

## Curdling Logic in Feminist Scientific Inquiry

Modernity has done nothing if not posit the value of science and logical processes in societal discourse. Though rational logic arguably permeates most (if not all) levels of societal discourse (politics, religion, philosophy, gender identity, class-structure, economic models etc.), scientific inquiry seems to be the paradigm in which logical function is necessitated, and is often the source which society looks towards for Truth, absolute value, and knowledge of oneself, others, and the world. Feminist epistemological processes have challenged these understandings by seeking to expand the realm of knowledge/who can be a knower to reclaim agency through a recognition of the multiplicity of peoples as they exist in their complexities, and the intersectional relatedness of subjects/objects<sup>1</sup>. It would then seem that science, which has been defined by the pursuit of universal principles of knowledge, “objectivity”, and rational processes must be in direct contestation with feminist principles<sup>2</sup>.

This essay will challenge this dichotomy of feminism/science itself by examining feminist epistemological projects with relation to scientific inquiry. First considering Maria Lugones’ curdled mestiza logic for inspiration in a distinctly feminist epistemology, this essay will then follow Evelyn Fox Keller’s revisionist theory of the re-integration of “true” objectivity (rather than realism) into science- seeking to take from classical rationalism/logic what *can* be separated from masculinist construct. The dual examination and ultimate integration of these two approaches will address with specificity the aspects of scientific inquiry which have served to be problematic, challenging the violent nature of dichotomous logic and ultimately seeking to re-

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<sup>1</sup> I here consciously choose to take from Lugones’ construction of *mexican/american* (Lugones 470) to challenge dichotomous hierarchical relationship which systems of western logic have created between subject/object.

<sup>2</sup> This has certainly been seen in the thinly-veiled disdain which feminists and scientists alike very often view one-another’s work.

characterize unbiased objectivity as curdled, whilst recognizing the politically regressive danger of falling into a full discrediting of science. This incorporation will not only offer but will celebrate inclusion and recognition of mixed identities, re-inspiring science as a *necessarily* feminist epistemological process. Through an exploration of the tension between Fox Keller and Lugones' unique (and seemingly contradictory) feminist critiques, the ways in which a renewed objectivity in science may be furthered through a curdled logic of multiplicitous and non-unified reality is constituted.

It is important first to make clear what is meant by feminist epistemology, and classical logic/rationalism. Western logic has been constructed as a masculinist epistemology (study of knowledge) which operates through hierarchical binaries and dichotomies. This binary system, classically understood "rationalism" strives to dissect unembodied reason from the embodied "confusion", artificially and purposefully positing reason as a process through which a-historical, universal, and non-contingent, "objective" Truths may be known. This system has through social processes correlated masculinity as that which is to be void of the particular, multiplicitous, relative, and as such "the feminine"- creating what Genevieve Lloyd called "The Man of Reason". His reason paradoxically was created from an extremely particularistic masculinist viewpoint (white, wealthy, western, male)- a subject position which it in turn he has privileged and has been privileged to. One of the central goals of feminist philosophy has been to reclaim personal experience to analyze, question, and challenge the intersectional oppressions and systematic inequality which are felt and which remain insidious in our society. Feminist inquiry has been a tool in revealing the extent to which the hierarchical and discriminatory nature of our current societal structure has not come about by mistake, but rather has been created to legitimate

power structures which justify the control of white, heterosexual, wealthy, and “rational” male subjects.

Maria Lugones presents an exceptionally biting and nuanced feminist critique of this artificially-created binary/rationalist logic system in her piece *Purity, Impurity, and Separation*. Appealing to the imagery of making mayonnaise, she uses the language of “split-separation” to describe this masculinist logic of purity, binary dichotomies, and the idea that subjects/objects can be categorized into distinct aspects/entities. She expresses how the epistemology of split-separation/purity has been a tool of domination and control which has excluded feminist forms of knowledge/who can be a knower, and resists this through what she articulates as a “curdling” logic. This alternative logic is one which is uninterested in clean separation of subjects/objects, rather, it is one which is unstable, fluid, anomalous- resisting the “naturalness” of a unified/objective homogenous or separated “essence” (Lugones 458). Lugones seeks to disrupt objectivity as independent of history and situation, emphasizing the intersectionality of identities and its central importance to resisting logics of purity which falsely create “objective” subject positions- as if they can exist without being societally embedded and embodied (Lugones 465). Lugones argues that what is to blame is not subjects whom exercise control but this system of logic itself- “a historical process of domination in which power and ideology are at all times changing into each other” (Lugones 464). Rationality, in this way, enables the unified subject to highlight his own privileged vantage point, giving him the ability to abstractly categorize the multiplicitous nature of reality into a systematicity of norms- as has been and continues to be done in science (Lugones 465). (add)

Evelyn Fox Keller, as both a feminist and a scientist, struggles directly with this seeming contradiction and potential dilemma that feminist politics have with the normatively-masculinist

scientific enterprise (Fox Keller 175). As science has developed as an exemplar of rationalist logic, these masculinist/ “rational” biases have been foundational in science; whether it be through the clear underrepresentation of women in the field, male-oriented selectivity in the defining and choice of problems pursued by scientific communities, or the usage of male subjects as being model for the entire species within experimentation and the resulting biased interpretation of experiments (Fox Keller 176-77). The very real and ideological disenfranchisements which feminists (in science, philosophy, and society alike) have experienced/understood within this dichotomous, racist, androcentric epistemological framework have led many, such as Lugones, to find that the nature of this system be fundamentally questioned if not wholly rejected in seeking to re-instate themselves as agents and subjects (Fox Keller 178). This, of course, is a valid and important response which illuminates the sheer depth with which masculinist logic of domination operates within, truly, *all* aspects of society, defining the way in which subjects/objects can be spoken about and conceptualized.

In this it is clear that the recognition of science and its “classical” objectivity as necessarily socially constituted is in fact a political and intellectual *pre-requisite* to feminist theoretic in science (Fox Keller 178). However, there is a danger in viewing science as a purely social product in that “science then dissolves into ideology and objectivity loses all intrinsic meaning. In the resulting [relativism], any emancipatory function of modern science is negated, and the arbitration of truth recedes into the political domain” (Fox Keller 178). Fox-Keller here makes the distinction between objectivity and realism- objectivity being “fully realizing the countless intrusions of the self... and the illusions which result- illusions of sense language, point of view, [and] value” (Fox Keller 179). As Lugones, Lloyd, Fox Keller, and many other feminists have revealed, objectivity has been misnomered historically and in reality has been

reflective of realism- the androcentric illusion which “[ignores] the existence of self and thence [regards] one’s own perspective as immediately objective and absolute” (Fox Keller 179). As such, Fox Keller’s seeks to reimagine objectivity in within science by distinguishing between the inappropriately narrow, hyper-specific/parochial and the truly universal- creating accurate objectivity without the integration of realism in an alternate epistemological approach to hard science.

This is significantly different from many feminist epistemologists, including Lugones, who believe that there is a *fundamentally* problematic and violent nature to our normative system of western logic (a logic of purity, unity, and split-separation). Lugones’ examination reveals a much more insightful and critical analysis into how masculinist logic *operationally* works within society. However, it may be that she conflates the way in which rationalist/split-separation logic has been *engaged with* historically and the *theoretical/potential* value of objectivity/logic as a system through which one can engage to understand themselves and other subjects/objects. Lugones, in her understanding of her knowledge/truth as *always* relative to some frame of reference/social and historical context, may in a way falls into the “danger” which Fox Keller insisted upon; for if science is *completely* a social product, then it would lose all functional authority. By this, I mean to reiterate Fox Keller’s analysis that there is a temptation in rejecting the *currently* male-created and male-privileging nature of “objectivity”/rationality (realism) to withdrawal from ideas of objectivity and rationality altogether, and dismiss them as historical “products of a purely male consciousness” (Fox Keller 178). Admittedly, Lugones very well may be correct in her damning critique. The question of whether a philosophical discourse (in this case, universality/rationality) can be separated from its historical usage/context (hierarchical, racist, sexist, non-contingent and unembodied) is a controversy which carries on within

philosophical and feminist discourse today. But, inspired by Lugones' resistance to an "either/or" reaction, I propose that there is importance and validity to both of these epistemological understandings.

One can take from Lugones' work a deeper understanding of how the hierarchical, classically-rationalist construction of logic should not be taken lightly- as the control it has retained in society speaks to the almost Machiavellian, unscrupulous aspects of this logic and its non-coincidental ties to *very real* oppression and suffering. However, in recognizing that this system is so very indoctrinated in the political reality of western society, it seems that to completely discard it would be extraordinarily difficult if not impossible, and could even be dangerous to the goal of feminist emancipatory projects. To condemn science as a whole because of its rationalist usage in practicality would mean the reiteration of masculinist ideology- that those outside the current sphere of ideological privilege should remain outside the sphere of scientific knowledge/inquiry forever (Fox Keller 178). This would serve only to reinforce the rhetoric that science is not for those who think "irrationally"- women, POC, non-binary folks etc. It is important to fully recognize and give weight to this political reality. Furthermore, to reject objectivity completely and invalidate this field as a whole may be reductionist and reactionary as it would seem to discount the work of feminist scientists who have made liberatory strides whilst utilizing scientific methods (such as the reimagining of microbiology in the egalitarian "Steady-State" molecular model) (Fox Keller 185). Though science is undoubtedly dominated by masculine construct, there are clear examples of the potential for science to internally transform and reject false dichotomy/realism through feminist approaches/understandings.

It is true that Fox Keller, in focusing only on the way in which women are affected by androcentric rationalism, does not recognize the complexity and intersectional nature of

oppressions, and the way in which and western logic is compounded to de-legitimize the experiences of all those who do exist as the normative rationalist subject (male, white, wealthy, western, classically-educated, heterosexual etc.). It also is problematic that Fox Keller's notion of objectivity paradoxically must notice the self with the goal of erasing the self. These problems may be better addressed by curdling logic, which is able to richly access intersectionality and accommodate the anomalous/ambiguous nature of processes of self-reflection. If Fox Keller's revised objectivity were to be *truly* refined, it would *necessarily* require the integration of logic of curdling to ensure that it would not add to the exclusions of multiplicitous perspectives from science but instead be able to create a subject whom "perceives, understands, grasps its worlds as multiple sensuously, passionately as well as rationally without the splitting separation between sense/emotion/reason lacks the unidimensionality and the simplicity required to occupy the privileged vantage point" (Lugones 465). In this dialectic between objectivity and subjectivity, science may transform into a creative and collaborative project which as a matter of course would seek to synergistically integrate the curdled perspectives/experiences of multiplicitous beings so as to create a clearer and more unbiased scientific process. This process, accordingly, would transform science and the very nature of violent logic from within, allowing for a truly positive and politically practical feminist epistemological project in which knowledge of subjects/objects may be understood as curdled/mixed rather than static/unified.

Works Cited

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