Feminism and the Crisis of the European Sciences: *Husserl and Feminist Critiques of Science*

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> What you see and what you hear depends a great deal on where you are standing. It also depends on what sort of person you are.
> – C.S. Lewis, *The Magician's Nephew*

While Edmund Husserl's phenomenology is usually drawn into feminist discussions only as a part of discussions on women's embodiment or sexuality, little has been said about the relationship between Husserl and feminist philosophers of science and in particular, on their often quite similar critiques of scientific rationality and objectivity. Both Husserl and contemporary feminists see that there is a serious problem in science – for Husserl not just a problem but a crisis – that stems from the practices and methodologies used by scientists in action, as well as the worldview that governs modern experimental science overall. Husserl thinks that starting with Galileo, the dominant scientific viewpoint became one that assumes that nature is not really the world of imperfect shapes and impressions presented to the senses in everyday experience. The real world is mathematical, composed of ideal geometrical shapes. Consequently, only a formalized mathematical investigation into nature can provide objectively true knowledge about it. Mathematical physics, the instrumentalism that springs from it, and the impersonal disinterested style of objectivism that they endorse, are often taken up in science as promising an increasingly objective perspective on the world. This perspective sees itself as moving past particular human biases to get at the nature of the world outside of humans' perception of it, and an outlook which has brought about the undeniable successes of scientific and technological innovation.

Despite their benefits, these scientific practices do not necessarily provide a more complete knowledge about the world; indeed, they might amount to a reduction in the scope of the world in question, a distortion of the nature of scientific knowledge itself, and an inaccurate picture of the relationship between that knowledge and human life. The world is primarily given to human beings in their everyday interactions with it, interactions rooted in subjective and intersubjective experiences. For Husserl there are profound social consequences to modern science's tendency to

overlook the conception of the world as first and foremost given in experience and instead replace it with a set of mathematical hypotheses and abstractions. Husserl thinks that the abstraction from and subsequent forgetting of this life-world leads to the scientific community and the general population influenced by it passing over the sphere of specifically human existence and not adequately including human experience in epistemological valuation. Further, this passing over leads to attempts to change, formalize, and regularize mankind in accordance with these formal, "objective," principles that come to characterize the "real" world presented by science.

Feminist thinkers like Evelyn Fox Keller, Sandra Harding, and Donna Haraway, take up criticisms of science and the form of disinterested objectivity that it promotes in ways surprisingly similar to Husserl's. These theorists note how the situations and experiences of the subjects who do science and who receive scientific knowledge have been excluded from scientific discourse and how the emphasis on a disinterested standpoint tends to – under scrutiny – actually be the standpoint of men in positions of power. The subjective experiences of people involved in science that are emotional, non-quantitative, experiential, and – as Husserl fails to note – gendered, have been labelled "merely" subjective factors to be eliminated or disregarded in considering scientific epistemologies and discourse.

Both feminist theorists and Husserl see that there is a need to reincorporate the subject engaged in the production, distribution and reception of science, into scientific knowledge and practice, thereby situating our claims to scientific objectivity. From both Husserlian and feminist perspectives this re-evaluation and incorporation of subjectivity and with it aspects of life historically labeled feminine and associated with feminine gender roles, is not a movement away from objectivity, but towards it. This re-affirmation amounts to taking up a standpoint that claims that subjectivity is not anathema to a rigorous and objective science but, on the contrary, is necessary for a legitimately objective science. I will argue that feminist thinkers like Fox Keller, Haraway, and Harding provide an excellent critique and addendum to Husserl's thought by including the wider frameworks of gender and differential positions in knowledge production. Husserl puts forward subjectivity but does not focus on particular subjects, emphasizing subjectivity without embodied situation. At the same time, Husserl's thinking on the relationship between scientism and relativism can help feminist thinkers re-imagine the relationship between scientific thought and epistemological valuation.

Dermot Moran, in his introduction to Husserl's *The Crisis of the European Sciences and Transcendental Phenomenology,* notes that there are two negative attitudes that characterise modern science: scientism and naturalism. Scientism amounts to a subservience of the variety of types of prescientific knowledge human beings have to science. Naturalism amounts to the reduction of the multiplicity of

human experiences to supposedly natural phenomenon, evacuating their experiential or phenomenological content and the epistemological lines of inquiry stemming from that content. Moran writes that, "Husserl is challenging the cultural dominance of *scientism* (with its commitment to what he calls 'objectivism') and the *naturalism*, which he sees as having led to the acceptance of varieties of cultural relativism and ultimately to scepticism."[1] For Husserl, contrary to how they present themselves, objectivism, scientism and naturalism – the mentalities that hope to move beyond human biases and gain concrete knowledge about the nature of the world – have brought human beings into a more and more distant relationship to that world by presenting it as "really" something completely alien to human experience. There is a rising tide of "irrationalism,"[2] which he associates not only with philosophical movements espousing a non-scientific, skeptical mentality, but also towards political irrationalism in the form of the fascism that he sees taking root throughout Europe in the 1930s.

Husserl's theoretical point seems at first counter-intuitive. Rather than bringing about greater certainty, the scientific worldview that seeks to achieve concrete truths about the world brings the world into doubt and irrationalism, and eventually brings human communities into fascism. To understand why it is that people are unable to achieve the kind of certainty in the "objectivistic" world that science presents as real, Husserl's objections and his relationship to science and human endeavour need to be situated in the context of his concept of the *Lebenswelt*, the life-world.

The life-world is the everyday world of human experience. Husserl describes how the life-world is

> pre-supposed as existing – the surrounding world in which all of us … consciously have our existence … in this world we are objects among objects in the sense of the life-world, namely, as being here and there, in the plain certainty of experience, before any-thing that is established scientifically … On the other hand we are subjects for this world, namely, as the ego-subjects experiencing it, contemplating it, valuing it, related to it purposefully.[3]

The life-world is the world in which humans find themselves experientially, a world full of objects that have particular historical and personal meanings and "senses" and that we experience and inhabit in our day-to-day interactions with other human beings. This world is characterized by our subjective experiences and our inter-sub-

[1] Dermot Moran, *Husserl's Crisis of the European Sciences and Transcendental Phenomenology: An Introduction* (Cambridge: Cambridge University Press, 2012), 58.

[2] *Ibid.*

[3] Edmund Husserl, *The Crisis of the European Sciences and Transcendental Phenomenology* (Evanston: Northwestern University Press, 1970), 104-5.

jective re-affirmation of those experiences. Scientism, naturalism and objectivism all lead to relativism and doubt by divorcing scientific endeavour from the first hand certainty of activity in the life-world. In establishing the dogma that the real world is represented by abstract and impersonal mathematical science, human experience finds itself perpetually outside of science's real world. With their experiences thus excluded from the scientific world, people are unable to conceive of the ways that subjective experience – now characterized as an illusory meta-phenomenon of matter in motion – can still be tied to objective knowledge, since there is no human sense that can provide anything like a feeling or grounding of objectivity. This devaluing of the life-world leads to skeptical doubt of both the value of subjective experience and of the science that excludes it.

Husserl is strongly opposed to relativism but still wants to provide a conception of objectivity that leaves room for, and is even prefaced on, subjectivity. Husserl's project for establishing this non-relativistic role for subjectivity centres on his concept of intersubjectivity. Human beings each perceive that they act in a world that is pre-scientifically given to them, but this world is not understood as simply "my" world, or our knowledge of it as "my" knowledge; rather, it is a world shared with others, our knowledge of which is open to correction through its being shared in a wider network of subjects. Husserl writes that "there constantly occurs an alteration of validity through reciprocal correction. In reciprocal understanding my experiences and experiential acquisitions enter into contact with those of others...intersubjective harmony of validity occurs, [establishing what is] 'normal.'"[4] For Husserl, the existence of subjective knowledge does not mean a retreat into solipsism or relativism but instead, the opening up of human interrelation and the sharing and adjustment of a body of knowledge.

As Moran points out, for each of us what really exists in our prescientific state is the content of our subjective experience, yet "there is an unquestioned, a priori, necessary presupposition of experience, namely that we all share a *single* world, albeit one that appears differently to each. All worlds are considered to be part of the *one world* common to all."[5] While we emphasize the ontological and epistemological importance of subjective experience, this experience comes with the assumption that it belongs to a world of other peoples' experiences which in their variance present different aspects of the same world. Consequently, no individual's view alone is enough for epistemological certainty or any account with a complete claim to objectivity until it is put into a process of reciprocal correction or into the testing ground of intersubjectivity. Accordingly, emphasizing the importance of subjectivity

[4] *Ibid.*, 163.

[5] Moran, *Husserl's Crisis of the European Sciences and Transcendental Phenomenology*, 83, my emphasis.

does not lead to a retreat into relativism, as subjectivity contains prescientific principles and dynamics for the acquisition of knowledge and for ascribing validity to that knowledge.

For Husserl, the life-world is important because it belongs to the realm of subjectivity in that the life-world is not the product of mathematization and idealization that characterizes scientific, post-Galilean worldviews which divorce scientific knowledge from embodied human experience. He writes that,

> the ontic meaning of the pregiven life-world is a subjective structure, it is the achievement of experiencing, prescientific life. In this life the meaning and ontic validity of the world are built up – of that particular world, that is, which is actually valid for the individual experiencer.[6]

The life-world is the achievement of human experience conceived of as a conceptual and experiential construct that holds together and makes a unified world out of the disparate experiences of human beings in everyday life. Scientific conceptions of objectivity and the cult of objectivism that he hopes to challenge, do not escape this subjective life-world and its concerns but rather, "the 'objectively true' world, the world of science, it is a structure at a higher level, built on prescientific experiencing and thinking, or rather on its accomplishments of validity."[7] In the same way that the life-world is the accomplishment of human experiences, scientific knowledge is not simply a truth unveiled to human beings about an underlying reality, but is itself an accomplishment. Objectivity is a construct within a construct and scientific objectivity is the product of abstraction from the life-world. Ultimately, the types of validity given to objectivity find their origins in the meaning-making life-world itself whose subjective components science dismisses.

The crisis that has come about in science is that the primacy of the life-world of experience as the ground situating scientific investigation has been forgotten in our taking up of a mathematized and objectivized relationship to the world. Mathematical science cloaks the world immediately accessible to the human subject in a "well fitting garb of ideas, that of the so called objectively scientific truths."[8] For Husserl what has happened is that science has abstracted from the life-world formal mathematical ideals which it has then re-imposed onto nature, re-imagining nature as "really" mathematical. Husserl writes that,

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[6] Husserl, *The Crisis of the European Sciences and Transcendental Phenomenology*, 69, emphasis in original.

[7] *Ibid.*, 69.

[8] *Ibid.*, 51.

> mathematics and mathematical science...encompasses everything which...represents the life-world, dresses it up as 'objectively actual and 'true' nature It is through the garb of ideas that we take for true being what is actually...a method which is designed for the purpose of progressively improving...those rough predictions...originally possible within the sphere of what is actually experienced and experiencable in the life-world.[9]

Science forgets the life-world, with its doxa of lived experience, by representing to human beings this mathematized vision of the world as the real location of truth.

Science has forgotten its origin and grounding in the subjective and intersubjective experiences of the life-world. Science does not exist on its own, at a removed from the rest of human life or the rest of the concerns that make up the intersubjectivity of the life-world. Rather, for Husserl science should be understood as springing from the concerns of the prescientific life-world. If, as he believes has already occurred, science is simultaneously put forward as divorced from the life-world by its anti-subjective and anti-experiential grounding in mathematical certainty and made the privileged site of truth and reality, it misunderstands its own task, the limits and sources of its "objective" validity and, as feminists critics are quick to point out, it creates worse science in so doing. The epistemological validity of mathematized science comes out of the meaning-creating life-world and in denying the primacy and reality of the life-world and its subjects in favour of this latter creation, science devalues its own source of validation.

In a similar vein to Husserl's thought, Evelyn Fox Keller notes in *Reflections on Gender and Science* that whereas science presumes to take an objective standpoint, this "objectivism" does not remove its subjective component as a human endeavour; – that is, it does not remove itself from the life-world, but only denies its situation therein. She writes that, "the ideology of modern science, along with its undeniable success, carries within it its own form of projection: the projection of disinterest, of autonomy, of alienation."[10] For Fox Keller the types of claims Husserl asserts have made their way to the centre of human scientific and cultural life and have gained the highest epistemological power – scientism, naturalism, and their emphasis on impersonal objectivism – are, from the very start, not escapes from the type of subjective claims and positions that they presume to eschew. Instead, they are a particular type thereof, one perspective that claims that it is non-perspectival. Fox Keller claims, "my argument is not simply that the dream of a completely objec-

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[9] *Ibid.*, 52.

[10] Evelyn Fox Keller, *Reflections on Gender and Science* (New Haven: Yale University Press, 1985), 70.

tive science is in principle unrealizable, but that it contains precisely what it rejects: the vivid traces of a reflected self image."[11] Science does not escape the subjective positions that characterize the pre-scientific life-world as it creates its own projection upon that world even while it presumes to move past subjective experience and perspectives to achieve an objective view. For Keller, as for Husserl, this view still remains situated in the realm of human experience and meaning. The disinterested position that science claims to put forward is still a particular position that contains the goals and presuppositions – the interests – of human scientists, who, Fox Keller notes, have been almost entirely men.

If, as stated above, science does not really ever escape the life-world and the subjective activity therein, is there really a crisis in it and what are the manifestations of this illusory reduction of the world to mathematics or to the male dominated view of objectivity? Dagfin Føllesdal points out that "we should resist the urge to see the life-world as something set up against science, for the scientific world is itself part of the life-world, scientific statements get their meaning from being embedded in the life world."[12] Yet while the scientific world may be situated within, and take its meaning from, the life-world and the work of particular, gendered people, it does not acknowledge itself as doing so but instead, sees the life-world as set against scientific objectivity, the realm of illusions, prejudice and relativity versus its own world of truth and reality.

Part of the crisis for Husserl is certainly that science threatens to cut itself off at its roots, depriving itself of its justification and validation and pushing individuals to then fall into irrationalism. What is more, the formalism of mathematical science is such that the value of human endeavour, of experiential meaning, and consequently the value of unique human lives and perspectives are lost. He believes that this process led to the rise of fascism and Nazism as regimes which aimed to formalize and objectivise the world by removing from it subjective variation and the multiplicity of views represented in intersubjective networks, thereby losing sight of the value of human life.

From feminist perspectives there are a variety of different stances on how and why the focus on 'objective' and impartial science, divorced from embodied subjectivity, leads to a crisis in science. Sandra Harding's *The Science Question in Feminism* outlines three different feminist critiques of science which each pose different problems existing in the scientific, male-oriented, objectivist milieu. Feminist empiricists, standpoint feminists, and post-modern feminist critics all provide different

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[11] *Ibid.*, 70.

[12] Dagfin Føllesdal, *Science and the Life-World: Essays on Husserl's* Crisis of the European Sciences, ed. David Hyder and Hans-Jörg Rheinberger (Stanford: Stanford University Press, 2010), xvii.

ways of understanding the crisis brought about in science. For feminist empiricists, the problem with our current objectivist science is that science as it currently exists excludes the embodied experiences and practices of women and as a result creates worse, ultimately less objective, science. Harding writes, "Surely it is 'bad science' to assume that men's problems are everyone's problems thereby leaving unexplained many things that women find problematic, and to assume that men's explanations of what they find problematic are undistorted by their gender needs and desires."[13] For feminist empiricists, the crisis created by an objectivity's claim of a standpoint outside of embodied subjective experience is that the objectivity and disinterest it projects on the world is from the particular situated standpoint of men. Men have historically dominated in the sciences, and so taking for granted the impartiality of scientific objectivity misses the reflected male image within this seemingly objective perspective, limits the scope of its investigations and, overlooking the problems and explanations of women.

Fox Keller's occasional feminist empiricist stance provides an excellent example of how subjectivity needs to be incorporated into the understanding of scientific objectivity – an idea strongly amenable to the Husserlian project – in her discussion of the life and work of scientist Barbara McClintock. McClintock took a different approach from that of her male contemporaries in her observations of genetic phenomena. Fox Keller writes that, "the prevailing focus on classes and numbers, McClintock believes, encourages researchers to overlook difference, to 'call it an exception, an aberration, a contaminant.'"[14] In Fox Keller's analysis, McClintock's work already shows an affinity with Husserl in its rejection of the reduction of the objects that the scientist encounters to mere formal instantiations of numerical regularities that empty the object in question of its particular value and, crucially, of its power to confront and confound the assumptions of the scientist with new data. McClintock's approach, interacting with her objects of scientific study through emotions like love, curiosity, and respect for the particularity of the objects of study before her, provides an excellent response to the objectivist crisis in science. Fox Keller writes that "self and other, mind and nature survive not in mutual alienation, or in symbiotic fusion, but in structural integrity."[15] McClintock's method, approaching her objects with subjective emotional content instead of an ideal, disinterested, and objective mentality, allowed her to engage completely, and to learn things that would otherwise have been hidden; in this way, McClintock was able to do better, more thoroughly objective, science. The "structural integrity" is the type of objectivity that Husserl and the other branches of feminist criticisms present as the possibility for a new

[13] Sandra Harding, *The Science Question in Feminism* (Ithaca: Cornell University Press, 1986), 22.
[14] Fox Keller, *Reflections on Gender and Science*, 163.
[15] *Ibid.*, 165.

form of objectivity that is objective precisely because it comes from the standpoint of particular embodied subjectivities relationships and engagements.

McClintock's work can from one perspective appear as a situation wherein bad science was being done because objectivist dogma and that "garb of ideas" was hiding evidence and venues of future study. She rectified this problem through an incorporation of a method acknowledging the subjective situation of the scientist involved. From this perspective, it seems that she and Husserl are united in their understanding of a need for a consciousness of subjectivity as the condition for the possibility of a strong objectivity in science. That said, McClintock's story provides the ground for a criticism of just what Husserl means by subjectivity, or more accurately, just whose subjectivity he is concerned with. Fox Keller argues that what made it possible for McClintock to engage in her alternative method of scientific inquiry was her situation as a woman within a patriarchal scientific community. Fox Keller writes that McClintock's particular stance arises out of the fact that "because she is not a man, in a world of men, her commitment to a gender-free science has been binding; because concepts of gender have so deeply influenced the basic categories of science, that commitment has been transformative."[16] It is McClintock's position as a woman that contributes to her ability to approach her scientific study with objectivity that appreciates subjectivity – while Husserl hoped for this he never considered gender as a factor.

Harding provides a second category of feminist critique that provides the opportunity to take up this question of the re-incorporation of scientific objectivity into the subjective and intersubjective life-world with an understanding of the challenge coming out of McClintock's story. A feminist empiricist would argue that McClintock's being a woman simply left her outside of the regular discourse of science and that the inclusion of her work constitutes a more rigorously objective science simply by including the views of women previously marginalized in science. Fox Keller writes that, "although McClintock is not a total outsider to science she is clearly not an insider."[17] Because she has been relegated to the fringe of the scientific community because of her gender, McClintock is capable of constructing her own identity and practice and more importantly her own style of objective inquiry outside of the usual dogmas of the male-dominated scientific institution.

A standpoint theorist would argue that it is not just a question of re-incorporating excluded women's voices into the scientific discourse that creates a strong, situated objectivity of the sort that McClintock exhibits, but rather that it is because she, specifically as a woman, has a privileged position from which to gain objective knowledge. For standpoint theorists, women as an oppressed group in science

[16] *Ibid.*, 174.
[17] *Ibid.*

are closer to the actual workings of scientific discovery because they are excluded from the theoretical discourses available to men which remove men from the material interaction with the world that science investigates. Harding writes that, "this proposal argues that men's dominating position in social life results in partial and perverse understandings, whereas women's subjugated position provides the possibility of more complete and less perverse understandings."[18] For a standpoint theorist, women's socio-historical oppression, places them in a standpoint from which they are not given the historically male privilege of claiming to speak from an objective and disembodied perspective. However, this exclusion has led to women being positioned to engage with and produce better scientific knowledge. This privileged position comes about partially because women have never been able to claim that what they called objectivity was divorced from the people – the women – who produced objective knowledge.

Husserl, though he is interested in subjectivity, both human – *in* the life-world – and transcendental – *constituting* the life-world – does not take up the question of how subjectivity might be influenced by different genders or sexes. Husserl is interested in how human beings' sense of objectivity is not just subjective but intersubjective. Yet, the intersubjective agents that Husserl describes as part of this intersubjectivity out of which a life-world is composed and epistemological validity established are notably gendered. Husserl writes, "thus in whatever way we may be conscious of the world as universal horizon, as coherent universe of existing objects, we, each '*I-the-man*' and all of us together belong to the world as living with one another in the world."[19] There is a serious gap in Husserl's story that seems at best to privilege a universalized subject who is particular but whose mould is taken exclusively from men's experience. *Toward a Phenomenology of Sexual Difference* Sara Heinämaa points out that Husserl "gives a set of phenomenological problems for future study: he refers to the problems of birth and death...and then, he states, 'there is the problem of the sexes.'"[20] This being so, it is possible that Husserl recognizes the need to engage in a more thorough investigation into the nature of different kinds of subjectivity and their influence, including the differences between male and female subjectivities. That said, both empiricist and standpoint feminist critique opens the way for questioning whether Husserl does not fall into the same types of problems he accuses contemporary science of: allowing human being to be formalized as "man" in his attempt to de-formalize, and provide content for, subjective human knowledge

[18] Harding, *The Science Question in Feminism*, 26.

[19] Husserl, *The Crisis of the European Sciences and Transcendental Phenomenology*, 109, my emphasis.

[20] Sara Heinämaa, *Toward a Phenomenology of Sexual Difference* (Lanham: Rowman & Littlefield Publishers, Inc., 2003), 21.

and life in the world. Husserl's hope for science is that its' relationship to the life-world be restored, but in doing so he may oversimplify some of the complexities inherent in his own concept of the life-world and the men and women who live in and constitute it.

Further, for McClintock, and for feminist empiricists generally, the way to overcome the shortfalls of objectivity are to apply objective standards more vigorously by including the views of women and thus expanding the fields of scientific inquiry. It is uncertain whether Husserl, in his call for a rethinking of the nature of objectivity itself, would agree to this program even in situations like McClintock's that use the type of subjective situation of objectivity that he espouses. That said, if applying the standards of objectivity more rigorously requires the inclusion of subjective perspectives, emotional engagement, and an awareness of the gendered scientist as subject involved in a relation to her object, it seems as though the objective practice that results is already a reformulated and reconceived idea of what objectivity is.

Husserl's position may be most amenable to the third of Harding's kinds of feminist critiques of science, post-modern feminist theorists like Donna Haraway. Post-modern theorists bring into question "the received categories and methods of objectivity and reason, and inquire into what maintains the faith that the scientific community and the wider cultural world have put in them."[21] While there may be an implicit critique of what objectivity is or how it is reached in empiricist and standpoint critiques, post-modern feminist critiques of science bring to the fore the question of what objectivity is. Haraway wants to suggest that we re-conceive what constitutes objectivity and how, towards what ends, and under what conditions people do science.

In her essay *Situated Knowledges,* Haraway suggests that a truly objective standpoint is one that acknowledges the contingencies and the particularity of the knowledge that it produces, aware of the fact that this knowledge comes from a certain place, time, and people. Haraway's main concern is "how to have *simultaneously* an account of radical historical contingency for all knowledge claims and knowing subjects … *and* a no-nonsense commitment to faithful accounts of a 'real' world, one that can be partially shared."[22] Haraway's situated knowledge – her re-conceived idea of objectivity – bears a strong affinity to Husserl's view which also hopes to have it both ways; questioning the meaning of objectivity and re-interpreting it such that, as Moran writes, for Husserl, "subjectivity must be recognized as a transcendental condition for the possibility of objectivity."[23] Husserl, with Haraway, wants to claim that

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[21] Harding, *The Science Question in Feminism,* 27.

[22] Donna Haraway, *Simians, Cyborgs, and Women* (New York: Routledge Chapman and Hall, Inc, 1991), 187.

[23] Moran, *Husserl's Crisis of the European Sciences and Transcendental Phenomenology,* 83

subjectivity does not detract from objective knowledge, but rather produces and makes possible any objectivity at all – situating it in the concrete world and people who create it.

Scientific content is grounded in human experience and a proper science that avoids its crisis is one that takes account of itself as situated within the wider life-world, its concerns, and those of the gendered people within it. Scientific objectivity cannot position itself using what Haraway refers to when she writes about a science that "does not pretend to disengagement: to be from everywhere and so nowhere, to be free from interpretation, from being represented, to be fully self-contained or fully formalizable,"[24] echoing some of Husserl's concerns about formalization. Haraway puts forward an idea for science's consciousness of its own situation and relational nature in her concept of responsibility. She writes that her work "is an argument for pleasure in the confusion of boundaries and for responsibility in their construction."[25] Haraway argues in the *Cyborg Manifesto* that many of the dualities and divisions that have existed and delineated different types of worlds – the cultural from the natural, the experiential from the scientific, the human from the technological – need to be rethought as contiguous with each other, part of a larger navigable space akin to the life-world.

Haraway's imagery of the cyborg and its world are especially provocative as they deter a reading of Husserl that would claim that the life-world is a pastoral, non-scientific or irrational world equating to a movement back to a prescientific style of life. Husserl wants the scientific endeavour not to be separated out from the life-world, but understood as always already enmeshed within it and responsible to it. Haraway's focus on pleasure and on responsibility ties down the ideal mathematical forms of a Galilean science to the needs and implications of those forms as they relate to human life more generally. It does not allow for a kind of dualism that would claim that science's concerns are divorced from those of the everyday or non-scientific world. Haraway writes that "only partial perspective promises objective vision... an objective vision that initiates, rather than closes off, the problem of responsibility for the generativity of all visual practices", emphasizing that, "partial perspective can be held accountable for both its promising and its destructive monsters."[26] In accepting that all scientific knowledge is situated and comes from particular places and particular embodied and gendered people, science is able to take up responsibility for itself and its actions. It is able to consider whose voice or vision is taken to be objective, what power relations enforce this validation, and how that science affects the life-world and the human lives in which it is situated and that it influences. Haraway's situated knowledge provides the opportunity for a science that is responsible

[24] Haraway, *Simians, Cyborgs, and Women,* 196.

[25] *Ibid.*, 150.

[26] *Ibid.*, 190.

for its gendered biases – among others – and that avoids the kind of dehumanizing crisis Husserl sees in twentieth-century science while grounding Husserl's critiques in the embodied struggles and practices of science and society.

Contemporary Feminist critics and theorists of science like Fox Keller have confronted the problem of objectivism and, strange though the formulation is, an excess of scientism in scientific practices and outlooks that divorce it from the world of human activity, partiality, and everyday experience – from the life-world. That said, those critics then find themselves confronting the same problem Husserl faced; how, given the move from objectivity back to subjectivity, scientific knowledge can remain distinct from relativism. The parallel to Husserl's concerns are clear. Relativism is the spectre that he sees looming in the irrationalism that he thinks is becoming prominent in his own time. Husserl's problem is formulated differently by these feminists'. For Husserl, relativism is the product of scientism and objectivism, and not the threat coming from a corrective shift to the other pole of subjectivism and his care to re-evaluate and not simply better apply our ideas of objectivity censure some of the attempts of feminist empiricists. Fox Keller notes that the claims to objectivity and scientific truth are traditionally associated with men and with a "masculine" type of science,[27] and feminist critique often faces the criticism itself that it intends to move away from objectivity labelled as masculine, and replace it with subjectivity, labelled as feminine, that seems to claim relativism is the only honest answer.

Sandra Harding, denies that claim that subjectivism, and with it feminism, leads to relativism. She writes that,

> The leap to relativism also misgrasps feminist projects. The leading feminist theorists do not try to substitute one set of gender loyalties for another...they try to arrive at hypotheses that are free of gender loyalties...the goal of feminist knowledge-seeking is to achieve theories that accurately represent women's activities as fully social, and social relations between the genders as a real – and explanatorily important – component in human history.[28]

The movement away from an exclusively objective science – or more accurately a science that claims to be exclusively objective – does not entail a fall into an anything-goes type of relativistic situation. Like Husserl, feminist theorists see that there needs to be an integration of subjectivity into our understandings of how science works, how it is done, and how it relates to our public and private lives. For Husserl, science makes the claim that subjectivity is the problem and that experiences in the life world are "only in the subjects; they are there only as causal results of events taking

[27] Keller, *Reflections on Gender and Science*, 38.
[28] Harding, *The Science Question in Feminism*, 138.

place in true nature, which events exist only with mathematical properties."[29] But as he notes, "if the intuited world of our life is merely subjective, then all the truths of pre- and extra-scientific life which have to do with its factual being are deprived of value."[30] In making this divide between human reality, associated with science, and human-being or the experiential and subjectively situated life-world, and the true reality of scientific, formal, and non-experiential worlds, the human world and its concerns are downgraded in value, creating adverse social and political conditions of the sort that Husserl sees in fascism and that feminists see in patriarchy. Moreover, this downgrading of subjectivity forgets that subjectivity comes with Husserl's assumption of a "*single* world" on which there are many perspectives which ground subjective scientific experiences and experiencers in the world of intersubjective validation that is rooted in an essential being-with other people in a shared world.

For Husserl, for Fox Keller, for Harding, and for Haraway, the answer to the crisis seen in a science that attempts to project an impersonal, naturalistic, mechanistic objectivism onto the world is to turn to a science that acknowledges and respects the role of subjectivity as the condition for the possibility of objectivity. This new objectivity may reduce its scope but increase its accuracy, transparency and responsibility in the creation of scientific knowledge and its relationship to the wider extra-scientific world of human meaning and endeavour. Husserl writes that only a radical inquiry back into subjectivity "and specifically the subjectivity which ultimately brings about all world-validity, with its content and in all its prescientific and scientific modes, and into the 'what' and the 'how' of the rational accomplishments" can make objective truth comprehensible.[31] Science, for Husserl, is incomprehensible until it takes seriously the fact that it comes from and depends on not the god-like vision that Haraway points out, but on the partial perspectives of subjective individuals situated in the life-world with science as one human endeavour among many products of collective subjectivities. Fox Keller writes, "The recognition of an independent reality of both self and other is a necessary precondition for both science and for love. It may not, however, be sufficient for either."[32] This separation between subject and object is mirrored in a separation between subjectivity and objectivity; without a proper relation between the two, both remain negatively limited and lead to worse science and a worse human condition. In providing Husserl with a firmer grounding in just what subjectivity means, and in providing feminist thinkers with a wider ranging critique of objective standards, both parties work towards a new project that better considers what a responsible, objective, and engaged science looks like.

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[29] Husserl, *The Crisis of the European Sciences and Transcendental Phenomenology*, 54.
[30] *Ibid.*, 138.
[31] *Ibid.*, 69.
[32] Keller, *Reflections on Gender and Science*, 82.

Works Cited

Fox Keller, Evelyn. Reflections on Gender and Science. New Haven: Yale University Press, 1985.

Haraway, Donna. Simians, Cyborgs, and Women. New York: Routledge Chapman and Hall, Inc, 1991.

Harding, Sandra. The Science Question in Feminism. Ithaca: Cornell University Press, 1986.

Heinämaa, Sara. Toward a Phenomenology of Sexual Difference. Lanham: Rowman & Littlefield Publishers, Inc., 2003.

Husserl, Edmund. The Crisis of the European Sciences and Transcendental Phenomenology. Evanston: Northwestern University Press, 1970.

Moran, Dermot. Husserl's Crisis of the European Sciences and Transcendental Phenomenology: An Introduction. Cambridge: Cambridge University Press, 2012.

Science and the Life-World: Essays on Husserl's Crisis of the European Sciences. Edited by David Hyder and Hans-Jörg Rheinberger. Stanford: Stanford University Press, 2010.