessary given by our fallibility and inability to come to certain knowledge. Although I agree with some aspects, for example about human fallibilism, I believe that in this case suspension has a counterproductive effect of making everything vain. We need to work towards a union and discussion that will get us to a consensus albeit a temporary one.

All alternative forms of knowledge must be screened because “the better a participatory project succeeds, the more clearly the extra-academic agents become part of the research community” Koskinen (2014, 746).<sup>61</sup> Each perspective must be seen in the capacity to make a meaningful contribution to the issues.

It must also be said, however, that integration practices follow complex paths, therefore caution and attention are always the prerequisites to be adopted in cases of complex settings between extra-academic collaborations and the scientific community. Moreover, we must both divide or understand the fields of action, and the meaning we attribute to the knowledge in question. For example, origin’s story of the world for the Indigenous has an importance linked to the identity and heritage of their people, they do not intend to replace the studies on hominids (Koskinen 2014). It does not make much sense to compare myths and scientific hypotheses.<sup>62</sup> It is much more convenient to integrate the types of knowledge rather than dismiss them as they do not correspond to the one considered more valid. It also takes mutual respect for this to happen because the components are genuinely considered bearers and capable of increasing knowledge. Hence, it also means not treating them with paternalism.<sup>63</sup> We must consider these people as our equal and take on criticism.

Relativism does not imply the impossibility of criticism, nor the evaluation of other knowledge systems, indeed precisely because they are relative, they can inspire to listen carefully to others.

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<sup>61</sup> This means focusing on membership and communication; in this case, Longino’s criteria would help running knowledge that is usually ignored or that in any case obtain less resonance, since a community may exclude, for social reasons, those who may have access to different or alternative evidence that correct biases. Longino’s norms point to respect and mutual recognition of scientific members.

<sup>62</sup> In the case of bodies of knowledge such as the Indigenous one, sometimes the purpose is restoring dignity or even existence to a type of knowledge that proposes the identity and self-determination of a people and is designed for that public.

<sup>63</sup> Attitude or behavior marked by condescension toward someone considered hierarchically inferior, or younger. It is typical of a sexist attitude, because men feel more entitled to make decisions for others, given their superiority.

#### 4.5.1 Collaborative Examples of Knowledge

Alison Wylie provides examples of how critical discourse enriches knowledge, in the case of collaborative forms for what concerns cases of archeology and the union between archaeological groups and understanding of those directly involved in these discoveries. A first obvious thing to do is mutual consultation between these groups, to avoid violate sites considered by aborigines or natives as places of worship and therefore sacred. Therefore, the collaborative forms are organized through exchange and mutually distributed authority, both to archaeologists and to groups of natives. The conditions of collaboration can be expressed through different degrees, from peaceful coexistence to becoming syncretic forms of dialogue and participation.<sup>64</sup>

Guidelines for this practice may include bans against destructive testing or the excavation of sacred sites and burials; they may require blessings or cleaning ceremonies; and generally, archaeologists require it to respect indigenous cultural norms of accessing and advertising special objects, sites, and traditional knowledge. Archaeologists are expected to give something new to the communities whose legacy they study. For example, simple linguistic relationships make research results accessible to the community; extension, education, and awareness programs; more ambitiously, capacity building and employment training for community members. They are enlisted to help develop community museums and interpretation centers and eco-tourism and fair-trade networks. These forms of collaboration show the interaction between conventional archaeological evidence and evidence gained from indigenous oral traditions can address (and sometimes reformulate) focal archaeological issues in beneficial ways.

Another example brought by Intemann and De Melo-Martin (2010) analyzes the case of the papillomavirus vaccine (HPV, henceforth). The authors state that the HPV vaccine is not suitable for populations in the third world most at risk of

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<sup>64</sup> With the encounter of indigenous and Aboriginal people, it has been rejected the Western presumption that had animated archeology (and anthropological practice) for over a century: that indigenous peoples had disappeared, and that history and cultural traditions being saved were significant not for a living community, but as an element of world history or, quite often, natural history (Wylie 2015).

developing cervical cancer. This is because the vaccine has considerable difficulties when used in these environments. First, they are costly to develop, require refrigeration and are therefore difficult to distribute because they require cold chains. The injection (three-step) takes place intramuscularly and this increases production and distribution costs. They are most effective when distributed in the pre-pubertal age, but this could collide with cultural norms. They are also prophylactic vaccines and therefore do not reduce the risk of cancer in someone who has already contracted an HPV infection. Developing countries lack a whole range of financial resources as well as infra-currencies for distribution.

In the case of the diversity and the marginal perspectives, having diversity in the community, having a wide range of identities and collaborative practices increase the possibility of having several hypotheses and methodological options that generate alternative explanations and identify more problems or flawed assumptions. For instance, in the case of HPV research there is clearly a Eurocentric assumption. A knowledge of the living conditions of the sub-Saharan rural area, on the other hand, would have brought attention, for example, to the problem of refrigeration or the lack of a healthcare system. Or more generally it would have generated starting questions that focused not on women in general but started from the conditions of those women who are most at risk of developing HPV, or who have an inferior care system. This would also throw more general attention on what difficulties different groups may face and help increase participation of scientists from different social positions that break down the barriers and challenges of underrepresented groups in science.

Starting from marginal lives allows them to work closely with these groups, that is, to create collaborations with the subjects of their research (Intemann & De Melo 2010). The interests of these marginal groups are taken into consideration and recognized. It could also lead to identifying other important points in determining the effectiveness of this vaccine, such as the efficacy rate in women with a depressed immune system or malnutrition (both of which are endemic problems in developing countries). From a social perspective, fewer health inequalities would have occurred, and attention would be drawn to diseases that significantly affect developing countries.

Focusing on these issues illuminates how research can be perceived based on different social and geographical locations. Moreover, using a gender perspective leads scientists to realize that it is a disease that is transmissible to both men and women and that therefore also the sexual behavior of men has a role in the spread of this disease, and subjecting men to the vaccine would help create herd immunity and stop HPV transmission. The infection is in fact also responsible for penile and head and neck cancer, and genital warts. On the contrary, vaccinating only one gender for a sexual disease transmitted also by men would reinforce the stereotype that only women should be held responsible for reproductive health problems.

#### 4.6 Finale Phase: Vote and Transient Diversity

Diversifying the social composition of the community of experts and collaborative exchange are ways for promoting a critical dialogue between perspectives capable of obtaining less partial knowledge and ensuring fair representation for social groups excluded from the scientific communities. Diversifying, however, is only the first step, since epistemic diversity must, in any case, allow the formation of a consensus on which to base a shared knowledge, albeit variable, that does not fall into the extermination of social constructivism neither into naive truthism.

Thus, diversity, in fact, is not preserved through the maintenance of every single perspective neither with the complete assimilation of differences, but it is essential and preparatory to the critical discussion, enriched by different points of view, which will lead to a never premature and immediate consensus, but always the result of debate of different positions. This epistemic consensus will truly be achieved when everyone is allowed to express themselves, and that even in the case of non-unanimous agreement, all members can truly feel heard (A. Moore 2016). Therefore, the vote rather than being a choice has the task of communicating the point of view of the other, so that consensus is never reached at the expense of the suppression and conformity of dissident voices. The agreement will be formed by some form of shared belief and is therefore based not on unanimous, but only partial

consensus. Everyone can veto and everyone can change their opinions because they are convinced by the arguments of others, in the same way, if they do not convince others, they can still think they have been heard and therefore no longer feel obliged to oppose the consensual proposal (A. Moore 2013, 307).

The collective deliberation will therefore take place *in situ* and will foresee that first, all the voices included (especially dissident ones) are heard and then that the ratification of these statements is reached. The collective democratic decision-making processes that provide for inclusion and collaboration contain statements that derive from deliberation in which, in a context where everyone could have opposed, it was possible to agree on a collective consensus.

This agreement, however, will never be univocal and fixed but always polyphonic, pluralistic, and perfectible. In fact, if knowledge reflects social positions, then increasing knowledge means increasing social positions, which contribute to the explanation of a problem. Based on new points of view and discussion, objective knowledge can expand or change. The articulations of the world change based on further epistemological questions. Therefore, the alternative to relativism is not a single totalizing vision, but partiality, locality, and criticism of the possible network of connections in solidarity to obtain shared epistemic conversations. A fairer but also more all-encompassing world is a world that is informed by all social experiences. Consensus does not coincide with the Truth, but our only reliable access to meaningful and justified theoretical knowledge is possible through the agreement of researchers who have exchanged their perspectives and critically discussed each other (Anderson 1995c, 204).

Finally, the outcomes of democratic discussion must be placed in a context of active public scrutiny. In this sense, social movements and activism play a crucial role in maintaining this scrutiny in context. Democratic strength, therefore, derives from the fact that the supposed authorities are called upon to justify their practices, also speaking of epistemic norms, reliability, or evidence. The deliberations of the experts must be open to external judgment, for example, to the context of scrutiny and contestation produced by the social and artistic movements that populate the sphere of the public domain. These practices therefore lead to internal and external debate and greater accuracy.



## 4.7 Conclusions

In this final chapter, I wanted to reconnect the theoretical analysis conducted so far and employ a broader gaze on epistemic phenomena. I wanted to show how feminist reflections should integrate with a change in our academic and ultimately social structure. In this way, I looked and reflected on issues that went beyond the original niche of feminist epistemology and reached a broader breath that these theories can give back to the general thought on the cognitive and social practices that concern us.

I call this approach a feminist-political epistemology, that is, a theory of knowledge attentive to political and social influences with an indispensable focus on gender and racial dynamics under the aegis of intersectionality, breaking down social and political modes that indulge in gender inequality and more, in general, presuppose precise hierarchies of power. Such a reflection can only enrich and benefit the broader panorama of ideas, weakening those positions perched on the objectivism of facts and still complicit in a scientific vision for a thought that can be marked by gender biases.

In fact, the chapter began precisely on a discussion on the epistemology of ignorance and epistemic injustice, perhaps the best example for understanding that power relations shape epistemic reliability, credibility and access to knowledge. Epistemic injustice and the active production of ignorance are powerful allies to maintain the status quo, the Western Eurocentric society, based on sexist divisions role and racialization of non-white persona.

On the other hand, the second part is a reflection on these issues to extract a methodology that can mend theory and practice. This method to be successful must follow at least these three principles: democracy, inclusion, and collaboration. The democratic approach first allows the entry of the different voices into epistemic fields. However, so that these voices are not only exploited without changing the social and academic milieu, it is also necessary to aim at the inclusion of differences and not at their assimilation. One of the issues highlighted is the need to act on the cultural mindset and be aware of how gender issues affect our society, at least the

Western one, which has divided the world for as long as we can remember by class of gender/sex. This teaches us that adopting a feminist gaze improves our lives, because unfair gender division is part of our whole life, and feminist precisely commits to overthrow it.

To get used to this intersectional perspective, we need to act at a global and local level. For example, on the educational level, we must update the programs, and detach them from the Eurocentric and androcentric views. The encounter with gender studies cannot be left to chance, as it happens now. It is also necessary to fill the gender gap thanks to bodies that supervise and encourage gender-based practices, starting from the allocation of the funds given to those who respect and commit themselves to equalizing the imbalances. Quotas are also an example to get used to cultural change. They shift the question not to whether it is difficult for a woman to be in a position of power, but to how difficult it is to access that position of power. In summary, the main areas of intervention concern visibility, representation, communication, access, research training, recruiting careers, governance, Work-life balance, and work well-being.

Finally, the third step is collaboration: from the mildest to the most interactive, collaborative practices serve to promote dialogue and mutual listening between academia and society. The academy produces knowledge, but society is always the signal to be taken into consideration not to detach and listen to requests and needs, to understand if knowledge reflects or excludes identities, and not repeat dynamics of power. Moreover, these collaborations must lead to sharable knowledge. This knowledge must never be the result of premature discussion nor gained at the cost of suppressing dissent voices. Democratic exchange and discussion are transient because they are propaedeutic to mild relativism, that is the recognition of the procedural nature of every human activity, the awareness that human activity is always situated within historical and social contexts (as feminist epistemology suggests), the vision of scientific activity as a culturally situated and deeply involved in the construction of social knowledge. There are no fixed standards and criteria that will last forever. Still, we can find measures that work for that community and that given moment, capable of embracing the intuition that social differences give rise to differences in the perspectives that built the world,

and that power can be an influence on how we evaluate those perspectives. Multiple, diverse perspectives are therefore desirable as they contribute to the discursive and critical practice of knowledge.

A responsible and transparent practice such as feminist-political epistemology, which considers social differences and embraces them, can present itself as a worthy formulation against the post-truth era,<sup>65</sup> which effectively nullifies any possibility of shared and shareable knowledge.

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<sup>65</sup> The neologism was included in 2016 in the Oxford Dictionaries as a word of the year. It generally indicates the cultural climate marked by political events such as Brexit and the election of Donald Trump as President of the United States and the establishment of national-populist governments in Eastern European countries and Turkey (Omodeo 2018).

## Concluding Remarks

The main topic of this dissertation is scientific objectivity, a complex and debated issue in epistemology. I have decided to analyze scientific objectivity within feminist epistemology, to show the epistemic gain provided by a feminist perspective on knowledge theory. I have analyzed this epistemic advantage both at a general level with the assessment of epistemic practices in academic settings and at a specific level, that of scientific objectivity in the philosophy of science. In the first case, our epistemic practices and science institution can be improved by establishing a feminist-political epistemology, using feminist-political tools and strategies, and exploring practical situations of science settings. In the second case, the epistemic gain is explained and shown through my approach which I call contextual standpoint theory. My approach explicitly concerns feminist epistemology and scientific objectivity.

Therefore, I have imagined my argument as a circle, reflecting this global-local dialectic. In chapter one, I explored feminist philosophy and critiques towards science, by describing general topics and the feminist tools I employed in my research. In chapters II and III, I restricted the gaze, and the analysis focused strictly on epistemological issues and scientific objectivity, where I presented my approach of contextual standpoint theory. Finally, in chapter IV, I widened the assessment, by using feminist epistemology tools to explore topics that go beyond the original niche of feminist epistemology. In the last chapter I also used some of the assumptions and methods of contextual standpoint theory to explore academic settings, to implement the reflection of expertise and science. This circle also explains why I place such importance on feminism history and literature in chapter one, even though my thesis was primarily in feminist epistemology. The claims about scientific objectivity have relevance for a general framework, not to mention that inclusivity and epistemic privilege revolutionize scientific objectivity and the abstract image of epistemology and how we intend science. The circular structure is also helpful to explain the difference between two expressions: feminist epistemology and feminist-political epistemology. In the introduction to the thesis, I explained that

when I use the expression feminist epistemology in the second and third chapters, I am referring to the position that has emerged since the 1980s, generally divided into three categories, and whose area of research usually refers to classical problems in the philosophy of science (justification, validation, objectivity). The expression feminist-political epistemology refers instead to a broader perspective when I analyze issues that are outside the problems in the philosophy of science. In the thesis, I am keen to propose this distinction to show how much one can expand the focus from the traditional discipline. A political feminist epistemology, in addition to the strictly speaking discipline, broadens its gaze and the issues to analyze. This different use of terms is reflected also in the explanation of my thesis's outcomes. I have divided the results obtained in my dissertation into three macro-themes. By showing these themes, I have also retraced the structure of my chapters.

Bearing in mind the circle-mirror structure, I advise the reader that the first outcome deals specifically with contents explained in chapters one and four. The second one addresses specifically the second and third chapters. Finally, the third macro-topic is hybrid since it collects suggestions by all chapters, albeit the majority derived by the second and third chapters.

## I Feminist-Political Epistemology Through Wide and Narrow Scope

The first outcome is the definition of a feminist-political epistemology and what can be expected from it in the analysis of scientific theories and institutions.

Chapter one, entitled "Historical Figures and Political Roots of Feminist Epistemology," retraced the historical divisions of feminist thought in four waves and its cornerstones, such as the fierce criticism against patriarchy and the naturalization of the sex/gender pair. Patriarchy imposes superiority and domination of masculine over the feminine by setting opposed dichotomies: masculine/feminine, nature/culture, human/animal. These dualisms are organized through the principle of higher-lower assumptions, i.e., one is placed higher than the other, and this justifies domination and control. The lowest is usually given an

instrumental role in a relationship of power. Finally, the two terms are exclusive. There is no surprise that the first and superior term is masculine and the lower is feminine. Moreover, to the other first terms in the dualisms are assigned features that resemble the supposed masculine nature.<sup>1</sup> The pair sex/gender is even more problematic since, in a patriarchal system, natural sex differences between males and females become reasons to justify and explain the inferiority of women. Biological sexuality is transformed into a cultural product, organized in a strict division of gender roles, so ingrained that it is perceived as natural.

On the other hand, the historical waves set out the evolutions and changes of feminist thought since its first appearance. I used this chronological division to present which form of feminism I adhere to, namely trans-intersectional feminism. This form gathers the most numerous and varied requests by women and marginalized individuals, considering the intersections of multiple axes of discrimination such as gender, sexual orientation, disability, class, race, etc. I apply this feminism to my project, contextual standpoint theory, and the general assessment of the academic framework.

In the following part of the first chapter, I delved into the relationship between feminist thought and science by dividing three different areas to examine. The first one, the “deconstructive part” collects the most important criticisms made against science institutions and well-established scientific theories. This part aimed to highlight the intrinsic biases in science, to the level of institutions and participants and to the concepts used in science, such as reason, objectivity, etc. These are informed by an (un)conscious androcentric and sexist mindset perceived as impartial and universal. Once I acknowledged the errors in science, I moved to the constructive and methodological parts, where I gave details of the feminist epistemology discipline and of its main research tools.

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<sup>1</sup> Considering the dualisms present in western society, women had been combined with nature's features and the realm of physicality. Men are identified with the human and with the realm of rationality. Anything identified with nature and the physicality is inferior to anything identified with the human and the mental domain. Therefore, women are considered inferior to men. Ecofeminist theories have long studied the relationship between femininity and nature, see Merchant 1990, Gaard 2011, Barca 2020.

From the feminist tools, I extracted the feminist-political epistemology to be used in general research besides philosophy of science traditional debates. Feminist-political epistemology is an epistemology that combines two intents: feminist-political-social and epistemic. The first one is given by two aspects. With a feminist lens, I analyze the Western ideology shaped by discriminatory axes. These axes also involve our epistemic practices undermining the experiences of certain individuals and subjects and exalting the presumed universality of claims made by other individuals which corresponds to the norm in a patriarchal system (mostly white men). Hence, feminist epistemology is political because it studies political factors and power relationships in our epistemic practices. But it is also political because it aims to initiate a social-political change in society, whose beneficiaries are those same individuals that are usually undervalued. This is exemplified by the methodological principle of academic militancy since from studying other material conditions or asking different questions, we can shed light on who is omitted.

On the other hand, the epistemic intent in feminist-political epistemology is explained because, due to situatedness, different epistemic questions may depend on different social locations. Furthermore, it is not possible to transcend any personal, subjective, extra-scientific perspectives for the epistemic agent. Everyone begins to know from their social positions and their auxiliary assumptions, which are also formed by cultural aspects. In a nutshell, our social location sets our knowledge; hence there is no interchangeability between subjects. Situatedness also reveals that some social locations are disadvantaged because cognitive aspects such as credibility, reliability, access to knowledge, communication of results change based on the body and position taken into consideration.

Shedding light to these social locations and individuals who occupy these social locations entails a bigger and varied number of questions. This is exemplified by the principle of pluri-diversity: we can suppose different questions for the same topics or questions not yet analyzed. But we can also imagine improvements to existing established theories thanks to the method of decoloniality and marginality because deconstructing our privilege and being in the margin gives the possibility to explore different responses to questions already asked or to raise epistemic

privilege on certain issues. This was the case of feminist thought on topics such as female sexuality, female reproduction, etc.

In summary, the epistemic intent is improved because the collective epistemic framework is broadened by new epistemologies, new narratives, new questions, new subjects who study or to study. There is no neutral or universal perspective rather the epistemic horizon is improved by the admissions of multiple, situated voices. The epistemic horizon – duly enlarged – conversely also implies material changes. Indeed, a more inclusive society is achieved with a cultural transformation of the highest spheres of knowledge: epistemology studies how the world is or appears to be, but it can also signal what needs to be changed.

On this matter, chapter one is connected with chapter four and to feminist-political epistemology because, in chapter four, I analyzed material conditions of our academic settings since they are places of production of knowledge for all intents and purposes. Firstly, I focused on the relationship between expertise and science. Science is seen as an authority since it is usually considered one of the most secure, objective, and evident among the types of knowledge. Consequently, those who produce knowledge are seen as experts, which often translates to those experts being questioned even in political and social situations to decide the course of action. Feminist-political epistemology can also help because the experts' role is studied (again) through an intersectional lens. The first part of chapter four focused on epistemic injustice (someone is damaged in their ability to communicate knowledge) and epistemology of ignorance (active production of ignorance). Political features and discriminatory relationships affect and explain both phenomena.

Moreover, in this chapter, I also add another feature to the feminist-political epistemology because I also explore epistemic contents by considering some reflections labeled under “political epistemology.”<sup>2</sup> More and more, we witness in the epistemological debate the increase of positions that recognize the active role of

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<sup>2</sup> Political epistemology is a broad label that collects positions and reflections very different from each other, but that share an interesting at least in one of these four topics: concept of truth and consensus, the role of experts, epistemic injustice and epistemic virtues (Hannon & Ridder 2021). Furthermore, political epistemology's positions, as the name said, focus on the political-social-cultural aspects intrinsic in knowledge production; see also Omodeo 2019.



political aspects on knowledge (both from an external and internal phase). This shows another outcome for feminist-political epistemology, namely possible bridges and connections with different positions not strictly feminist.

In the remaining of the chapter, I studied the experts in their main environment: academic settings. To this matter, I advocate that to obtain inclusivity and epistemic improvement, we shall work on at least three aspects. The first one is the democratic one and derives from the awareness that our epistemic practices do not allow the admission of all the different voices. Evidence of this is few diversity in scientific communities, silencing deviant knowledge that does not correspond to the dominant one,<sup>3</sup> presumed universality of mainstream claims, poorly distributed epistemic credibility and reliability. Hence, we need to practically intervene so that these knowledge practices are democratic, namely, allow to thrive and obtain greater social and cognitive diversity: more individuals, more questions, more reasoning styles.

The second aspect to consider is inclusion, often tokenized rather than actualized. The feminist-political lens shows that there is no participation or growth between different members of society, at least not at an equal pace. Inclusion needs to study and make an equal employment scheme, greater and varied allocation of funds, gender budgeting, to combat discriminations such as glass ceiling or even harassment and fill the existing gaps. Inclusion also refers to global changes such as rethinking the philosophical canon in schools and universities or implementing gender studies in school. The methods pass through the deconstruction of our privilege: syllabi in school are still formed by only (or large prevalence) of white men.<sup>4</sup>

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<sup>3</sup> In chapter one, I showed how the “myth” of objectivity also served to exclude other knowledge and expertise, such as Indigenous knowledge, which did not comply with Western culture and way of thinking. Nowadays, we witness an increasing interest in a specific field of Indigenous knowledge, known as Traditional Ecological Knowledge (TEK). Indigenous knowledge and expertise are many and variegated: pre-colonial knowledge, IWOK (Indigenous Ways of Knowledge), TEK, etc. (Toledo 2013).

<sup>4</sup> I report the latest Italian ministerial program required to win the high school philosophy teacher call scheduled for 2022 (<https://www.miur.gov.it/documents/20182/2432359/Allegato+A+Programmi+concorso+secondaria+02022020+uv-signed.pdf/b813a133-7ab9-cfd9-6421-f18440af328a?version=1.0&t=1587564350930>). The education class of future students is not required to have a gaze that goes beyond the Eurocentric and male one. Such a philosophical

Moreover, with inclusion I also analyzed the cultural assumption about meritocracy,<sup>5</sup> seen as system to maintain the status quo. Meritocracy is designed to progress more easily certain individuals who adhere to the image of a successful persona in our Western system. However, it preaches that if anyone wants to succeed, all they need to do is want (to succeed). Meritocracy translates into a system that works better for men than for women. In a world where the division of gender roles is so stark and labor care is all about women and other marginalized individuals, it is easier for men to just concentrate on their careers. So, if gender policies are not created to equalize the two roles, it is normal that one gender will be able to move on faster than the other.

But meritocracy entails also flaws from a purely epistemic point of view because, again, it does not allow for critical discussion and the production of knowledge that is accessible to all and thus creates gaps, as it misses questions that do not regard white males strictly or it produces explanations incomplete or partial. On this matter, the last aspect that I take into account is specifically epistemological and concerns the stages of collaboration between different epistemic communities to reach a more exhaustive and complete but intersecting horizon. The epistemic goal is to arrive at a shared, shareable, pluralistic, and polyphonic knowledge thanks to the real and not façade resonance of all voices for an epistemology that is always ongoing and progressing.

In conclusion, the appraisal of feminist-political epistemology is capable of studying epistemic practices to improve them. Practical examples of these improvements occur precisely using the three aspects – democracy, inclusion, and collaboration – I examined.

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canon accustoms to the idea that the only knowledge worth knowing is white and produced by men.

<sup>5</sup> Meritocracy is the system by which the value of an individual is measured solely on its own merits and is typical of our neoliberal society. The deception of this system is that obtaining one's own merits and progressing by building a career with internships, more prestigious universities, and networks is much easier for individuals who already have substantial means at their disposal. You must first afford to do a free internship that is likely to bring you networking and access to higher positions. Not everyone starts on the same footing. Same for prestigious universities who come with expensive tuition.

## II A Contextual Standpoint Theory

The second macro-theme of my thesis relates to the discipline of feminist epistemology, showing how my thesis takes position in the epistemological debate and what I add in relation to viewpoints already present in feminist epistemology. Hence, this outcome strictly responds to the question of an epistemic gain related to feminist epistemology frame. In order to describe this result, I will start by recapitulating the remaining two chapters, II and III. In these chapters, I present my project, contextual standpoint theory, given by the combinations of standpoint theory by Sandra Harding and contextual empiricism by Helen Longino.

As I said in the introduction of this thesis, feminist epistemology is a discipline informed by overtly political stances and interest in epistemological questions. To analyze this inclination, I divided the second chapter into two portions: the general framework, problems, and assumptions of feminist epistemology and the presentations in detail of Longino and Harding's projects.

Points of departure and lines of continuity between this approach and the general debate can be traced in the historical turn with Kuhn and Quine's thought. Kuhn proved the social and political values involved in science, and Quine raised doubts about the direct and evidential link between theories, observations, and data supporting certain theories. These authors have opened a discussion that is still central to epistemology, such as epistemic and non-epistemic values and the use of these non-epistemic values.

Feminist epistemology in this regard argues that it is not possible to maintain a clear distinction between the two types of values and that the intrusion of non-epistemic values should not be seen as harmful. Given the idea of situated knowledge and that by using feminist values feminist epistemology derives its normativity, it is not unusual to imagine these answers. Feminist theories of science had harshly criticized that the previous framework was only neutral on paper but had incorporated sexist and androcentric unconscious values. However, eliminating these values is not accomplished by even greater neutrality because it is impossible to achieve it given the principle of situatedness. Instead, we must take on board the

role of values in all stages of knowledge. This is a position widely held by both Longino and Harding.

Feminist epistemology then opts for a general image of knowledge and scientific objectivity different from value-neutrality. Nowadays, this does not create suspicion; indeed, it is shared by other positions, not necessarily feminists, for instance postmodernism, sociology of knowledge, social constructivism, etc. This, however, is a point that should be clarified, as adhering to a non-absolutist or relativist framework or theory does not necessarily mean to admit that all positions have the same weight, that “anything goes.” For feminist epistemology, knowledge is dependent on the social position, and knowledge justification will never be absolute, but it does not mean that everything goes or loses normative force. The image of science is one of value-laden science (in which extra epistemic factors enter the stages of knowledge) but seeks to save objectivity.

In the second part of the second chapter, therefore, I presented the projects of Longino and Harding that aim to strengthen the role and control of non-epistemic values, to maintain the social and situated character while not renouncing theoretical and rational aspirations. Harding makes her cornerstone the idea that certain values are more epistemically indicated than others to provide content and viewpoints on issues (epistemic privilege), while Longino pushes for a clear and transparent justification and evaluation of any value and a diversity of perspectives both for social terms but also for epistemic reasons (more perspectives allow more issues, questions, or theories to be considered).

All these precedent considerations are translated into the third chapter of the thesis, where I introduce my project of contextual standpoint theory, given by the combination of the two aforementioned stances. Contextual indicates the role of context and situated knowledge (partiality and dependence), standpoint recalls the methodological assumption of epistemic privilege and their heuristic capacity, and finally, theory indicates that this is a legitimized apparatus, a feminist theory to be precise. My project fits coherently into the current understanding of the three strands of feminist epistemology clarified for the first time by Sandra Harding,

which are much less clear-cut than they used to be.<sup>6</sup> What distinguishes my project from by other strands in feminist epistemology is that I combine the two perspectives to 1) obtain a more comprehensive picture that shows the actual contribution in epistemology, 2) resolve some criticisms made to the two perspectives, and finally 3) overcome a basic incompatibility that for some authors remains (Intemann 2010, Crasnow 2008, Tanesini 2020).

My project proposes a justification of knowledge made by the discussion of perspectives in the scientific community, gathered according to principles of inclusiveness and participation. This justification is not taken randomly but according to criteria, regulated by epistemic constraints, rational and methodological principles even if historical and not absolute. I advocate for a tamed form of relativism, a mild relativism. To propose how my idea takes place and how it is justified, I divided the third chapter into three parts: 3.1 discussed the shared points of the two perspectives, 3.2 criticized some passages in the two projects respectively, and in 3.3 I proposed my project in detail.

In 3.1, I started with the most easily recognizable points in common grounded in the normative, social, contextual, and political characters. Then I discuss the less obvious but nonetheless verifiable shared points, proposing that the three theses of standpoint theory apply to all feminist epistemology quantitatively, posing a degree difference rather than a qualitative difference between standpoint theory and contextual empiricism. Finally, the last part concerns the contrast between Harding's epistemic privilege (the explicit reference of certain values) and Longino's pluralism (ambiguity on values). I called this contrast value perspectivism in Harding and value pluralism in Longino. To solve it, I analyzed the passages in which Harding opens to pluralism and relativism by comparing definitions of relativism and pluralism, showing how Harding is closer to relativistic features rather than absolutist views. In Longino, on the other hand, the preference for certain values is less evident but still present when she discusses her criteria and which values are more conducive to critical discussion, contrasting dogmatism.

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<sup>6</sup> Nowadays, the distinction between the three internal positions within feminist epistemology described by Harding 1986b (empiricist feminism, standpoint theory, and postmodern feminism) is no longer neat, but there is a tendency to look for hybrid positions.

However, concerning Longino and Harding's projects, I also discussed the most vulnerable points of the theories (3.2), including that both focus on different poles leaving the other uncovered. Longino gives much attention to methods concerning knowledge validation: how we come to say that something is objective knowledge. Harding concentrates on the different questions that jump out when marginalized perspectives use their epistemic privilege. Without denying these results, I argue that Harding is missing a final step of justification, while Longino is missing a preliminary step before justification.

This problem is solved in the last part of the third chapter (3.3), in which I theoretically and methodologically present my project. Thanks to this combination, I maintain that Longino and Harding's projects complement and improve each other. Longino's criteria<sup>7</sup> are optimized because the marginal perspectives of standpoint theory ensure diversity on which the project's success is based. While for Harding, Longino's criteria provide plausibility, justification, and validation of the marginal views that are historically underrepresented. Moreover, the criteria safeguard these voices as they are specifically designed to consider the criticisms that emerged in the discussion of the theories.

From a methodological point of view, marginal perspectives can participate in Longino's project in two ways. The first one is a prerequisite, a preliminary step collecting different voices. The second one is a standard of inclusion to ensure that marginalized perspectives are not suppressed because they are politically driven.<sup>8</sup> Due to their epistemic privilege, marginal voices are more suitable for studying background assumptions of a community formed almost entirely by dominant individuals because political factors and power relations influence these background assumptions. The epistemic privilege is given because being in a dominated situation in a Western society organized through different discriminations, those who must deal every day with these discriminations can

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<sup>7</sup> Longino proposes four criteria: 1) avenues for criticisms, 2) appraisal of criticisms, 3) shared standards, and 4) tempered equality. Readers can find their explanations in chapters two and three of this thesis.

<sup>8</sup> Generally, an overtly political point of view is not always welcome in epistemology, which has a tradition of producing unbiased and detached knowledge. Even more, political perspectives that do not conform to the traditional mainstream view may be more likely to be discarded.

better grasp the difference between their situation and the dominant condition. This dialectic of domination also affects epistemic practices and science. For the same reason, marginal perspectives are also more likely to be critical and they will be considered by Longino's criteria. Marginal perspectives maintain their epistemic privilege without being justified on their essential conditions; rather they are justified through democratic criteria, they receive a platform to be listened to and to be contextualized. In contextual standpoint theory, contents proposed by standpoint theory and justification's standards intersect perfectly.

Ultimately, my project takes a more exhaustive look considering methods and perspectives, improves the criticisms leveled of the two positions taken individually, and highlights social and epistemic contributions. It reflects perspectives usually not considered and from whose knowledge marginalized subjects can benefit. It also shows epistemic contributions because more partial perspectives increase the comprehensive picture: paradoxically more partial views lead to less general partiality. Hence, contextual standpoint theory contributes to the general debate in epistemology and scientific objectivity.

## II.I Postilla: Truth about What?

Contextual standpoint theory gives a method to provide our outcomes of rational justification, for calling them objective. However, considering the premises of feminist epistemology, underdetermination, theory ladenness, and the consequences of intrinsically social and contextual knowledge, we need to clarify what kind of objectivity we are referring to and untie it from the meaning of "absolute truth."

Any knowledge activity must be intended as established in historical and social contexts, formed by meanings and relationships that are essential to interpretation and understanding. These activities are in constant evolution and transformation concerning the contexts in which they are located. The focus on the context is to be understood as focusing on the subjects' relationships and in the physical and cultural world of belonging. Finally, scientific research is culturally

established and implicated in constructing a social knowledge that bears the mark of situational contingency and the configurations of interest of the processes that generated them (Santojanni e Striano 2003, 84). Hence, every rational evaluative practice is necessarily limited. The framework within which to place the production of knowledge and knowledge itself will have a non-absolute but provisional and relative character. Being embedded in a relative belief system, objectivity does not equate to absolute truth, but the content's relation with the object should be intended in varying degrees depending on aims and contexts (Longino 2002b, 204). No justification is absolute and permanent, and no one can ensure that the contents developed by justification are absolutely true and fixed.

Moreover, justification is also social because it depends on communities whose epistemic statuses are contingent and inevitably include extra-scientific factors (Ashton & McKenna 2020, 33). The justification will depend on the positive agreement by these members. However, this does not automatically mean that justification identifies with subjective preferences, but that consensus is reached among the epistemic communities once the theories have been thoroughly discussed (Wray 1998).

The social discussion also opens to pluralistic and pragmatic dimensions. Hence, there are different visions and aspects on which we can concentrate, and we judge the content's success of knowledge also based on pragmatic choices and objectives that change over time. For example, Harding starts with questions and assumptions of the marginal groups that need to participate in knowledge in order to make it less false and more accurate. If the research results are corresponding and congruent with the world, then the knowledge claims will not be false. The relativistic framework should be operated as a device to probe human nature and to help humanity negotiate a complex and puzzling social reality (Kusch 2016, 11).

Given all these elements, knowledge is objective when it corresponds to models of the worlds and objects we observe, rather than specula truth of the world. Models also consider plural and pragmatic dimensions, and their validation<sup>9</sup> is given by agreement between members of the scientific community. Scientific

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<sup>9</sup> For other insights on this see also Cartwright (1983) and her discussion about scientific laws.



research is linked to significant aspects of the world. These significant aspects are related to our research purposes so that for a certain type of research, one characteristic is more important than others. To obtain a model, we must choose which categories we are interested in, and based on these, we then elaborate our research and model (Daston and Galison 1992, 85).

So, the nature of our contents does not represent the truth per se of the phenomena but is a model of our research objects, based on aims and interests we want to analyze. Scientific knowledge is made up of different portions of theories about the world. In this sense, pluralism also confronts us with the evidence that we cannot know everything immediately. Pluralism is the condition to develop knowledge because it urges us to find different aspects of the same objects or different objects to analyze. After all, a single theory does not exhaust all the causal interactions involved in a given process (Daukas 2011).

Pursuing a more pragmatic and plural approach in which objects can be inserted in a comprehensive context of description, classification, and analysis increases the different sides by which we can analyze a phenomenon. The objectivity will be measured then not on ideal and fixed standards but on pragmatic and empirical standards, which can be enlarged and changed based on the question we want to answer in each research. Moreover, there will also be a place for those problems, which have been ignored, because pluralism does not admit hierarchical organizations but opens to the complexity and transversality of the phenomena to be investigated. By adopting this approach, it is also possible to pragmatically understand what is meant that standpoint theory produces content for women, i.e., it uses models of knowledge that take into account the characteristics of the empirical world relevant to women, and at the same time, combat those models that continue to maintain the ignorance of women.<sup>10</sup>

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<sup>10</sup> An example can be helpful in this regard. Criminologist Elisabeth Stanko (1997) researched how women prevent violence. Research typically showed the use of self-defense techniques. Instead, asking women to talk about how they avoid violence has broadened the basic meaning of "self-defense." Many women described the choice of where to live, when to go out at night, which way to go and what to wear, etc. Interrogating women then made it clear that certain strategies were not considered self-defense by common sense, but indeed they count as self-defense practices (Stanko 1997).

Contents of knowledge can be regarded as objective when the agreement on these contents is thoroughly investigated by heterogeneous scientific members of communities whose discussions and interactions are regulated by Longino's criteria. These contents will also correspond to knowledge models, governed by social and pragmatic aspects, as they are not divisible from our epistemic practices. Since these are inherently social, then achievement of objective knowledge does not equate to absolute truth. It will be objective when it provides an explanatory model of the objects we investigate, the portions of the world we investigate, and the research goals that drive us to explore one such aspect instead of another, whose concordance and agreement on the models produced will be dependent on discussion among members of the scientific community. A successful discussion will be the one that leads to the greatest number of qualitatively diverse points of view, usually ignored, but which precisely, for this reason, can illuminate different aspects of the world, take into account different research objectives, and thus increasingly lead to the broadening of the models of knowledge employed. These will not be true in an absolute sense, but this does not mean that they are less valid.

### III The Definition of Objectivity

In this final section, I clarify the third and last macro-theme of my thesis, namely the different attributes that we can refer to when talking about scientific objectivity. It will not come as a surprise, but features used to value-free objectivity, such as impartial, neutral, detached, will be excluded. I have also distinguished the various attributes according to the aspect they analyze: the *essence* of objectivity, methods that compete with objectivity, and finally the attitude of the epistemic subject when producing objective knowledge.

*The main attributes of objectivity knowledge follow:*

**Partiality:** knowledge is carved and limited by our position, it is impossible to obtain the so-called view from nowhere, but every vision will always be partial and

local. It is partial in the sense of incomplete since every point of view is always “situated” and cannot grasp everything. And it is also partial in the sense that it is biased since knowledge is never entirely passive, just as the human beings who engage in its attainment are not mere devices but are driven by interests and desires, including prejudices (Haraway 1988). Consequently, knowledge can never be universal, but this does not imply that it is reducible to individual idiosyncrasies or epistemic relativism. In Haraway’s (1988) formulation, scientific knowledge is a situated objectivity, open to multiple connections, due to the awareness that human lives are different from each other and immersed in a knowledge stratified by gender and other axes. Women and men have different activities in society and also follow different patterns and behaviors. Using women’s life as a starting point to criticize basic knowledge that refers only to that of the ruling class thus reduces the partiality of the framework of social and natural life that has been given up to now. Partiality and diversity make it possible to obtain shared epistemic contents.

**Contextualism:** according to Harding (1986b), thanks to the importance given to social contexts and the positioning of an epistemic agent, more objectivity can be obtained because the marginal position allows grasping less evident aspects to those who occupy a central position. Furthermore, Longino (1990; 2002b) underlines how epistemic justification cannot disregard the relative background assumptions that are required to establish the empirical relevance of the evidence and theories. The basic assumptions are also motivated by the conditions and social contexts of the agent.

**Normativity:** the role of non-epistemic values and factors is not detrimental to objectivity but rather is epistemically fruitful. Feminist values play a positive, normative role, filling the evidentiary link between data and theory (Longino 1979). Indeed, some social factors such as feminist values are more conducive to critical discussions. Feminist objectivity rejects the value-free ideal and advocates that feminist values are better to minimize errors and bias in science than values opposed to feminism (racist or sexist values).

**Social and political connotation:** Feminist epistemology uses intersectionality as a category to examine how discriminations are interconnected with practices and knowledge production. Once we realize that social and political aspects are

intrinsically connected to science, we will see more clearly the division and hierarchies of power in science, and we can have an account of them. It is, therefore, epistemology itself that is political because the conditions for the production of knowledge are political. It is political because relations and hierarchies of power operate within it and determine access to knowledge, and it is political because identities, socially and politically constructed, influence the communication of what we study and the results.

**Pragmatism:** the adjective is inspired by the concept of knowledge-experience in Pragmatism. Knowledge-experience provides an accurate and complete understanding of human life and the tools to be in the world in favor of improving the material conditions of human life (Dewey 1938).<sup>11</sup> Consequently, if knowledge does not give the tools suitable for everyone to stay in the world, it does not comply with the principle of knowledge-experience. Feminist reflections underline how sometimes consolidated knowledge is useful only for certain experiences, those corresponding to the ruling class, and therefore does not conform instead to the experiences and socio-political conditions of remaining population (Alcoff 1996). Thus, objectivity will have to provide better means to marginal groups for interactions in the world. The experience is truly educational when it produces the expansion and enrichment of the individual, leading towards the improvement of themselves and the environment.

**Temporary/transitory:** precisely because knowledge undergoes revisions and enhancements, will never be fixed, but transitory, based on new points of view and discussion, and pragmatic needs. The articulations of the world change based on further epistemological questions. Furthermore, the diversity of points of view is also temporary/transitory, which ensures exchange in the community because it prepares for creating a shareable product, a consensus on which to base syncretic and shared knowledge contents.

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<sup>11</sup> Instrumentalism, as Dewey called his philosophical and pedagogical thought, is based on a conception of experience as the relationship between human and the environment, where human being is not a passive spectator but interacts with their surroundings. The individual's thought arises from experience, the latter understood as a social experience. Education must pave the way for new experiences and enhance all opportunities for further development (Dewey 1938).

*From a methodological point of view, objective knowledge is:*

**Communal:** objectivity is the result of a process of social and collective discussion, in which the combining and exchange of alternative points of view provide a means to critically evaluate the basic assumptions and mutual values of the members of the scientific community since the data receive probative relevance in the light of the basic premises (Longino 1979). Therefore, the processes of justification must include the empirical verification of the hypotheses with respect to the evidence and the scrutiny of the basic assumptions by different perspectives, and these operations are collective outcomes (Longino and Lennon 1997).

**Procedural:** shared contents are obtained with a process of critical control, which follows certain rules so that beliefs are governed by processes of deliberation within the scientific community based not only on specific knowledge claims but on forms of valid and epistemic justification (Longino, 1990). Interactions and discussion are a resource and the normative foundation of knowledge. Therefore, it is essential to analyze how these exchanges occur and the discussion processes on which consensus is then based and what rules manage these social exchanges.

**Plural:** different aspects of the same object can be known without hierarchical relationships emerging between them. Pluralism is a consequence of the complexity of nature because a single theory does not exhaust all the causal interactions involved in a given process. We know and deal with different aspects of the natural and social world, and this recommends a pluralistic approach that can focus on different political and epistemological projects (Daukas 2011).

**Democratic:** The discussion of points of view is possible only in democratic projects that welcome the highest number of expressions of points of view. The discussion must never be subjected to rhetorical devices or violence but must always follow rational procedures that allow everyone to be seen in their capacity to argue (Longino 1990; 2002b). This assumption is also evident in Harding (2015) when she warns to include in the production of knowledge also those groups that are generally excluded but whose lives are equally affected by this knowledge. Those who suffer the consequences of science/knowledge should at least be able to participate in this

choice. Harding argues that knowledge should therefore also promote projects to advance justice and social respect. This advancement is possible if marginalized voices are inserted in “democratic-advancing projects” (Harding 1991). In my contextual standpoint theory, marginalized voices are integrated into democratic criteria, such as those of Longino.

*Attitudes/Virtues of the epistemic agent:*

**Liberatory:** Since feminist epistemology focuses on avoiding the effects of gender oppression on the production and possibility of knowledge, the intention of the epistemic knower can be liberating because it will help generate the kind of knowledge necessary to bring positive and social change (Grasswick 2011). This aspect is related to the concept of feminism as an ideal to aspire. Feminism is many things and has many strands, but in general, it can be said that a common aspiration is the end of gender prejudice and oppression.

**Self-reflectivity:** developing and supporting feminist objectivity implies a sense of transparency and responsibility by the epistemic subject. Transparency is necessary to avoid any injustice or epistemic distrust. Accountability is necessary because if we recognize that our attitude towards knowledge is neither universal nor general, but that we are always integrated into social places that shape but also limit our understanding, it is our responsibility to ensure that the correct understanding is the one that respects the greatest number of people. The relationship with others and with the world is fundamental for the process of knowledge, we feed our sensitivity by questioning and looking for other people and experiences, and we also become more epistemically responsible (Heldke 1987). Therefore, we must open ourselves to the other, always remembering our existing prejudices and reviewing them based on the encounter with the other.

This list of attributes and characteristics has served to give a connotation of what can entail feminist objective knowledge, the method usually employed, and the knower’s epistemic virtues. By this, I am not saying that in all perspectives of feminist epistemology we will be able to find these elements altogether, but they are retraceable in my dissertation. Many of these approaches can be grasped by reading

my project in chapters II and III, but some are also derived from the other chapters (I and IV). For this reason, this last outcome pertains to all four chapters in wide-narrow dialectic and all-encompassing logic.

## IV Future lines of research

For my future research, I would like to actualize scenarios in which I can consult the usefulness of my contextual standpoint theory project and the benefits for epistemic communities and confronts other experts in feminist epistemology. But mostly, I would like to explore the avenue described in chapter four, which addresses our academic practices seen with an intersectional feminist eye on a general level.

Feminist theory has paved the way to assess gender relations hidden in medical, biological, and scientific theories. It has also examined how gendered aspects thrive in pivotal categories of epistemology and philosophy, such as the definition of rationality and its relation to the knowing agent and, thus, how certain political factors enter the philosophy of science. To this, I would add a more precise analysis of new positions in political epistemology to see how they can interact with each other. Feminist epistemology's meticulous analysis of the reasons of marginalization and power asymmetries can enrich the broader concepts of political epistemology focused on, among other things, democratic exchange in knowledge, epistemic authority, and how epistemic differences are diffused. The tools of feminist epistemology offer ways to rethink basic, often taken for granted, concepts and provide a better understanding of the dynamics between social and epistemological aspects, which are extremely useful for political epistemology.

This will take the form of an inclusive discourse between the two, without reducing feminist epistemology to a secondary branch of political epistemology, rather constituting a fundamental part of it, offering a concrete case study to support the general claims of how social and political factors influence science and vice versa. The inclusion of feminist values and feminist analyses are the exact demonstration of how the advent of a gender perspective affects the elaboration differently of scientific fact. In a broader sense, feminist epistemology, precisely

because of the themes and results it advocates, is a form of political epistemology, when it takes on political-social contexts as problematic but also as resolving. I expect to present the strength and potential that feminist-political epistemology has, both when considered independently and dialogically.

On a different note, of the three aspects described in chapter four (democracy, inclusion, collaboration), I wish to explore more inclusion in greater depth since it one notion most often mistreated.<sup>12</sup> For a few years now, the principle of inclusivity has been capitalized and emptied of its emancipatory feminist meaning. Inclusivity, in my analysis, passes through global mindset changes, thus a cultural destruction of the patriarchal-white supremacist frame. It is a matter of culturally restarting from the lives of women and marginalized subjects, not because they are essentially superior, but because rethinking from their lives allows us to focus on ignored aspects such as the relationality of individuals, situatedness, vulnerability itself given by the encounter and exposure to the other. It is a complete change of scenery.

The white patriarchal system, on the other hand, presupposes certain individuals in the hierarchy, qualitative and mutually exclusive differences between persons. Not to mention the fact that patriarchy is perfectly aligned with a neo-liberal system that sees autonomy, competitiveness, self-sufficiency, and extreme productivity as desirable characteristics for success in life and in the economic world, without considering all those preliminary factors for being in the world, feeding oneself, cleaning oneself, propaedeutic to work and extreme productivity. We mask these preliminary factors because it is convenient to patriarchy and neoliberalism to believe we are autonomous and hyper-productive, even though this latter is one of the causes of the most atrocious events (environmental disasters, exploitations, wars and military industry, refugee evacuation). Starting from women and the way we understand each other is a fundamental cultural and paradigmatic change, based on vulnerability, ends of differences, care for others and the surroundings.

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<sup>12</sup> I have begun to explore the topic also in Putignano (forthcoming).



Hence, this new cultural way of understanding has connections with issues that are now pressing, for example the environmental issues and the Anthropocene topic and can offer solutions not yet considered to these problems.<sup>13</sup> Hence, I want to put in work the appraisal of epistemic practices to initiate a cultural change of understanding the world based on care rather than autonomy, relationships rather than exclusivity, intersection rather than a dichotomy, feminist milieu rather than patriarchal.<sup>14</sup> Caring about each other and the world can change the lives of all of us.

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<sup>13</sup> The term Anthropocene was first coined by Stoermer in the 1980s and then made famous by the Nobel Prize for Chemistry Crutzen in the 2000s. However, scholars are both divided on the golden spike (the geological signal that separates two geological eras) and on the proper name to formalize this new era we live in. I believe that feminist reflections can say a lot about the environmental crisis, so I wish to explore this topic in the future.

<sup>14</sup> When I use the word "feminist," I never refer to a change in power roles, a matriarchy in place of patriarchy based on the same dynamics of subjugation, inferiority, and power. I always refer to feminist thought that instead seeks to break down any discrimination and focuses on the interdependence of individuals rather than their differences and autonomies.

## Glossary

**Androcentrism:** view that places the male point of view at the center.

**Cisgender:** gender identity coincides with the sex assigned at birth.

**Content/product of knowledge:** The products of objectivity, as in theories, observations, that are objective, and that refer to the external and social world. This description opens the longstanding debate between realism and antirealism in the philosophy of science. I cannot exhaust this debate here, so I only specify that generally, the debate concerns the question whether our theories correspond to independent entities (realism) or whether theories are reliable instruments that we use to predict phenomena and the physical world is in some way dependent on the conscious activity of human beings (instrumentalism). Realism, as well as antirealism, can be analyzed through different components. For example, there is a metaphysic thesis - entities ontologically exist, a semantic thesis (the reference of our words), and the epistemological question which asks whether we can know these entities through our theories. The debate between these two positions is generally centered on the distinction between the observables and the unobservables. While there is good reason for realists to believe that our descriptions of the subatomic world are true, instrumentalists are usually agnostics about unobservable entities (Ladyman 2014). In the case of feminist epistemology, objectivity does not entail faithfulness to facts of the world as if they were independent of the subject, nor anybody can acquire the view from nowhere, arriving at the raw reality of things, unmediated by human minds and other “distortions” (Nagel 1989). Feminist epistemology is sympathetic towards those philosophers in science that argued that the relationship between observation and theories is more complex and reciprocal, highlighting the problem of

underdetermination and theory-ladenness (Duhem 1954, Kuhn 1962, Hanson 1958, Quine 1951).

**Contextual standpoint theory:** it is the name I gave to my project in feminist epistemology. Contextual indicates the role of context and situated knowledge (partiality and dependence), standpoint recalls the methodological assumption of epistemic privilege and their heuristic capacity, and finally, theory indicates that this is a legitimized apparatus, a feminist theory to be precise.

**Epistemic achievement thesis:** it points out that knowledge accessible from a particular social location is not given but must be struggled for (achievement); moreover, individuals contribute to a critical consciousness within an epistemic community.

**Empirical adequacy:** “is the agreement of the observational claims of a theory or model with observational and experimental data, present, retrospective or predictive” (Longino 1995, 386). Feminist epistemology, in general, argues that the theories and scientific explanations proposed by feminist theories in some cases are, in fact, more empirically adequate than other theories that do not share feminist values (Cf. Bleier 1984, Fedigan 1992, Hrdy 1995, Longino & Doell 1983; Longino 1996, 45.).

**Epistemic/cognitive/constitutive values:** all those values generally considered constitutive of the aims of knowledge and search for the truth through scientific inquiry.

**Epistemic privilege/standpoint:** it is a renowned thesis in standpoint theory that states that some social locations (and the social identities of those who occupy these locations) can have an epistemic privilege that leads to open new inquiries, or reopen old questions in knowledge, due to their being on the marginal locations. The view that the agents who occupy these social locations enjoy is called ‘standpoint’ to distinguish it from a simple perspective. However, oppressed identities do not

automatically possess a standpoint; this is an achievement obtained after a careful reflection on their own situation and the dominant one.

**Epistemic relativism:** the idea that our knowledge claims are dependent on justificatory standards which are not fixed, absolute, timeless, but depend on an epistemic system or practice. I will appeal in my explanation of epistemic relativism to Maria Baghramian's (2004) definition, Martin Kusch's (2016) and Natalie Ashton's (2019; 2020a and b). Roughly speaking, these definitions entail three elements: dependence, plurality and non-neutrality. In contextual standpoint theory I argue that there are multiple valid ways of viewing, describing, and conceptualizing the world (plurality). The justification of these beliefs depends on epistemic practice or systems which are not absolute nor unique (dependence). These beliefs cannot be ranked in a neutral way (non-neutrality). However, this epistemic relativism excludes the idea that justification is completely random, arbitrary or unimportant. Justification is instead system-dependent; my aim through this chapter will be to present the epistemic system referring to contextual standpoint theory.

**Eurocentrism:** the tendency to consider Europe and, more generally, the West as the center of the economic, cultural, political, and social world (cf. Said).

**Feminist epistemology:** the discipline that has emerged since the 1980s, generally divided into three categories, and whose area of research usually refers to classical problems in the philosophy of science (justification, validation, objectivity).

**Feminist-political epistemology:** refers to a broader perspective that analyze issues beyond the traditional niche of feminist epistemology. In my thesis I use feminist-political epistemology for an appraisal on epistemic practices and scientific cultural milieu. In general literature, there are also recent trends in epistemology, labeled under "political epistemology" which signalize the active role of politics in our epistemic practices. My feminist-political epistemology stands out for its

indispensable use of feminist intersectional approach in investigating political factors.

**Feminist/marginal values/standpoints:** in feminist literature they are both related to standpoint theory and to contextual empiricism. For Harding, people who occupy oppressed social locations are more likely to develop and achieve a standpoint (epistemic privilege) on certain aspects of research. Since they have particular experience of oppression (gender oppression, race oppression, class oppression etc.) and if they reflect on their conditions, the values carried by these identities are likely to be anti-sexist, anti-racists, ect. Anti-sexist, anti-racists values etc., are shared also by those who support a feminist position, especially if this is a trans-intersectional feminism. Feminist values and any other political, social, stances are labeled as contextual values, and, according to feminist epistemology, they enter in science.

For Longino, feminist values are generally all those values that aim to end discrimination and are likely to meet feminist goals (hence also anti-sexist and anti-racist values). Moreover, Longino also proposes other epistemic values that can be framed under the label of feminist values. Longino does not think that a neat difference between epistemic and non-epistemic values can be maintained in science, hence they both enter into scientific knowledge.

**Feminist waves:** refers to the thematic and chronological distinction of the various stages and evolutions of feminist thought. Nowadays there is a debate about the validity of this distinction as it traces the Anglophone and American thought, giving less importance to other types of feminism.

**Intersectionalism:** it arises in the context of Black Feminism by political activist Kimberlé Crenshaw. Crenshaw's initial intent was to develop an appropriate tool to tackle the disadvantaged status of women of color in work settings where white women, or men of color, faced less discrimination and greater forms of inclusion. The idea of intersectional feminism allows us to understand how there are some historically specific types of constricting and limiting the power and/or normativity

differentials, such gender, ethnicity, race, class, sexuality, age and generation, disability, nationality, function in their reciprocal interactions; and how, in their intersection, they produce social inequalities and unjust social relations. At the same time, an intersectionality is also a tool that allows us to imagine how any resistance to such norms can be based on a re-signification of the processes through which identities are marked in a normative way, starting from how everyone negotiates the social relations of power in which she/he/they are entangled (Crenshaw 1989).

**Marginalized/subjugated/subaltern identities:** subjects who are socially oppressed and who do not occupy a dominant position. In feminist literature, “being in margin/periphery” is a common expression to describe the social locations occupied by marginalized subjects (hooks 2000, Anzaldúa 1987, Harding 1986b, Hartsock 1983). Women occupy these dominated locations since they are inserted in a patriarchal system. Marginality is not necessarily connected (it rarely is) with few quantitative numbers, rather with the condition of being at the margin, discriminated, ignored, or underestimated. In fact, women are a marginal category, even though they roughly count for 50% of the population.

**Method/criterion/practice of knowledge:** the methods and processes through which knowledge becomes objective. One of the principal ideals to pursue is called value-free theory, meaning the claims, theories, methods, and outcomes of science should be free of any non-epistemic perspectives, values, personal interest, or bias of any kind.

**Non-epistemic/Contextual values:** non-epistemic values concern personal, social, cultural aspects and depend on the context and the person who supports them (Rooney 1992).

**Objectivity:** I refer here to two meanings: (1) the idea that knowledge claims and contents are objective, impartial, (2) the process through which we come to say something is knowledge rather than opinion (Reiss 2017). Both aspects are addressed in the last two upcoming definitions.

**Patriarchy:** the system that supports the superiority of men and the inferiority of women and other subjects through political categories such as gender, sex, race, etc. The result is that the only normal and acceptable subject is the cis and hetero bourgeois white man, what all other individuals aspire to be, but never will be. The success of this superiority is given by the fact that the white man does not represent a social group like the others, but is perceived as a non-category, precisely as the normal.

**Sexism:** the attitude of those who judge individuals and behaviors based on their sex.

**Sex/gender:** sex usually indicates the anatomical, chromosomal, and biological dimensions, whereas gender indicates women and men's cultural and historical construction, organized through specific behaviors, duties, roles, expectations, etc.

**Situatedness:** indicates that our social location sets our knowledge. It also reveals that some social locations are disadvantaged because cognitive aspects such as credibility, reliability, access to knowledge, communication of results change based on the body and position taken into consideration, due to power relationships. In a Western society, power relationships are organized through different markers, such as gender, sexuality, class struggle, age, etc. Intersectional feminism studies also these forms of discriminations and their intersections.

**Social constructivism:** objects of inquiry are (partly or wholly) determined by our investigations and interpretations of these objects.

**Tokenism:** is the phenomenon whereby an individual from marginalized communities is included in discussions, panels (in the academic case), research groups to comply with eligibility criteria without really changing the mindset that prevents certain individuals from making their way in the same way as individuals from dominant categories. Here, marginalized individuals are used only as tokens.

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# Abstract

Studente: Francesca Putignano

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Dottorato: Filosofia e Scienze della Formazione; curriculum Filosofia

Ciclo: 34°

Titolo della tesi: Feminist Objectivity in Philosophy of Science: a Crossroad between Politics and Epistemology

## Abstract ITA

L'argomento della tesi è l'oggettività scientifica in filosofia della scienza, dimostrando esplicitamente l'importanza di uno sguardo femminista nelle nostre pratiche epistemiche nelle comunità scientifiche. Affronto questo scopo spiegando come l'oggettività scientifica è intesa nell'epistemologia femminista e presentando il mio progetto chiamato contextual standpoint theory, nato dalla combinazione di due famosi filoni dell'epistemologia femminista, la standpoint theory e l'empirismo contestuale. Ritengo che se considerati insieme, i due approcci permettono di ottenere un quadro esauriente del concetto di oggettività scientifica, perché la loro combinazione copre un'analisi sia dei temi epistemologici suggeriti da una prospettiva femminista e sia dei processi con cui condurre e produrre una conoscenza che possa dirsi oggettiva. Ciò culminerà nella considerazione dell'oggettività staccata dalla definizione di oggettività 'neutrale' o 'libera dai valori' (value-free), e raccoglierà una serie di caratteristiche che rimodellano l'ideale epistemico da perseguire proprio perché arricchite da queste prospettive femministe. Nella parte finale della tesi, sposto il focus dall'oggettività scientifica all'indagine delle pratiche accademiche attraverso un'epistemologia femminista-politica.

## Abstract ENG

The topic of this thesis is scientific objectivity in philosophy of science, explicitly demonstrating the importance of a feminist gaze in our epistemic practices in scientific communities. I address this aim by explaining how scientific objectivity is understood in feminist epistemology and by presenting my project called contextual standpoint theory, which was born from the combination of two famous strands of feminist epistemology, standpoint theory and contextual empiricism. I believe that when considered together, the two approaches allow for a comprehensive picture of the concept of scientific objectivity, because their combination covers an analysis of both the epistemological issues suggested by a feminist perspective and the processes by which to conduct and produce knowledge that can be said to be objective. This will culminate in the consideration of objectivity detached from the definition of 'neutral' or 'value-free' and will gather a number of features that reshape the epistemic ideal to be pursued precisely because they are enriched by these feminist perspectives. In the final part of the thesis, I shift the focus from scientific objectivity to the investigation of academic practices through a feminist-political epistemology.

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