

The Gendered Construction of Science

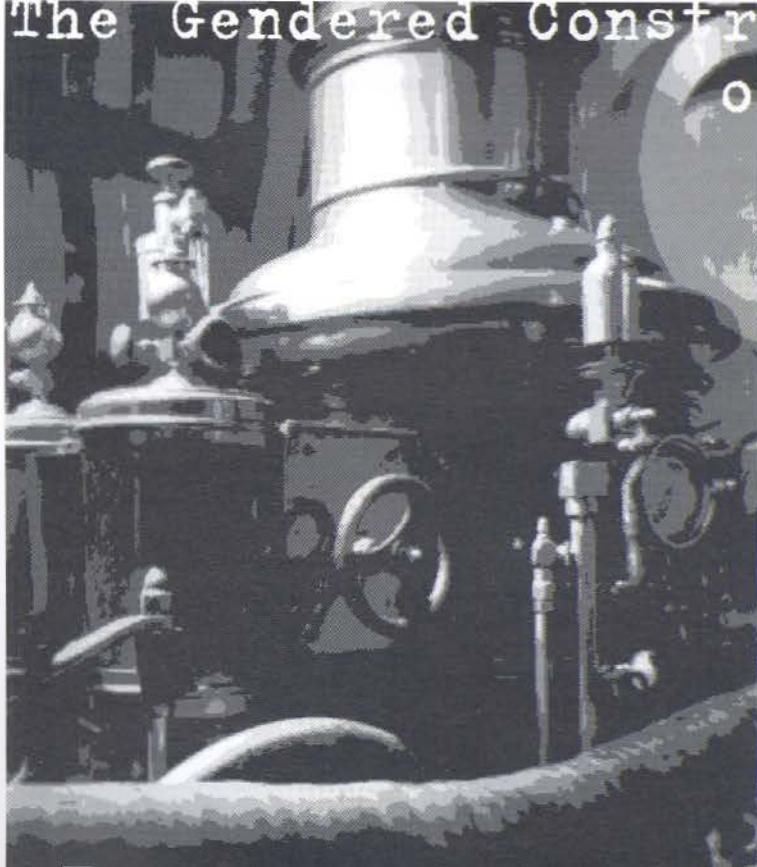
By Amy Block

scientific conception of "objectivity". Finally, Haraway destabilizes objectivity, freeing it from its universalizing effect. On the one hand, the consequences of Haraway's argument change the face of science. On the other hand, her argument changes the face of feminism. By outlining the shift in focus from "the women question in science" to the "science question in feminism" (Harding, 1986), I will show how Haraway's understanding of objectivity intervenes in the struggles of contemporary feminism. Objectivity in Haraway's terms will provide the epistemological foundation for feminist politics that refuses to rely on a homogenized, excusory subject: woman.

In *Cell and Molecular Biology*, my introductory biology textbook, the achievements of male scientists are numerous, filling the greater content of the text. Yet, mention of the female scientist is sparse: in the course of the text, the achievements of only two female scientists are described. Sceptically, I asked: "Where are all the women in science?" Scanning the McGill 1993 calendar, I discovered that perhaps this is not a question of the past: of 48 faculty members, only 3 positions were occupied by women. This kind of inquiry characterizes the "woman question in science" (Harding, 1986) which motivates feminism's initial pursuit. In mapping the field of gender and science, Schiebinger (1987) identifies two primary conceptual approaches. The first seeks to recover the unknown woman scientist, "to brush off the dust of obscurity from those women scientists whose scientific contributions have been neglected by mainstream historians of science" (Schiebinger, 1987:9). The second approach compliments the first by analyzing the history of women's participation in the institution of science, focusing on the history of women's limited access to the means of a scientific profession.

Harding discusses the results of these initial studies. Historical studies and bibliographies of contemporary scientists bring to attention what she names "women worthies" (Harding, 1991:22). Those women whose contributions to the field have been ignored and devalued in the mainstream scientific canon. In addition, Harding directs attention to the less public, less official, less visible and less dramatic aspects of science in order to gain the full scope of women's participation. Next, she describes both the structural and informal barriers that these initial feminist critiques of science unveil. From scientific education to lab appointments, from journal publications to membership in scientific societies, structural barriers existed that denied women access to the scientific enterprise. Finally, she describes the feminist sociological and psychological studies that uncovered implicit, informal barriers. The mechanisms of the informal discrimination include the devaluation of women's work, the exclusion of women from men's informal networks and the obstacles women meet trying to find reliable mentors. Thus, the first wave of feminist critique reveals that overt and covert sexism exists in all aspects of the scientific enterprise.

These initial studies point to surface problems in and around the institution of science. Clearly, steps must be taken to ensure equity; equity in terms of the scientific education of little girls and boys and equity in the working world of male and female practitioners of science. These claims are consistent with those the liberal feminist movement has attempted to hurdle within all social institutions. The liberal feminist position suggests that with equity



Since the advent of the scientific revolution, science has been purported to transcend the realm of the social. In the Western world, this is a luxury only science seems to enjoy. Indeed, our tolerance seems to be built into the very foundations of the scientific methodology itself: scientific methods are selected such that all social values are excluded from inquiry. The thinking follows that, when used properly, scientific method generates observations that are "objective" and results that are truly "value-free". In light of the meaning that science imparts, forging a connection between gender and science presents itself as an immediate paradox; to unearth the issues which surround this notion inevitably entails a kind of intellectual revolution. For feminist critiques of science, the task at hand is not an easy one. Sandra Harding observes that in modern cultures "neither God nor tradition is privileged with the same credibility as scientific rationality" (1986:32).

Despite the dominant culture's insistence on an essential scientific "objectivity," feminist critiques of science persist. Using numerous theoretical accounts, supplemented with my own experiences as a biology student, I will attempt to trace the evolution of these critiques. I will identify four waves of investigation that characterize the pursuit: beginning with the retrospective approach, feminist philosophers and historians of science take on the task of accounting for and recounting women's experiences in science. These initial studies comprise the first wave of feminist critique. Delving into more radical territory, the second feminist agenda focuses on addressing the implicit androcentric bias in the experimental design and interpretation of results. These two approaches are limited in that they fail to shake out issues of gender, power and domination, embedded in the very foundations of scientific ideology. Attempting to account for the conceptual and practical linking of objectivity, autonomy and masculinity that underlies scientific methodology, the third wave of feminist critique involves Evelyn Fox Keller's invocation of object relations theory. Elizabeth Fee and Donna Haraway, fourth-wave feminist critics, reject this account, for it fails to resolve issues of power and phallogocentrism inherent in the

legislation in place, women will enter the scientific enterprise unhindered. But Keller demands to know what women's participation will mean to science (1982:234). According to the liberal view, science will in no way be affected by the presence or absence of women. However, women's participation in "science as usual" (Schiebinger, 1987:9) is problematic in and of itself. Harding asks: "Should women want to become just like men in science?" (1991:33). Ultimately, Keller, Harding, Fee, and Schiebinger call for a more radical critique of science. Schiebinger urges that the feminist movement take its privileged perspective seriously: "From their position as outsiders, woman (like other 'outsiders', ethnic minorities and non-elites) have at this historical moment an opportunity to make a difference" (1987: 9).

More radical criticism follows the liberal feminist approach to the "women question in science" (Harding, 1986). Keller documents how the second wave of feminist critiques of science argue that the predominance of men in science has led to a bias in the choice and definitions of problems with which scientists have concerned themselves. For example, contraception has been given an unwarranted abundance of scientific attention. Furthermore, the attention it has received has been directed primarily on risky contraceptive techniques to be used by women (Keller, 1982:234). This second wave of feminist critique also reveals a bias in the actual design and interpretation of scientific experiments. Virtually all animal-learning research performed on rats uses only the male cohorts of the species. It is argued that the female rat's four day cycle complicates experiment procedures. However, the underlying assumption is that the male rat adequately represents the entire species. If research permits, the male rat will eventually come to represent the entire human species as well. The tendency for scientific explanation to rely on a male standard persists, predominantly in behavior and socially oriented sciences (Keller, 1982:235). For example, Southin's explanation of gametogenesis reads, "in mammalian females, instead of four functional products of meiosis [as in mammalian males], there is usually only one" (Southin, 1991:74). Contrasting female development to male development, using words like "instead" and "only" highlight an implicit standard set by the male example.

The studies outlined above point to an actual bias in the design and interpretation of scientific experiments. The second wave of feminist critique explains this tendency by alluding to the historical absence of women from mainstream science. According to this reasoning, women's valued presence in science will alleviate the aforementioned tensions. With equal participation of men and women in science, the bias, in effect, will cancel itself out. Again, the net solution implies that the need is not for science to accommodate women, but for women to accommodate science. Yet, a closer look at these studies reveals a more radical concern than this explanation offers. These studies imply that science's fortified tool, the key to its "objectivity" – the valorized "scientific method", can actually produce biased and obscured results. Clearly, it is not enough, therefore, to assert that by simply increasing the number of women in science, androcentrism will be obliterated. Scientific methodology, by definition, meant an ultimate obliteration of androcentrism, and Eurocentrism and classism, and so on. However, the explanation offered by this wave of feminist critique leaves "scientific methodology" stably established, and the essential "objectivity" remains unshaken.

On the quest for a more lucrative account of women's absence from science, and in an attempt to penetrate the notion of scientific objectivity, Keller's ground-breaking work marks the third wave of the feminist critique of science. Essentially, Keller contests the postulate that women in science means "science as usual" (Schiebinger,



PHOTO: JERRY VALEN DEMARCO, FATHOM FIVE NATIONAL MARINE PARK

1987:9). Her biographical account of plant geneticist, Barbara McClintock, documents scientific progress achieved not through detached objectivity, but rather through 'feeling for the organism' (Keller, 1983). This was a technique unheard of (and mocked at) by McClintock's male contemporaries. Keller argues then, that clearly it is science that must accommodate women. Her analysis suggests the means by which this can be achieved. Beginning with an explanation of how scientific language is embedded in culturally laden metaphor, she demonstrates how 'objectivity' inherent in science comes to be seen simultaneously as both disembodied and male. Using object relations theory, Keller then argues that individual gender development produces men suited for science and women alienated from the pursuit. Ultimately, she suggests a revised notion of objectivity, providing the basis for a kind of androgynous science that balances both male and female "ways of knowing".

Keller's primary concern with science is that it replaces ordinary language with a technical discourse purported to be cleansed of the ambiguity and values that burden its predecessor. Scientists insist, "let data speak for themselves". The problem, Keller argues, is that data never do speak for themselves. In science, and elsewhere, interpretation requires the sharing of a common language. In that way, science is embedded in a community of common practices and shared conceptions. She argues that sharing a language means sharing an entire conceptual universe. This means that the identified scientist must not only know the right names to call things, but also the right syntax to pose questions and assert conclusions (Keller, 1992:27). Thus, participating in science involves "sharing a more or less agreed-upon understanding of what questions are legitimate to ask, and what can be accepted as a meaningful answer" (Keller, 1991:28).

Keller continues to demonstrate that the seemingly pure and technical discourse of science depends heavily on metaphor, ambiguity and the instability of meaning. She asserts that the language

and metaphors of the scientific revolution were clear: sexuality was the metaphor for the mediation between mind and nature. While mind was posited in the realm of 'male', nature was posited in the realm of 'female'. Under this paradigm, the pursuit of scientific knowledge, or access to nature, is constituted as an act of aggression. Fee adequately summarizes this notion, describing how scientific metaphor suggests that "a passive nature had to be interrogated, unclothed, penetrated, and compelled by man to reveal 'her secrets'" (1986:44). Furthermore, the laws of nature which science seeks to unveil are rooted in metaphor which is historically conceptualized as imposed from above and obeyed from below. Again and again, in a multitude of disciplines and languages, "we find the familiar dualisms of mind and body, culture and nature, rationality and emotionality, activity and passivity, objectivity, subjectivity, male and female" (Fee, 1986:44). Suddenly, the language of science is seen to carry the imprints of culture. Women's absence from science is perhaps better understood as an "outsideness" from science, rooted in scientific ideology itself. While males assume the role of arbitrators of science (i.e., the subjects of science), women inevitably represent their field of interest (i.e., the objects of science).

Keller's discussion of language and metaphor explores new territory which had previously eluded feminist critique. First, and perhaps most radically, the notion of "science in a vacuum" and its "value-free" observations, collapses with the elucidation of an all encompassing language-culture effect. Keller asserts, first, that in a patriarchal society, science is 'male', in its fundamental ideology. Second, she argues that explanations for androcentrism in science that rely on the historical absence of women are simply inadequate as language and culture are postulated to be factors in this ideology. Along these lines, Keller's argument may lay the foundation for understanding what my organismal biology professor was hinting at when he explained to me that while my answer was not incorrect per se I "should learn to write more like Hemingway."

Keller's argument points to the implications of the Hemingway remark. What does it mean to "write more like Hemingway"? Abrams' *A Glossary of Literary Terms* describes Hemingway's work as the epitome of paratactic writing. Paratactic writing style is defined as "one in which the members within a sentence or else a sequence of sentences are put one after the other, without any expression of their connection or relations except (at most) the non-committal connective 'and'" (Abrams, 1988:183). It is contrasted to hypotactic style where "temporal logistical and syntactical relations between members and sentences are expressed by words or phrases" (Abrams, 1988:183). Hence, within the scientific community, within the shared conceptual universe from which I was unknowingly alienated, the accepted scientific language is one which is detached and unconnected. This appears to be consistent with the aims of science: to produce "value free", "objective" truths, scientific language must reflect maximum distance, "unconnectedness" and disembodiment. But Keller points to an implicit contradiction: if scientific ideology is rooted in a metaphor which deems the scientific mind as male, how can the scientific mind be at once male and disembodied? In the latter part of her argument, Keller sets out to illuminate the linking of objectivity (a cognitive trait) with autonomy (an affective trait) and masculinity (a gender trait) that underlies scientific ideology (1982:239).

Using object relations theory, the psychoanalytic tool laid down by feminist psychoanalysts, Chodorow and Dinnerstein, Keller establishes these links. Object relations theory contends that little boys and girls grow up in different kinds of ego boundaries (Fee, 1986:48). Consequently, they have different experiences of their relationships to other people and to the external world. In the context of female mothering, little boys must form their gender identities by cutting themselves off from the mother, the primary

love object. Little girls, on the other hand, continue to identify with the mother and do not experience that same abrupt break. In forming a masculine identity, little boys must undergo a process of denial and repression of their early identification with the mother (Fee, 1986:48-49). The consequences of early child development have an expansive scope. In Chodorow's words, the net result is that "the basic feminine sense of self is connected to the world, the basic masculine sense is separate" (1978:169).

Next, Keller invokes Piaget's argument that the capacity for cognitive distinctions between self and other (objectivity) evolve concurrently and interdependently with the development of psychic autonomy. In short, our cognitive ideals become subject to the same psychological influences as our emotional and gender ideals. In this way, along with autonomy, the very act of separating subject from object itself, comes to be associated with masculinity. Ultimately, Keller concludes that "our early maternal environment, coupled with a cultural definition of masculine (i.e., that which can never appear feminine) and of autonomy (i.e., that which can never be compromised by dependency) leads to the association of female with the pleasures and dangers of merging, and of male with the comfort and loneliness of separateness" (Keller, 1982:239). Both the dynamic processes of development that require separation from the mother and cultural definitions of masculinity as independence, reinforce an association of the male with separateness, pushing him to a rigid and exaggerated separation. An important dimension to her explanation is that the maintenance of this male form of individuation is achieved by domination of the "other" (Keller, 1982: 234-240).

Continuing with her endeavor to address the "women question in science" (Harding, 1986:22), Keller reformulates the task for a radical, feminist critique of science, by shifting the approach from an historical to a transformable one. Her concern is to articulate an alternative philosophy of nature - one in which nature's order is perceived as inherent and self-generated, rather than construable as law-governed. She argues that woman's valued participation in science would result in a truly different outlook on nature, and a truly different outlook on science. Only in rejecting sexual polarities which permeate the modern concepts of science and nature, can the study of nature be as inviting to women as it is to men (Keller, 1982:116). The impulse for domination subsided, science could be opened to a more holistic, co-operative, integrative way of theorizing about nature. In Keller's vision, a passage which reads, "the virus in essence, hijacks the metabolic machinery of this cell, turning it into a factory for the production of progeny virus particles" (Southin, 1991:9) would cease to make sense in the name of science.

The "objectivity" that Keller conceives, then, is one characterized by dynamic interaction between the subject and the object of science. Keller postulates a dynamic objectivity which "grants to the world around us its independent integrity, but does so in a way that remains cognizant...of our connectivity to that world" (1985:117). In this way, science can achieve more adequate, reliable representations of nature than those that are available through (masculine) static objectivity. It appears then that, historically, scientific objectivity has been misunderstood. In short, rather than abandon what Keller calls the "quintessentially human effort" (1982:238) to understand the world in rational terms, Keller demands that feminism and science join forces and simply refine this effort. This refinement begins by re-conceiving the very notion of scientific objectivity itself.

While certainly provocative, Keller's analysis is subject to scrutiny. Elizabeth Fee highlights key areas of concern, and reduces the central criticism of Keller's argument to a highly consequential oversight: Keller's analysis appears to explain too much. Psychoanalytic theory, object relations theory in particular, is based on modern, Western, nuclear families within a capitalist economy. Under this paradigm, the mother assumes full domestic responsibility while the father is occupied in the labour force and, therefore, absent from

the home. Is Keller's analysis intended to account for gender generally or more particularly to middle class Western societies? Object relations theory is clearly inadequate for the 'general' gender account. Even if Keller's argument is limited to the modern, white middle-class individual, is it still valid to assume a negligible variety in gender related matters, across such a diverse group of individuals?

Fee materializes these suspicions when she looks at the relationship between feminist epistemology of science in Western capitalist societies and epistemologies representing a range of cultural perspectives on nature and natural knowledge (1986:48). What Fee discovers is that while Keller's critique of science addresses scientific ideology as masculine, Black and Native writing addresses scientific ideology as White and European. Moreover, Marxist writing addresses scientific ideology as bourgeois. Concepts of nature that are in one context denounced as masculine, are, in another, denounced as European, colonial, white and bourgeois. While Keller's invokes gender as a unitary analytic category, Fee's analysis reveals this to be problematic. She argues that because gender is not lived independently of other social relations, scientific knowledge is perhaps better seen as a reflection of the "particular moment of struggle of social classes, races and genders found in the real, natural and human world" (1986:55).

In light of this argument, Keller's analysis is exposed as being static and limited. It constructs gender in isolation, and, therefore, neglects to consider the way in which it is constituted through a myriad of social relations. Fee contends that clearly, power cannot be discussed solely in terms of male domination, for maleness is articulated through the matrices of race, class, and so on. It is at this point where Fee's argument takes its most insightful turn, as she shifts the focus from the "women question in science" to the "science question in feminism" (1986:55). As maleness is articulated across several boundaries, so too is femaleness. You cannot be a woman without belonging to a certain class, a certain race, or a certain country, for example. Similarly, a woman exists in a particular moment in history. That moment in history carries its own definition of what it means to be a woman of a certain class, race, nationality and so on. This notion of women (and people) as dynamic "reciprocal selves federated in solidarities rather than essentialized and naturalized identities" (Harding, 1986:55) is a useful tool for contemporary feminism.

Fee is certainly not alone in her criticism of Keller's analysis, nor in her shift of focus. Postmodern critiques assert that the goals of Keller's science are limited by masculine metaphysical and epistemological frameworks. While Keller's analysis engages scientific ideology where the first and second waves of feminism fail, postmodernism asserts that Keller's critique has simply not delved far enough. Keller's notion of objectivity reflects the belief that a more symmetrical gender system will produce a kind of androgynous science. This androgynous science will approach true "objectivity". It is precisely the notion of "true objectivity" that postmodern critique rejects. Instead, the aim of postmodern critique is the elimination of the "defensive androcentric urge to imagine a 'transcendental ego' with a single voice that judges how close our knowledge claims approach the 'one true story' of the way the world is" (Harding, 1986:55).

Postmodern critique, therefore, rejects the notion of the omniscient and omnipotent "transcendental ego" that Keller's analysis invokes. Donna Haraway articulates this rejection by employing a metaphor on the "much maligned sensory system" (1988:581) in political and scientific discourse: vision. Haraway argues that to similar ends, vision has been used to signify a leap out of the social body and into "the conquering gaze from nowhere" (1988:581). According to Haraway, this free-floating gaze is an artifact which mythically inscribes all social bodies while rendering the unmarked category the power to see and not be seen, to "represent while

escaping representation" (Haraway, 1988:581). In modern Western culture, this gaze signifies the unmarked positions of Man and White. Furthermore, it is "one of the nasty tones of the word 'objectivity'" (Haraway, 1988:581). In light of this, then, Haraway argues that the key for feminism is the insistence of the embodied nature of vision. In that way, objectivity comes to be understood as nothing less than situated knowledge.

Haraway demonstrates that in late twentieth century Western world, technological devices for seeing are conflated with meanings of disembodiment. The vision of "ordinary primates" (Haraway, 1988:582), humans for example, can be endlessly enhanced to the extent that visualizing technologies are without apparent limit. Sonography systems, Magnetic Resonance Imaging, satellite surveillance systems, and electron microscopes are only a few of the devices which illuminate the world from the microscopic cellular level to the global stratosphere (Haraway, 1988:582). Immediately a paradox emerges: these technological mediations are at once celebrated as scientific accomplishments and presented as utterly transparent, as if they were always already there. Objects come to the social human eye simultaneously as "indubitable recordings of what is simply there and as heroic feats of technoscientific production" (Haraway, 1988:582). According to Haraway, this paradox is the effect of the "god-trick" (1988:583): an illusionary view of vision which sees everything from nowhere.

Escaping the mythical promise of the "god-trick," Haraway argues for a revised perspective. She understands this diverse technology as a set of highly specific visual possibilities, each with a wonderfully detailed, active and particular way of organizing the world (1988:583). In Haraway's view, feminist scientists and feminists alike, without giving into the tempting myths of vision as a route to disembodiment, are able to construct a usable but not innocent doctrine of objectivity. Feminist objectivity "turns out to be about particular and specific embodiment and definitely not about the false vision of promising transcendence of all limits and responsibilities" (Haraway, 1988:582) which the "god-trick" purports to accomplish. In short, feminist objectivity is about limited location and situated knowledge, not about transcendence and the splitting of the subject and object.

A key element of Haraway's objectivity is responsibility (1988:582). Unlocatable forms of knowledge harness irresponsibility, which, by definition, evade accountability. Her ideas demand a revolutionary mind-set. She turns the Western cultural narrative, "allegories of ideologies governing the relations that we call mind and body, distance and responsibility" (Haraway, 1988:583) on its head, to ultimately insist on the eradication of innocence from subordinating systems of knowledge-seeking and knowledge-making.

Haraway's discussion of responsibility is by no means targeted solely at mainstream, phallogocentric discourse. Rather she demands, in fact insists, that feminist discourse adopt this necessary responsible demeanor (1988:587). Haraway contends that the premise of "transcendence" in feminist epistemology is problematic, even antagonistic, to feminist goals. In the past, feminism has relied on standpoint epistemology – the view of the subjugated seemed to illuminate women's experience. The preference for subjugated standpoints is easily understood, for they seem to promise more adequate, sustained, objective transforming accounts of the world. Yet, Haraway warns of the danger in adopting the subjugated position: "To see from below is neither easily learned, nor unproblematic, even if "we" "naturally" inhabit the great underground terrain of subjugated knowledges" (1988:584). She contends that subjugation is not grounds for ontology. However, "it might be a visual cue" (Haraway, 1988:586). Instruments of vision always mediate standpoints, dominant as well as subjugated ones. Ultimately, Haraway argues that it is positioning that is the key practice in grounded knowledge organized around the imagery of vision.

The Gendered Construction of Science: A Reflection.

By Amy Block

This paper was written in my final year of my undergraduate biology degree and marks my first attempt to formalize some ideas about feminism and science that had long been festering. I admit that as a comprehensive literature review, as a feminist critique of "difference", and as a self-performed catharsis, "The Gendered Construction of Science" was devised to serve many purposes. In an attempt to meet these diverse demands, I organized the text in a way that made immediate sense to a self-identified biology major: an evolutionary progression of the feminist critiques of science. In short, I argue that feminist critiques can be categorized sequentially into four discrete impulses. Consistent with contemporary evolutionary paradigms, I demonstrate that each impulse builds on the preceding one. Complicit with the Darwinian conflation of evolution and progress, one will notice that each impulse delves further into 'radical' terrain. Ultimately, I argue that what begins as an attempt to isolate women's participation in science eventually evolves into a project that implicates scientific principles as antagonistic to feminism. I articulate this transition as an adaptive advantage, for it meant that feminist inquiry could finally embrace 'difference' among and between women.

I imagine though, that you could tell the story of feminism and science differently. An evolutionary paradigm operates through particular modes of progression and competition, but what do these modes exclude? How do these modes construct the very story they attempt to merely describe? Even at the onset, the evolutionary paradigm is problematic. In fact, it seems that inscribing a framework of evolutionary progression went against my better instinct. I "supplemented" the critique with my own experiences as a biology student. Yet, these experiences did not accrue over evolutionary time, rather each transpired in the same historical hour; one analysis did not succeed the other. Instead, each held some theoretical power and each met some political and personal need. Used in combination, they ultimately helped me make sense of my experiences as an outraged, alienated biology student. But an evolutionary framework is bound to understand diverse feminist epistemologies as competing — always leaving out the myriad of ways in which things can co-exist non-competitively, mutualistically, cooperatively. In retrospect, then, perhaps the story of feminism and science is better read as epistemological symbiosis. What would that mean for Feminism? What would that mean for Science?

Amy Block is in the combined Master in Environmental Studies and Law Programs at York University. Thanks to Rose-Marie Kennedy for her editorial comments.

Haraway takes the very notion of scientific objectivity, the fundamental building block of modern science, and exposes it as the mythical construct inherent in phallogocentric epistemologies. Instead, she offers a usable and responsible kind of objectivity: embodied situated knowledge. Tracing the waves of feminist critique of science, from retrospection to psychoanalysis, no critique shakes our basic understanding of science to the extent that Haraway's does.

However, in addition to revolutionizing science, Haraway revolutionizes feminism. For Haraway, diverse visualizing technologies are metaphors for 'difference' among and between women. Particular ways of knowing are rooted in her precise notions of what it means to 'be'. But 'being', she argues, is problematic and contingent: "One cannot 'be' either a cell or a molecule-or a woman, colonized person, laborer and so on- if one intends to see from these positions critically" (1988:589). It is the notion of splitting, not being, that is the privileged image for feminist epistemologies. Splitting in this context is "about heterogeneous multiplicities that are simultaneously necessary and incapable of being squashed into isomorphic slots or cumulative lists" (1988:589). Thus, the knowing self is articulated as partial in all its guises- a radical divergence from the essentialized, homogenized subject that Keller depicts. Thus, from the laboratory to the classroom, feminist investigations into science charter unforeseen territory. Ultimately, feminism has everything to gain: Haraway's partial, locatable, critical knowledges sustain the possibility for feminist coalitions leading to "solidarity in politics and shared conversations in epistemology" (1988:588). Science, on the other hand, will never be the same.

References

- Abrams, Meyer Howard. (1988) *A Glossary of Literary Terms*. 5th ed. Fort Worth: Holt, Rinehart and Winston Inc.
- Chodorow, Nancy. (1978) *The Reproduction of Mother: Psychoanalysis and the Sociology of Gender*. Berkeley: U. of California P.
- Fee, Elizabeth. (1986) "Critiques of Modern Science: The Relationship of Feminism to Other Radical Epistemologies," Bleier, Ruth, ed. *Feminist Approaches to Science*. New York: Pergamon Press.
- Gunew, Sneja and Anna Yeatman. (1993) *Feminism and the Politics of Difference*. Halifax: Fernwood Pub.
- Haraway, Donna. (1988) "Situated Knowledges: the Science Question in Feminism and the Privilege of Partial Perspective," *Feminist Studies*. 14, 3: 575-599.
- Harding, Sandra. (1991) *Whose Science? Whose Knowledge?* Ithaca: Cornell U.P.
- _____. (1986) *The science Question in Feminism*. Ithaca: Cornell U.P.
- Keller, Evelyn Fox. (1992) *Secrets of Life. Secrets of Death*. New York: Routledge.
- _____. (1985) *Reflections on Gender Science*. New Haven: Yale U.P.
- _____. (1983) *A Feeling for the Organism*. New York: Freeman Press.
- _____. (1987) "Feminism and Science," *Sex and Scientific Inquiry*. Sandra Harding and Jean F. O'Barr. eds. Chicago: U. of Chicago P.
- Longino, Helen E. (1988) "Science, Objectivity, and Feminist Values," *Feminist Studies*. 14,3 Fall: 561-574.
- Schiebinger, Londa. (1987) "The History and Philosophy of Women in Science," *Sex and Scientific Inquiry*. Sandra Harding and Jean F. O'Barr. eds. Chicago: U. of Chicago P.
- Southin, John L. (1991) *Cell and Molecular Biology*. 2nd ed. Dubuque: Kendall/Hunt Pub.