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LANGUAGE EXPERIMENT: SCIENCE, GENDER, AND DISCOURSE IN THE WORKS OF MARGARET FULLER

By

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A dissertation submitted to the Graduate Faculty in English in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York

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Abstract

LANGUAGE EXPERIMENT: SCIENCE, GENDER, AND DISCOURSE IN THE WORKS OF MARGARET FULLER

by

Mary-Jo Haronian

Advisor: Professor Joan Richardson

This dissertation examines the impact of scientific thought on Fuller's politics and poetics, uncovering aspects of her work invisible without this context. Fuller's attention to the ideological framing of knowledge, which science elicited by its very denial of such a bias, led her to reconsider how "knowledge" is formed and transformed through description, authoritative statement, and rhetorical manipulation.

As Fuller weaves terms from electricity, optics, botany, and other sciences into her text, she demonstrates and exploits the mutability of these terms to open up the possibilities of new definitions of the natural and social phenomena science purports to describe. This in turn leads to a redefinition of language itself, which becomes a

vehicle for social change. Her unraveling of gender terms such as "woman," "feminine," and "manly," for example, coincides with her attention to the changing meanings of the terms used to describe electrical energy. Given her nearly complete deconstruction of the definitions of "energy" and of "woman," her claim that women possess more "electrical" force than men do enacts a critique not only of science and of gender paradigms, but of a society built on the assumption of stable categories. Once she has toppled this assumption, and conceived a model of discourse in which meaning is constructed through dialogic contest, scientific theories can be pressed into service for her own ends. Her text projects into relief, against the background of dominant social mores, the discursive elements that regulate not only gender, but also race, in the cases of Native Americans and American slaves, and class, in the cases of frontier settlers and laborers in America and Europe.

The manipulation of scientific concepts becomes a revolutionary strategy throughout Fuller's work; when noted as well in the works of Emily Dickinson, Gertrude Stein, and Djuna Barnes, writers sharing Fuller's concern with definitions of gender and subjectivity, it indicates a

feminist exploitation of authoritative epistemological claims and abstractions usually cast as patriarchal practice.

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We must be clear that, when it comes to atoms, language can be used only as in poetry.

--Niels Bohr

CHAPTER ONE

SCIENCE AND PERCEPTION

I. Introduction

Nineteenth-century scientific concepts and the cultural debates they generated were central to the development of Margaret Fuller's politics and poetics. An examination of the impact of scientific thought on Fuller's writing, overlooked in the criticism to date, uncovers aspects of her text otherwise invisible, contributes to a deeper understanding of her feminist project, and reveals her radical reconceptions of language. Simultaneously fascinated by science's advances and wary of its epistemic claims, Fuller came to perceive science as cultural construction. The manipulation of scientific concepts becomes a revolutionary strategy throughout Fuller's work; when noted as well in the works of Emily Dickinson, Gertrude Stein, and Djuna Barnes, writers sharing Fuller's concern with definitions of gender and subjectivity, it indicates a feminist exploitation of authoritative epistemological claims and abstractions usually cast as patriarchal practice.

Fuller's negotiations with science come into view through the two lenses of American literary/cultural study and feminist theory. Because all cultural and aesthetic

movements take place in relation to contemporary science, whether or not they acknowledge this relation, and because Fuller's critique of science recognized this, my project occasions a survey of nineteenth-century American culture, affording new perspectives on the underpinnings of romanticism and Transcendentalism, and on the period's religious doctrines, racial attitudes, and gender roles. It also reveals nineteenth-century roots of twentieth-century movements, including pragmatism, feminism, modernism, and poststructuralism. But my readings of Fuller's passages are not aimed at projecting the future from her work, for a recognition of the "proto" nature of many of Fuller's insights is most useful not in itself, but rather when it leads to an examination of the modes of thought prompting these insights. Thus the following chapters explore the extent to which specific scientific texts induced new perspectives in Fuller's thought, and, because they affected her understanding of language and discourse, shaped her poetics.

Much of Fuller's negotiation with science constitutes an engagement with objectivity and the abstract which seems to run counter to the romanticism, pragmatism, and feminism I have just evoked. That the abstract plays an important role within feminist discourse, and that this role itself

warrants theorizing, is a proposition generally drowned out by feminist evocations of the personal, the subjective, and the local. Yet some recent poststructuralist theorists, including Donna Haraway, Patricia Yeager, and Barbara Johnson, reconceive the personal, subjective, and local so thoroughly as to require a reevaluation of the relationship between feminism and the abstract. Yeager and Johnson embrace poststructuralist notions of mutable knowledge and identity in order to revise the concept of gender and to enact in their texts radical disruptions of a dominant male discourse which would render them silent could they not use against it the very tactics meant to exclude their participation: a foregrounding of the instability of meaning, of the slipperiness of words, and of the power residing in the manipulation of language. The fact that the very literary theories underlying these feminist theories--such as Bakhtin's model of a dialogic discourse structured on an always-present tension between domination and suppression, or Derrida's formulation of a linguistically-constituted self--destabilize notions of the subjective, personal, and local utterance, illuminates the abstract nature of the poststructural in both its form and its content.

An abandonment of the subjective, personal, and local

becomes an emancipatory event when it dismantles constraints based on the identity categories the subjective, personal, and local define. Fuller, I demonstrate, becomes capable of entertaining this notion and employing this strategy, along with others, through her engagements with scientific thought. Recognizing that both scientific knowledge and gender definitions are mutable, Fuller experiments with a text in which both can be used strategically in the discursive competitions in which power is won and lost.

II. Science in Fuller's Work

Tracing the thread of science through Fuller's work, most significantly in *Woman in the Nineteenth Century* and *Summer on the Lakes, in 1843,* and attending to the complicated nature of that presence in Fuller's thought, I identify a poetics of perception shaping her texts. Science is central to this poetics because while all assertions of knowledge--such as those of nineteenth-century philosophy, metaphysics, and religion--imply claims *about* perception, the claims of science are essentially claims of actual perception: science claims to perceive new things, and to perceive all things more clearly. Science's powers of perception were being asserted in ways attractive to Fuller in her famous quest to be led "by no illusion." Fuller's

thought was captivated by the new "scientific" representation of electricity, and one can find in her body of work the marks of each of the concepts Alfred North Whitehead would identify as the "great novel ideas" introduced into theoretical science during the nineteenth century: continuity, atomicity, the conservation of energy, and the doctrine of evolution. (Each of these predated the figure or text most easily associated with it in the popular mind, and so circulated in Fuller's lifetime; evolution, for instance, did not spring full-blown from Charles Darwin in 1859, but, referred to as "development," was debated heatedly as early as 1844, and had been denoted by Charles's grandfather, Erasmus Darwin. See note 2 below.) My project, however, is not to trace each of these ideas in Fuller's text, but rather to show how *as* ideas--not merely as metaphors--science shapes her writing. Whitehead emphasizes that these ideas sprang from a combined "scientific" and "creative" interpretation of the world. "The greatest invention of the nineteenth century," he writes, "was the invention of the method of invention" (451). *This* is the scientific development that most nearly parallels Fuller's modern perception and the development of her poetics. The invention of tools and theories with which to investigate the world, and more important, an inventive mode that finds

new ways of asking questions about the world, coincide with an aesthetic that finds new ways of looking at and representing the world, and with a writing practice that enacts this aesthetic and activates its potential to invent new worlds.

Fuller was not a scientist, but a reader and writer; her critique arises from *this* expertise. Science would demand of her an especially complicated reading response, one in which she attended to both the claims which she accepted and those she rejected, and in which the contested nature of this new discipline became part of its text. The epistemological questions raised by new science and the "transvaluations" of the meanings of gender, perception, truth, and science itself that these questions led to, are "radically enmeshed," to use Christina Zwarg's terms, in Fuller's reading of science. But also enmeshed are the limited understanding and technology of scientists in Fuller's day, fervid contemporary debates about human potential and progress, and clashes of validity claims made by science, within science, and by Fuller herself. Science's assertions of new ways of perceiving drew Fuller in, but the association of these new perceptions with the assertion of authority begged her to contest science on several points, including its claims of separateness from, and superiority

to, other modes of knowing, and its strict rules of categorization which both came from and fostered a sharp segregation of male and female characteristics and of reason and emotion. It also insisted on making ontological, rather than epistemic, claims at a time when Fuller was beginning to see all knowledge claims as epistemologically-framed statements. All epistemologies, Fuller realized, hid their *representative* character; science hid even its epistemological nature. Revealing its hidden operations would require, and would generate in Fuller's text, innovative writing strategies arrived at through particularly modern ways of understanding the world--a world of multiple perspectives science itself helped to establish--and by turning the lens of language on itself.

Fuller staked her claim at the converging borders of what today we call Romantic metaphysics, Enlightenment science, and "pseudo science." From this position she came to the radical views on issues of gender, class, and race presented in her journalism and criticism. Whether writing about literature, social customs, landscape or political struggle, she wove her texts from all three of these strands. She did not merely incorporate them into her material in order to invest her arguments with intellectual authority, with popular interest, or with the intrigue of

the supernatural, but rather she made them the very substance of her writing, examining them as part of the cultural material she addressed in her reviews, articles, books, dispatches, and letters. Her work cannot be fully understood or appreciated without recognizing this foundation and examining the relations of philosophy, science, and pseudo-science with each other and with other elements of her politics and her poetics. While the philosophical foundations have been enthusiastically probed by scholars of Fuller's work in particular and of the Transcendentalists in general, her engagement with science (and pseudo-science) needs to be considered more fully.

Fuller approached science and pseudo-science not as ontological tools describing the truth, nor as epistemological modes offering unique ways of knowing, but as systems of representation, economies in which what is produced and exchanged are definitions, signs, and symbols. Within such an approach, some of the questions of ontology and epistemology drop away--Fuller is interested not so much in establishing *the* truth, nor in finding a way truly to *know,* as in understanding how claims of truth are *represented* in the new language of science and the newly-invigorated languages of mesmerism and prophetic "seeing." As I shall illustrate, Fuller sees and exploits the

political dynamics inherent in the institutions, the practices, and the vocabularies of science, as its practitioners strove to present it in specific ways to the public. Of course to the extent that this presentation contained dramatic ontological and epistemic claims, these issues will not fall away entirely, but rather will be part of the material--the matter of representation--that Fuller takes as her subject. But by far her largest scientific interest is in the ways science represents itself and the world, and in the ways these representations shape perception.

III. Gender and Science

A reading of the ways science inflects Fuller's text must include a recognition of the extent to which gender informs her thought. To fail to recognize this would be not only to contort the text in an attempt to twist out the strand of science, but also to miss the ways Fuller's awareness of the *significatory contests* of gender inscription inform her encounters with other contested arenas, including science. Fuller's own perception, and therefore her thought and work, are deeply affected by her gender. Gender, however, inflects her text not simply by the accident of her being born female, but, more importantly, by

her understanding of gender as an economy of representation. Even more than *Woman in the Nineteenth Century* is a text about women, it is a text about the representation and perception of women. Furthermore, it is a text about representation and perception as modes of power used against, and potentially by women. Fuller's attention to the terms that define gender, and her vigilance in reminding us that we read and reproduce *representations of,* not *real* women, occasions a practice she also brings to bear on her reading of the new words representing science, and the scientific words representing the world.

Attuned to the normative power of the vocabularies of both gender and science, Fuller scrutinized both in service to a larger project encompassing issues of representation and discourse in general. Lessons learned in Fuller's play and battle with the languages of gender and science extended to other political arenas, as Fuller manipulated the discursive elements that regulated race, in the cases of Native Americans and American slaves, and of class, in the cases of frontier settlers and laborers in America and Europe. Because Fuller was interested in the pragmatic and political consequences of representation, her explorations of discursive power will emerge in readings of specific passages incorporating terms of science and gender rather

than in any theoretical formulation.

A perspective informed simultaneously by science and by an attention to gender distinctions is a complicated one. As Ruth Bernard Yeazell has pointed out, science looks for origins, traces, records, and signs; feminism questions all of these and investigates their construction and interpretation (ix). Science drives toward the abstract, formulating "universal" laws through which the world is viewed, often making invisible anything, or anyone, located on the margin or outside the mean. Yet again and again in Fuller's text, gender-related topics highlight scientific ones, and vice versa. This is, as I've suggested above, partly because Fuller's interest in the ways science represents knowledge and gender represents individuals is part of a general, wide-ranging interest in the power that resides in representation and its ability to control, to different degrees, perception. But it is also more than that; the particular *ways* in which science and gender represent are interesting to Fuller, and are in her view particularly symbiotic. The epistemic nature of science's claims--its purporting to know in a different and superior way--raised for Fuller complicated questions of knowing and representing. These were just the sorts of questions she would want to raise in all areas of knowledge; the extremity

of science's claims provided a particularly rich ground for her work. Gender, Fuller saw, was a mode of representation permeating every aspect of culture, but one nearly hidden, or at best acknowledged only in terms used to define women, and to prescribe male and female behavior and male-female relations. Fuller recognized the presence of gendered descriptions and biases in all facets of culture, from the obvious subject of women's "rights" and "duties," to the seemingly unrelated subject of white usurpation of Indian territories or the definitions of friendship she debated with Emerson. When science converses, in the readings that follow, with areas of contested representation besides gender, for example in the terms of racial stereotypes, even then Fuller's gender critique resonates in the background, providing a specific alternative perspective *and* a reminder of the necessity of an alternative perspective to counter the power residing in dominant social representations. Fuller's attention to the ideological framing of knowledge, which science elicited by its very denial of such a bias, led her to reconsider how "knowledge" is formed and transformed through description, authoritative statement, and rhetorical manipulation. She applies this analysis to expose gender bias in all its forms. When both scientific knowledge and gender definitions are thus shown to be

mutable, both can, Fuller demonstrates, be used strategically in the discursive competitions in which power is won and lost.

Fuller's cultural critique, in other words, is a feminist critique in the broadest sense, and her poetics, which I shall trace as proto-modernist, constitute a modernism born of feminism. "Modernism," Bonnie Kime Scott points out in her introduction to *The Gender of Modernism,* "was inflected, in ways we can only now begin to appreciate, by gender" (3). That any poetics and literary-cultural strain would be so inflected was one of Fuller's greatest insights, and one that put her at the forefront of a feminist criticism, a feminist politics, and a modernist aesthetic.

IV. The Invention of the Scientist

Gender, then, because of its ubiquitous circulation, and science, because of the extremity of its epistemic claims, are more often than not in Fuller's cultural analyses, co-operative with, and conducive to, the methods of the various other epistemological approaches she employs. Today, in an era in which feminist criticism and theory are familiar, even institutionalized enterprises, we are comfortable with the idea of a cultural critique in which

gender provides a major mode of analysis and the main subject matter. But when it comes to a critique centered on science, we are not accustomed to Fuller's method. Moreover, when we overlook the historical context of her text, we do not even appreciate the complexity of that method. We tend to gloss all of the scientific terms as metaphoric, and dismiss all of the pseudo-science as superstition Fuller became caught up in. It is as if we forget that in the 1820s, 30s and 40s these distinctions between science, philosophy, hypnotism, even religion were being insisted on for the first time as the advocates of science maintained that what they did was different in kind, and was more real, than what philosophers or poets did. While it is true that Fuller's remarkable education and life-long pursuit of knowledge provided her with a far greater familiarity with new and emerging scientific concepts than most of her readers possessed, those concepts were, until a specialization I describe below became paramount, widely discussed in lectures, in Lyceum discussions, and popular periodicals of the day, and they circulated in public discourse in a manner unknown both in the previous "scientific revolution" of the seventeenth century, and in our present information-glutted yet highly specialized society. To some degree, then, in the first half of the

nineteenth century, science was part of the fabric of society, allowing for conversations by non-scientists that combined discoveries in the "hard" sciences, such as electricity, with older notions such as alchemy and newer enthusiasms such as animal magnetism. But by the 1820s, as George Daniels documents in *American Science in the Age of Jackson,* the stage was already set for a contest as "men of science" began to assert the type of claims I have been discussing. Even when the scientists themselves were unsure (and, as it often turned out, incorrect) in their drawing of distinctions between what constituted the "real" knowledge of science and what was old-fashioned, mistaken thinking--mesmerism, for example, was seen by many as *part* of the study of electricity--they insisted that such absolute distinctions did exist. Fuller's use of scientific and pseudo-scientific terms, then, was more than tropic exercise or literary style; it was an engagement with the issues surrounding the continuing scientific revolution of the nineteenth century and its cultural impact.

As a practiced cultural critic, Fuller recognized what many of her contemporaries did not: that even as exciting scientific discoveries were capturing the imagination of the public, even as stories of scientific advances served as tales of everyman heroes and testimonies to the potential of

the human intellect to reassure a young democracy, this very arena in which the public took such interest and such pride was being closed off, taken out of the public domain. Even Fuller had conceded, in her *Dial* piece on Goethe, that "[t]he scientific man may need seclusion from the common affairs of life," but she did so reluctantly, and critically, clearly preferring the domain of the "man of letters" who was "impatient at being set apart" from the public and who would seek "not adorers, but peers." Her essay warns us that the new science seemed to demand "blind worship" of "the short-sighted bystanders" outside its borders (*American Romantic* 84). Fuller, we shall see, would turn neither a blind nor a short-sighted eye, but a sharp one, on any field making such demands.

This border-closing, which was gradual and never total, had, and we could say today still has, many sources. Certainly Fuller's comment above recognizes that what today we might call a Foucauldian policing accounted for some of the movement, as newly minted "scientists"--the term did not exist until 1834[1]--assured themselves dominance in a field which by definition claimed for itself a power greater than previous and competing methodologies and epistemologies, including specimen collecting and botanical sketching by amateur natural historians, instinctive or "common sense"

theorizing about natural causes or physical laws, and theologically orthodox explanations of the physical universe.[2] Technological advances increasingly put experimentation beyond the reach of average citizens, as scientists raced to find ways to understand and measure the new discoveries and to test theories about them. In 1831 Michael Faraday, whose work was familiar to Fuller, was able to perform his most important experiments, those leading to his discovery of electro-magnetic induction, with items as simple as a magnet and a coil of wire. Not fifty years later, in 1879, James Clerk Maxwell died before his theory linking electricity, magnetism, and light, could be tested. Building on Faraday's work, he had suggested that electromagnetism moves in waves that could be generated in the laboratory, and that were their velocity measured, it would be the speed of light. Yet even his prestigious Cavendish laboratory was not capable of detecting measurable waves at any significant distance. By the time Heinrich Hertz demonstrated electromagnetic waves in 1888, the laboratory's importance and authorization were firmly established. Only in the laboratory could one assemble the sophisticated equipment to continue investigations into the physics of electromagnetic, light, and eventually sound waves (leading to the invention of radio) and only highly

trained physicists could perform such experiments. Advances in optical technology were also out-pacing the capabilities of the general public, indeed were racing ahead even of the other sciences necessary to interpret all that this new technology showed. The microscope, already two centuries old in 1810, continued to provide quantities of material previously unimagined, as specimens from around the globe and within the human body were increasingly collected and preserved specifically for microscopic inspection. And while the microscope did make specimens visible to anyone who looked through it, it also marked the beginning of a long line of instruments (including the telescope, and through today, the equipment of photographic, x-ray, and MRI imaging) which, even while serving the public and becoming available for widespread use, remain largely in the hands of scientists and specialists whose work pushes the limits of the technology itself or studies in depth what the technology reveals.[3]

Of course, economic factors also came into play, as newly-organized scientific societies, laboratories, and university departments competed for patrons and funds awarded on the basis of prestige as defined by claims of expertise. And further demarcating the realm of the scientist was the seemingly exponential proliferation of

scientific research being generated and published, which in turn generated further experiments and discoveries. Beginning his scientific career in 1821, Michael Faraday was able to study in detail all of the previous year's theories and experiments concerning electromagnetism. By 1867, the year of Faraday's death, such an exhaustive survey would take one scientist far more than one year, presenting a Sisyphean task, as the current research continued to accumulate. The result was further specialization, the only hope that any kind of "mastery" could be possible.

Such a specialization is a trend that continues to the present day, and which, in its proliferation of separate spheres of knowledge that say less and less to each other or to non-scientific spheres, allows us to expect so little scientific thought in literary and cultural texts such as Fuller's that we overlook its significant presence. That science is not widely recognized in Fuller's text is, in itself, a good indicator of how thoroughly it infuses the text. Readers of Fuller overlook science for several reasons: because it is interwoven with other threads; because the newness of the scientific words and the novelty of the ideas they represented in Fuller's day no longer resonate with today's reader; and because Fuller does not demonstrate any one attitude toward science, nor does she

employ its concepts and terms in any simple way. At times she draws on it as a source of authority, at others she denies its claims, and at others she even uses it against itself. We should not be surprised at the extent to which Fuller complicates the status of science in her work, nor should this complexity prevent us from teasing out revealing examples of science's operations in the text; we are used to finding this sort of complication in Fuller's work and we know enough to look for specific engagements rather than for a grand theory or a fixed position.

We can draw an analogy between Fuller's more familiar metaphysical and her less-recognized scientific strains to demonstrate the way science permeates the text. In the opening of *Woman in the Nineteenth Century,* Romantic idealism is held up for examination alongside competing and overlapping world views: "[T]he student of, and servant to, the universe-spirit" shares the stage with "the philosopher who listens steadily for laws and causes," with "the historian who...records them," and "the man of science dissecting the statements, testing the facts" (248).[4] The tenets of transcendentalism infuse the entire text of *Woman* and inform many of its most radical passages, such as Fuller's comments on gender relations. At the same time, the "lens" of transcendentalism becomes the object of vision in

this passage, and the insights it yields spring as much from gazing at it as through it. The "lens" of science, too, serves two functions--as both an implement for perception and an object to be perceived. Just as recent criticism, by Bell Gale Chevigny, Christina Zwarg, and others, has recognized that reading Fuller simply as an "American Romantic" limits drastically an understanding of her work, so too any oversimplified view of Fuller's engagement with science will leave unread much of Fuller's most significant text. Toward science, as toward transcendentalism, Fuller's attitudes ranged from enthusiasm to suspicion, from affirmation to resistance: "Every fact is impure, but every fact contains in it the juices of life. Every fact is a clod, from which may grow an amaranth or a palm" (*Summer* 148). The "juices" Fuller extracted from science included specific insights and large-scale organizational models, as well as the knowledge that it, like all discourse, produced mutable varieties.

Drawing from eclectic source material, finding value in a wide range of epistemological approaches, Fuller refuses to privilege one approach over another, denying any hierarchy of validity as she quotes and paraphrases dozens of sources. That she does so frequently without citation has frustrated critics for over a century, but what has so often

been called a failing might better be seen as an intentional, political strategy. As she combines concepts from very different fields to present her most important arguments, describing, as in the passage below, sociological trends and gender relations using terms borrowed from electro-magnetism and hypnotism, her text begins to bring into view the many ways representations--of women, of electricity, of men--in common social thought and in her text, determine and disturb power relations:

> The electrical, the magnetic element in Woman has not been fairly brought out at any period. Everything might be expected from it; she has far more of it than Man. This is commonly expressed by saying that her intuitions are more rapid and more correct. You will often see men of high intellect absolutely stupid in regard to the atmospheric changes, the fine invisible links which connect the forms of life around them...
>
> Women who combine this organization with creative genius are very commonly unhappy at present. They see too much to act in conformity with those around them, and their quick impulses seem folly to those who do not discern the motives. This is a usual effect of the apparitions of genius whether in Man or Woman, but it is more frequent with regard to the latter, because a

> harmony, an obvious order and self-restraining decorum, is most expected from her...The world repels them more rudely...
>
> Those who seem overladen with electricity frighten those around them. (*Woman* 302)

Fuller's resistance to specialization in favor of eclectic knowledge is coextant with the development of her politics--and as I shall show, her poetics. As Fuller attends to the power that resides in representation within a field, she also notes the power struggles in the representations among fields. Alert as she is to the ways every representation limits at least as much as it clarifies one's perception, she incorporates as many representations of the world, as many perspectives on it, as she can. Doing so, she develops a philosophy, a politics, and a poetics grounded on "discursive" power in two senses of the word: a wandering from one discipline to another that refuses hierarchical orderings of method in favor of an eclectic inclusiveness, and the more recently-developed meaning referring to discourse as a site of contested identity and power. In effect, Fuller's attention to the former provides a strategy for uncovering and emphasizing the latter.

Notes

1. I discuss the history of the word "scientist" below. Also, see Oliver Sacks, "The Poet of Chemistry." *The New York Review of Books* 4 Nov. 1993: 50-56. In this review of David Knight's Humphry Davy: Science and Power," Sacks makes important points about the specialization of science and the figure of the poet-scientist.

2. This last way of knowing represented by far the strongest rival to the authority of the new science, and the contest played itself out even within the pages of the *Tribune* during Fuller's tenure there. Robert Chambers's anonymously published *Vestiges of the Natural History of Creation,* published in 1844, was reviewed in the March, 1845 *Tribune;* Robert J. Scholnick suggests by Henry James, Sr. See Scholnick, "Chamber's *Vestiges* (1844): The Transmutation of a Subversive Book in America," in *The Versatile Text: Studies in the History of the Book.* Ed. Bill Bell, Simon Eliot, David Finlestein. Penn State UP, forthcoming.

3. For a penetrating discussion of the "desperation that threatened early accounts" of microscopy, see James Elkins, "On visual Desperation and the Bodies of Protozoa." Representations 40 Fall 1992: 33-56.

4. Throughout this work, citations from *Woman in the Nineteenth Century* and *Summer on the Lakes* are from *The Essential Margaret Fuller,* ed. Jeffrey Steele.

CHAPTER TWO

A POETICS OF PERCEPTION

I. Eclecticism and Economies of Representation

Characteristically drawn to rather than turned back by borders such as those thrown up by the "new science," Fuller continued to read scientific texts, and to read side-by-side texts already held in very different regard by nineteenth century men of science, and certainly by scientists today. In doing so, she engaged both the issues of truth claims and of specialization raised by science. Her reading included, for example, the scientific studies of Johann Wolfgang von Goethe, whose botanical writings foreshadowed important aspects of Charles Darwin's discoveries and whose *Theory of Color* pitted, with some success recognized only in this century, an amateur's explanation of light against that of Newton. She notes in her journal and letters a familiarity with both the work of Michael Faraday, whose *Experimental Researches in Electricity* contributed greatly to the development of that field and holds an important place in the history of science, and that of Joseph Philippe Francois Deleuze, a mesmerist much discussed in educated circles in Providence, Rhode Island, where Fuller taught school in

1837. Anticipating pragmatism's complex relationship with science, Fuller embraces the new "truths" Faraday offers without accepting science's assertion of objectivity as identical to truth. She sees important truths also, as I elaborate in Chapter Three, in subjective experiences. Science can show us what is "real" about electricity, but just as real--in our experience--are our perceptions of how electricity works.

Fuller's intertextual method and eclectic style were not merely coincidental to her incorporation of scientific concepts. Reading remarkably diverse texts was central to her work at the *Tribune,* where Horace Greeley hired her to write literary reviews. Reading was a primary activity in her father's educational plan, and her eclecticism presented challenges to his reading lists, evidenced in several letters in which she argues for his permission to read contemporary novels. Eclecticism marked her self-directed studies modeled after the curriculum of Harvard and German universities, studies which included the work of the French philosopher Victor Cousin, who labeled his extreme idealism "eclecticism." For Cousin, universal harmony can be attained through "universal, absolute, and infallible reason," and the goal of man, and of art, as Laura Dassow Walls explains, is "the entire absorption of nature into humanity" (qtd. in

Walls 22). Fuller read both Cousin's critical examination of Locke and his *Introduction to the History of Philosophy,* which she recommended to her brother Richard (LF 3: 86). Walls presents Cousin's influence on the transcendentalists as, in George J. Joyaux's term, a "catalyst" for "the American assimilation of German thought" (Walls 256). Fuller, we know, delved deeply into German thought, and an eclecticism with these multiple roots informed her research on the land and the people--both white and Indian--that supplemented her travel accounts in *Summer on the Lakes.* It provided a remarkably wide cultural spectrum for *Woman in the Nineteenth Century,* and inspired her (lost) history of Rome. As her letters show, Fuller read for a variety of reasons--to increase her understanding, to experience foreign cultures, to contextualize her own observations--but to one overall purpose, to multiply her perspectives on the world. She read to widen her experience beyond the cultural spheres circumscribed for someone of her time and place, spheres defined by gender, race, class, and education. As early as 1832 we see Fuller examining other literatures and cultures almost anthropologically, as she translates and studies the German Idealists, seeing them, especially during the *Dial* years, as a necessary balance to the often stifling social and intellectual atmosphere around her.

I use the word "anthropologically" anachronistically of course, but I do so pointedly. First, I am stressing Fuller's interest in the many American cultures outlined here, and her valuing of them as an anthropologist would today, regardless of their status in the hierarchy constructed by the dominant culture. Second, I am indicating Fuller's reading of these alternate cultures not only within the economy of the dominant culture, but also *as* economies of representation themselves. It is, in fact, their existence as systems in which power is claimed, contested, and exchanged, that identifies them as cultural material to Fuller. For example, gender can be viewed as a simple fact, unchanging, timeless, and existing independent of social and historical context. Alternatively, it can be seen as a contested term among cultures, or as a marker of a culture's conflicts and changes. Fuller saw gender as such an intercultural and intracultural marker, as nearly every page of *Woman in the Nineteenth Century* demonstrates. Her constant spinning of gender terms in *Woman* not only highlights the words' status in tropic mutations, a project I will discuss further in the following chapter, but also sets the text's central word, "woman" against various cultural backgrounds--intellectual, emotional, sexual, mythological, political--that serve to change its

appearance. In the process, each background comes to the foreground. When we see what mythology does with and to representations of gender, for example, we see several things about myth. Fuller draws on the tale of Orpheus to demonstrate that this is not merely a story of "mankind's" challenge to Death, or even simply a Romantic vision of mankind's mastery of Nature, but is, as Jeffrey Steele points out, at its core a specifically male fantasy of a mastery of *woman* so total it can challenge even Death for control of her. Fuller, Steele writes, "knew that Orpheus's great flaw was lack of faith in Euridice. . .Interpreting Orpheus as a symbol of man in general, she suggests that he failed to raise Euridice (woman) up to his level; instead, he left her in the underworld of a half-completed psychological process. Since man has failed to rescue woman, Fuller suggests, it is time to reverse the process and allow woman to rescue man from his own underworld--patriarchal prejudice" (*Essential* xxi-xxii). The reason that, according to Fuller, "the time is come when Euridice is to call for an Orpheus," is, we find, precisely because of the prejudices of traditional representations of gender. Certainly this serves as an illustration of Fuller's discernment of the power residing in representation and the need to wrest control of it, and it serves also as a reading of myth as

one of the economies of representation that I am referring to as "cultures" for Fuller's anthropological analyses. But what I am emphasizing in this illustration is that Fuller not only saw these backgrounds as important cultures to examine, but that she also saw "woman" itself as a culture, against the background of which each of these other cultures, such as myth, could be held. Our understanding of "myth" changes as we see aspects of it illuminated by gender; we see how myths ostensibly concerned with topics "beyond" gender are inflected by the gendered terms in which they are passed down, and how myth's ambiguities leave room for re-interpretation that make them useful again in a different cultural economy, as in Fuller's feminist reading of the myth of Orpheus and Euridice. This is also the work of her book: as much as "woman" is viewed through the various cultural strains I have enumerated, all of these strains are viewed through gender. We can understand Fuller's preference for her original title, which I shall return to below, as it highlighted not "woman"--the semantic marker of other culture's representations--but rather gender, even *genders,* as cultures operating within other cultures. "The Great Lawsuit" suggests an umbrella culture in which the conflicts of gender cultures will be enacted. The phrases "Man versus Men. Woman versus Women" suggest two

cultures, each with its own internal politics of representation, and points to a common culture, gender, within which both the cultures "men" and "women" operate.

Fuller treats gender, then, as a mutable, context-laden, socially constructed and socially-regulated, largely unconsciously-operating, vastly political construction--in a word, a culture. A third reason for my use of the term "anthropologically" above is to propose that to the extent that *any* phenomenon drew Fuller's attention to the politics of representation, it was approached with the same attitude she brought to her readings of gender and the other cultures noted above. And Fuller seems to intuit lessons any good anthropologist discovers. When the culture studied is one of the subset she, the participant-observer, occupies--for example, gender--it can, as in *Woman in the Nineteenth Century,* be analyzed in relation to its counterparts, the cultures defined by class, geography, politics, etc. And when the culture is one foreign to her--Native American, for example--the analysis can, ultimately, teach as much about her own culture(s) as it does about the unfamiliar one. Fuller's observation of the Native Americans camped along the St. Clair River, however limited by unconscious biases obvious to us today, (and of course this is another characteristic her work shares with early anthropological

studies), nevertheless results in insights into their culture so profound as not only to overturn popular white beliefs about the Indians, as I shall take up in the following chapter, but also to revise popular notions of white culture, painting the white settlers and missionaries as those who have "sinned" in corrupting, rather than saving the Indians (*Summer* 181).[1]

Fuller's anthropological insights are illustrated in her language-use not only because words are the writer's medium, but because as often as she finds the material of her study in the frontier, or in social gatherings or rituals, she finds it actually in the lexicon used to describe these phenomena. Her experience with the Indians in fact leads her to turn on its head the standard (white) moral hierarchy of the two cultures. In a manner typical of her developing ability to harness language for the service of her social agendas, she achieves this inversion through semantic ambiguity and a disruption of the reader's habitual assignment of meaning to a common term, in this instance "masses."

> I know that the Europeans who took possession of this country, felt themselves justified by their superior civilization and religious ideas. Had they been truly civilized or Christianized, the conflicts

> which sprang from the collision of the two races, might have been avoided; but this cannot be expected in movements made by masses of men. The mass has never yet been humanized, though the age may develop a human thought. (*Summer* 211-212)

Fuller's use of the word "masses," and the unexpected meaning a reading of this passage reaches as Fuller brings into question exactly who is and who is not civilized and truly Christian, emphasizes that the hierarchy in question is a matter, merely, of representation, not of reality. White culture *represents* Native Americans as undifferentiated and thus in some way uncivilized "masses," and *represents* whites as individuals operating responsibly within an advanced society. When the "masses" of this passage turn out to be the whites, these definitions, are, briefly, reassigned, switched. The "masses" Fuller uses is not, of course, the "masses" of the Marxist vocabulary, which, as it would develop into the next century, would reverse her word's connotation. Fuller's "masses" were still at best "masses of men leading lives of quiet desperation," at worst masses being led blindly by habit to kill a people and destroy a culture. They were *not* the "huddled masses yearning to breathe free," in which the word would be applied as a sympathetic term, and when applied to groups

far more like the Indians than the white settlers would bring the political connotation of the term's mutations full circle. In Fuller's revision of the vocabularies of race and gender, we begin to see how her analyses of hierarchies of *representation* alter her perceptions, and how in turn these affect her poetics. We see the way politics and poetics merge, as she designs (and de-signs) her text to alter her reader's perceptions. Changing white readers' perception of another culture, she changes their perception of their own culture as well. Fuller makes us aware that the terms one chooses to represent others reflect back on one's self metaphorically, as they do literally in her passage.

Science, the readings below will illustrate, joined gender, race, class, literature, and art on Fuller's list of cultures meriting, indeed requiring close analysis as economies of representation, systems in which power is contested and exchanged by the manner in which things are described and seen. As I have noted above, Fuller was aware of science's epistemic claims and the resistance her text presented. Although Fuller's refusal to grant science special "truth" status would be explained away by one common reading attributing to Fuller and Romanticism a posture of retroactive resistance to progress, this resistance should instead be *emphasized,* as a very active engagement with the

claims of that progress. Fuller, I have been suggesting, would resist granting any one culture, including the culture of science, special status, and at the same time she would see no culture as without value. Rather, she would probe the representative functions of scientific concepts and claims, mark the cultural power these concepts and claims held, and separate them from the factual knowledge science could offer. Her texts take an account of science's terms, both within science's own system of exchange, and, through its eclectic synthesis--what today we might even call a multi-cultural inclusiveness--within the other economies of representation in which she invested her hopes for social and political change.

Not surprisingly, the scientific theories and discoveries informing Fuller's work most importantly are marked by associative, border-crossing thinking. For instance, Michael Faraday's *Researches,* which Fuller mentions briefly in her journal, combined concepts from chemistry, magnetism, and electricity, as he saw that all that separated these fields were the false categories set up by men of science: "the forces *termed* chemical affinity and electricity are one and the same" (398; my emphasis). He even went so far as this, as early as 1848:

> I cannot resist throwing forth another view of

> these phenomena which may possibly be the true one. The lines of magnetic force may perhaps be assumed as in some degree resembling the rays of light, heat, &c.; and may find difficulty in passing through bodies, and so be affected by them, as light is affected. (652)

Maxwell's and Hertz's work did not prove these connections--and connections well beyond "in some degree resembling" each other--until 1888. Not only did the individual scientific writings of Faraday, Leibniz, and Goethe constitute eclectic matter, their works also lent themselves easily, in Fuller's mind, to combination with each other and with strongly-held philosophical and political beliefs. Leibniz, whose vast scientific interests are praised in the *Dial,* and whose *Monadology* is cited as an especially valuable contribution to our understanding of the world, extracted the value from the widest range of sources, believing, as Nicholas Jolley quotes him in a 1714 letter, that "the majority of the philosophical sects are right in the greater part of what they affirm, but not so much in what they deny" (2-3). Physics and metaphysics consistently share the page in his works, from the text of the *Monadology* to his explanation of the calculus. Goethe's wide-ranging writings on scientific topics, which provide real insights into matters of

perception and subjectivity, refuse to acknowledge any of the categories set up by official science. Faraday's book on electricity gave Fuller a new notion of the relatedness of objects and bodies, while affirming Goethe's model of an organically unified world, in which all objects are invisibly linked.

Throughout *Woman in the Nineteenth Century,* Fuller employed terms from these texts to illustrate the reverberating consequences of actions, and the consequences of always-inaccurate, imposed categorical separation, throughout cultures as well as among fields of study and physical bodies. When she combined ideas from Faraday's research on electricity with Leibnizian concepts of harmonious souls, she brought together newer and older material in a fashion Leibniz and Goethe would have appreciated, discussing together physics, souls, and societies. Referring to an article from the *New York Pathfinder,* in which the unnamed author asserts that Woman, viewed "from the soul," is "a harmonizer" gifted with "inspiring and inspired apprehensiveness," Fuller writes:

> This view being identical with what I have before attempted to indicate, as to her superior susceptibility to magnetic or electric influence. . . The especial genius of Woman I believe to be electrical

> in movement, intuitive in function, spiritual in tendency. (*Woman* 309)

Faraday's "electrical currents," which he describes as "lines of force...as *physical* lines of power," become in Fuller's text "the fine invisible links which connect the forms of life around them, . . .seize[d] and delineate[d] . . .with unerring discrimination" by women, when the "electrical, the magnetic element" is brought out in them.

II. Leibniz's *Monadology*

In her preface to *Woman in the Nineteenth Century*, Fuller states a preference for the original title she had given the earlier version of the piece, published in the *Dial* two years previously. The earlier title, "The Great Lawsuit.--Man versus Men; Woman versus Women," she prefers, "partly for the reason others do not like it,--that is, that it requires some thought to see what it means, and might thus prepare the reader," and because "it offers a larger scope, and is, in that way, more just to my desire. I meant by that title to intimate the fact that...the action of prejudices and passions...is continually obstructing the holy work that is to make the earth a part of heaven" (13). Her goals for this piece, then, are to encourage the reader to engage her or his own powers of perception to understand

the theme, to offer a wider scope to the reader, and to make the reader aware of the "obstructions" that affect perception.

The centrality of perception as a driving force for Fuller becomes most apparent when it is recognized as the major structuring element of *Woman in the Nineteenth Century* as a whole. Of all of the scientific concepts Fuller drew on to understand and discuss perception, Leibniz's *Monadology* deserves special attention here, as it takes perception as its subject matter. Indeed, the search for an organizing principle in *Woman* will yield no fully satisfying rhetorical format, artistic design, or philosophical position unless perception, as associated with the *Monadology,* is seen as a synthesizing concept. Many critics, Perry Miller most (in)famously, have reached the conclusion that because they saw no coherent structure in Fuller's writing, none existed. The wanderings of the text simply marked, her early editors thought, careless writing or thinking. Other readers have seen the seemingly arbitrarily arranged, highly associative passages as typical of a type of nineteenth-century prose related to the styles of letters, diaries, and religious testimonies. Some fruitful readings, however, do begin to describe structuring principles. Marie Urbanski provides the most thorough analysis of the text's structure, identifying

a "dual nature": that of a sermon, with an *applicatio, peroration,* etc.; and that of a Romantic piece, patterned on "writing techniques derived from transcendentalism" in which, as Urbanski quotes Coleridge: "The organic form is innate; it shapes, as it develops itself from within" (167). Indeed, Fuller's poetics is deeply rooted in organicism, but her meanings become clearer and more distinct when Leibniz's *Monadology* is read, along with Goethe, as a source.

Questions about perception, about how it occurs and how it is communicated in societies, through history, in art, and in the individual human mind, are the questions around which Fuller's texts take shape.[2] The understanding of Fuller's "poetics of perception" that I am delineating here *necessarily* centers on science, for two reasons. First, science offered Fuller new means of perceiving. At the same time, however, as I've suggested above, Fuller was disturbed that the "scientific method" makes epistemic assertions different from the claims of other fields and methodologies, purporting that objectivity presents the only access to the Real and the True, and that science provides this access. In intent, science offers specific means of perception, something methods of historical research offer also, but what science uncovers is seen as *new,* as the current, present reality, not merely the hidden past. Its newness

combines with its claim of objectivity, denoting an assertion of pure perception, of validity, that history can never quite match. While Fuller refused this claim of privileged authority for science as she did for history,[2] the claim nevertheless remains a part of the text of science, and so Fuller, concerned as she is with perception, must explore this claim.

Fuller's frequent and complex use of the word "unit" marks the interweaving of several threads in her text, emphasizing the layering she performs in her quest for fuller perception. She uses the word "unit" several times in *Woman in the Nineteenth Century* in discussions of gender relations, and its relation to perception emerges in some of the most important passages in *Summer on the Lakes*. At one level, there is a relationship between her use of this term and her understanding of the role of cultural symbol-making. Relevant here is Douglas Miller's observation, in his discussion of Goethe's understanding of the symbolic, that the word "symbol" is related to the Greek verb *symballein,* "to unite" (Goethe xvii). Symbols unite thoughts, linking, *through representation,* various occurrences of, different versions of, a phenomenon or experience. Fuller, following Goethe, was wary of a unifying practice, in language or in science, that erased the individual unit. Symbols, Goethe's

text reminded Fuller, must not be confused with the individual subjects or ideas they unite:

> We are insufficiently aware that a language is, in fact, merely symbolic, merely figurative, never a direct expression of the objective world, but only a reflection of it. . . .
>
> How difficult it is. . . to refrain from replacing the thing with its sign, to keep the object alive before us instead of killing it with the word. (277)

I mean, by the term "cultural symbol-making," above to distinguish this phenomenon from a more general sense of the symbolic. Symbols were, of course, an essential feature of Fuller's belief-system and of the transcendentalist world view, central to the capacity of romantic organicism to encompass not only the whole physical world, but the spiritual universe as well. Where natural facts are signs of spiritual facts, the symbolic character of natural facts provides access to truth. As with all systems of symbols, this is a case of the specific--observable natural phenomena--marking the way to the more abstract--the spiritual realm so difficult to describe, or even to experience in any other way. Indeed, one hope of science and mathematics is to invent formulas with which to express

abstractions.

But while Thoreau's beans or Fuller's lakes represent spiritual facts, their physicality keeps us from ever confusing them with their metaphysical counterparts; the sublime remains always under-represented. Natural facts are always insufficient in their symbolic function, and this insufficiency is what marks them so clearly *as* symbols. In contrast, the cultural symbolism Fuller, and Goethe before her, fear, allows the sign to become an obstacle, blocking access to the very truth from which it was derived. Symbols such as "woman," or "Indian" *seem* sufficient to express that which they signify, and so lose their identity as symbols.

In my readings of Fuller's use of the word "unit," it will become clear that the units Fuller wants women to become must *resist* being made into such cultural signs, symbols linking various limiting representations of women--mythic, religious, or sexual. Finally, adept enough in the field of language to use its often-harmful symbolic function productively, Fuller employs the *term* "unit" itself as a symbol in her text, to represent her overall project of separating the individual from the mass, both the actual mass of humanity and the mass that is the representation of any cultural category. Thus the term "unit" circulates within the texts of *Woman in the Nineteenth Century* and

Summer on the Lakes to link Fuller's various analyses of the different representations of "woman" (and "Indian"), and by so linking to mark, to symbolize, her overall project of not only rejecting each of these representations, but of resisting the power held by any and all representations. On another level, perhaps the one most available to readers in recent years, we hear the political-democratic connotations of her term "unit," and its echoing of Romanticism's call for individuality. For Fuller's contemporaries, these associations would have coexisted with a third layer, made up of equally strong echoes of scientific ideas, particularly theories of atoms and other units of matter. The importance of Fuller's "unit" can thus be traced back from nineteenth-century natural science's focus on the specimen, through Transcendentalism's sublime and Goethe's writings, to Leibniz's monad.

The monad, with its several definitions of unit, unity, one, and God, is relevant in several ways to Fuller's concern with perception and the poetics that interest inspires. A careful reading of the *Monadology* reveals several characteristics that associate, even equate, these words--unit, one, God--with perception. Leibniz defines a monad as distinct, even as it is always infinitely related to every other monad; furthermore, it is simultaneously

isolated and all-inclusive; finally, it is impenetrable yet mutable. These related characteristics need to be understood in order to grasp the Leibnizian concepts associated, for Fuller, and for the other scientists she also read, with the word "units." Leibniz's monad is *distinct* in two senses of the word. It is unique: "[i]t is ever necessary for each monad to be different from every other" (463). And it is separated from all other monads: "Monads have no windows through which anything could enter or depart. So neither substance nor attribute can enter a monad from without" (463). And yet this closed entity "always expresses within itself its relations to all others"(463). In a world of entirely unique units with absolutely no communication, the definition of "relations" will be new and consequential, as it provides a template for Fuller's redefinition of the relations of women and men.

This new definition takes shape from the seeming contradictions Leibniz uses to define the monad. For the relations of monads to each other is relatively easy to understand only when the ideal monad, the "pre-established harmony," the infinite, is in place, and when the *primary* characteristic of the monad is explained as "perception." Each monad has a perception of the infinite, harmonious, all-inclusive universe. These are infinitely unique

perceptions (as many as there are monads in the universe) but they all take as their object the ideal. The relations, then, between monads, while based on neither similarity nor influence, are based on two other characteristics. First, a shared activity occurs, perceiving the ideal. It occurs "between" monads only if we picture them in a circle or sphere around a central ideal monad, each representing it--this is a monad's activity--from one perspective. Since each monad perceives the ideal, (or, strictly speaking, each monad *is,* only, perceiving) each does in fact perceive all of the others in perceiving the ideal, since the ideal monad is all-inclusive of every monad in the universe. Thus the second characteristic of the relations among monads: mutual perception. Perception, then, as a verb and as a noun, connects everything, and by itself represents the entire universe: "Now this mutual connection or accommodation of all created things to each other and of each to all the rest causes each simple substance to have relations which express all the others and consequently to be a perpetual living mirror of the universe"(648).

I shall return to the meaning of "accommodation" among monads, as Leibniz's particular meaning of this word describes what will become a central aspect of Fuller's feminist project in *Woman in the Nineteenth Century*. But one

further characteristic of the monad needs to be considered at this point. Even while a monad is impenetrable and indivisible, it changes. "It follows from what I have said," Leibniz writes, "that the natural changes in monads come from an *internal principle,* since an external cause could not influence their interior" and the change cannot be attributed to a splitting or reduction of the monad (643). This change is "[t]he passing state which enfolds and represents a multitude in unity or in the simple substance is merely what is called perception"(649). The internal principle of the monad thus operates solely to bring about new perceptions. A monad not only has, but *is* a force for perception. Fuller's "unit" conjures this force, and, as I discuss below, she encourages this force in women as a crucial step in her feminist reorganization of male/female relationships.

Leibniz's thought permeates Romantic philosophy, his ideas were taken up with enthusiasm by Fuller and the transcendentalists, and he is held up as a model of intellect and scholarship in the piece on German literature in Fuller's January 1841 *Dial*. His general influence is easy to see in Fuller's work, yet her engagement of concepts from the *Monadology* specifically, which, are essential to her poetics, are routinely overlooked. In Fuller's philosophical

musings around man's quest for truth, such as this one from the opening of *Woman in the Nineteenth Century,* it is no surprise to find Leibnizian ideas:

> the artist whose hand, drawn by a preexistent harmony to a certain medium, moulds it to forms of life more highly and completely organized than are seen elsewhere, and by carrying out the intention of nature, reveals her meaning to those who are not yet wise enough to divine it; the philosopher who listens steadily for laws and cases, and from those obvious infers those yet unknown.(*Woman* 248)

In a standard reading, whether or not we heard Leibniz explicitly echoed in Fuller's "preexistent harmony," we would recognize this passage's debt to his ideas as they have shaped the Romantic background. And even if we were more apt to discern Emerson's voice in passages such as these, and behind that, Goethe's, we could fairly easily draw out and give a nod to Leibniz here, noting the concepts from his letters and works most obviously taken up by the Romantics: the reference to harmony, the assumption of an intention of nature we might strive to perceive, questions about causes and the possibilities and limits of science. All of these, of course, are ubiquitous themes in Fuller's work, and we could see their ties to Leibniz fairly easily,

but perhaps without much consequence. They seem the somewhat standard material of transcendentalist essays, although it is taking longer for them to be mined in Fuller as they long have been in Emerson. Linking them back to Leibniz, *without* specific attention to the *Monadology*, seems to offer little more than a refresher on a particular portion of the history of these ideas. Associated with these enormously important but hardly uniquely-Fuller themes, Leibniz, in this view, fades into the background again for us.

But something happens, Fuller's unique engagement with Romanticism emerges, when the monad is read as central to all of these Leibnizian concepts. For Fuller, Leibniz, the monad, and the concept of perception as the essence of everything, are never only in the background. Just as much as in the passage above, Leibniz is everywhere in the following, also from *Woman in the Nineteenth Century*, describing marriage relations:

> If any individual live too much in relations, so that he becomes a stranger to the resources of his own nature, he falls, after a while, into a distraction, or imbecility, from which he can only be cured by a time of isolation, which gives the renovating fountains time to rise up. With a society it is the same. Many minds, deprived of the traditionary or instinctive means of

> passing a cheerful existence, must find help in self-impulse, or perish. It is therefore that, while any elevation, in the view of union, is to be hailed with joy, we shall not decline celibacy as the great fact of time. . . All tends to illustrate the thought of a wise contemporary. Union is only possible to those who are units. To be fit for relations in time, souls, whether of Man or Woman, must be able to do without them in the spirit.
>
> It is therefore that I would have Woman lay aside all thought, such as she habitually cherishes, of being taught and led by men. (*Woman* 312)

The associated terms "union" and "unit" will stand out to any reader of *Woman*, as Fuller repeats the terms, and the idea presented here, several times. "We must have units before we can have union," she quotes "one of the ripe thinkers of the times" (101), using these terms to argue for a new vision of marriage and for woman's place in society in general. When women are allowed "a free development of any powers with which they may be gifted by nature," as Goethe aims to do, she writes, "[t]hey are units, addressed as souls" (*Woman* 317).

Thus the importance of Fuller's "unit" begins to emerge as we hear in the famous passage above a call to self-

reliance and associate it easily with Emerson, and move, fruitfully, to many strands of common association. But when we hear Leibniz's monadic relations, other themes announce themselves. The "resources of [one's] own nature" become clearly equated with "self-impulse," and that essential force is perception. Read *without* the *Monadology,* the term "self-impulse," clearly central to the passage, remains vague, tied to notions of individuality and identity, but hardly a concept vivid enough to challenge, rhetorically *or* experientially, *another* impulse it suggests. Because we encounter "self-impulse" as a self-reflexive and somewhat indefinite term, as we continue to read we look for something to hook it to, to anchor its meaning. In the next sentence we find the suggestion of celibacy. We link self-impulse to this because the sense and syntax of the passage draw the connection--self-impulse is presented as being strengthened by celibacy. But we make the link also because we experience certain reverberations of the word "impulse" in the word "celibacy." Celibacy explicitly presents the context of sexual desire, so "*self*-impulse" becomes associated with the implicitly conjured "*sexual*-impulse." But the difference between the terms makes all the difference in this reading. Self-impulse is what will keep us from perishing, the implied opposition emphasizing the

deadly consequences of unleashed sexual-impulse. We seem to have a choice: lose ourselves in sex or find ourselves without any. On the other hand, perhaps Fuller is playing these words and associations off each other to allow for the idea that the two impulses *are* related, and that perhaps sexual-impulse, redefined as "a resource of [a woman's] own nature" rather than a phenomenon in which she is "led by men," could be not opposed to, but rather correlative to, even constitutive of, a powerful self-impulse. Sexual-impulse, in this reading, might be another version of the perceptive force that springs from and strengthens the self.

While the good news in either of these readings is Fuller's suggestion that women must discover and practice their individuality before entering into marriage, we are still missing in the passage an important intertextual link. For this is *not* simply an injunction for women to get to know themselves, or to strengthen their will-power, before marrying, and the suggestion to withdraw from relations is not made simply to give these tasks attention. The call here is to a larger task, with larger stakes.

The "distraction" or "imbecility" living too much in relations can produce are not the results simply of losing a grasp of one's self-will, or self-control, or even inner strength. They are the consequences of living in an

unnatural state of perception, one which contradicts the descriptions of monadic relations outlined by Leibniz. The distracted, endangered individual Fuller describes is one who has foregone attention to her own perception that *is* "the resource of her own nature," and who has allowed others' perceptions to influence her. She loses her self when she consists of others' representations, as a monad has "no windows" to outside influence, and, most importantly, is defined by its perceptive force. "Woman, self-centered, would never," Fuller writes, "be absorbed by any relation" (*Woman* 347). In losing her own perspective, her own act of perceiving, she loses not only her vision of her self, but the self that vision constitutes. "[B]eing taught and led by men" threatens not just self-image and self-knowledge, but self. This Leibnizian reading helps explain the emphatic quality of Fuller's later statement, "I have urged upon the sex self-subsistence in its *two* forms of self-reliance and self-impulse, because I believe them to be the needed means of the present juncture" (*Woman* 346; my emphasis). The self-impulse of subjective perception is needed by *women,* Fuller suggests because the attempt to confront the world through a perception "led by men" leads to self-annihilation, or imbecility. One wonders if Fuller had in mind the etymology of the term "imbecile." In addition to "mentally weak," her

passage evokes the word's earlier meanings of "without a stick or staff" and "without support." She applies the term specifically to women who lean too heavily on men's perceptions and then find themselves without support--either by those men or in their own experiences--for their own perceptions and for their own identities. These identities are belittled or denied, one could say, because of woman's most basic lack, the phallic "stick" that is the marker of patriarchal identity. The imbecility Fuller describes could be of two orders: one may spend her life in pursuits that are perceived as "imbecile" in the new context Fuller provides in *Woman in the Nineteenth Century,* or one may in fact be driven insane by the colliding of the patriarchal world-view with her own conflicting subjective experience of the world. The monad "shares" perception with others only in perceiving the same universe, *not* in "accommodating" to others' perceptions of it. Fuller's text reads the "accommodation" Leibniz describes as a co-inhabiting of the individual monad with others in a universe wide enough to accommodate all in their infinite variety. This "accommodation" expresses not only a dwelling but also an *indwelling,* as Fuller emphasizes that it is an individual's inner force of perception, her "self-impulse," that accommodates her to be co-habitant with, not inhabited by,

men.

III. Perception and Language

It is no mere coincidence that in nearly all of the Fuller passages I've cited thus far in which scientific terms appear, the language carries us from science to gender. As these new scientific concepts, such as those Faraday begins to make visible through the many diagrams in *Experimental Researches in Electricity,* provide the images and the terms through which Fuller identifies and expresses complex questions of relations, the newness of the concepts highlights their discursive processes: the language that is applied to define them, the various ways the new terms are applied in further definitions, and the ways in which knowledge *becomes* in the process of description. Fuller's attention to the cultural impact of the new concepts and models would have been nourished by contemporary conflicts over new scientific terminology. One example is the very term "scientist," which had its conscious, calculated, and well-documented inception during Fuller's lifetime. Sydney Ross tracks the persistence of William Whewell (1794-1866) in establishing the word (other possibilities considered included "sciencer," sciencist," and "scientiate,") through a long process of debate carried out in correspondence and

journal publications--including *The Quarterly Review,* where the word first appeared, and *Blackwood's Magazine,* regular reading for Fuller's circle when the word was discussed there in 1840. And Faraday, one of Whewell's correspondents in that debate, consulted a variety of scholars in determining the terminology for electrochemistry. These words--"electrode," "electrolyte," "anode,"--and the word "scientist," Ross demonstrates, were debated in philosophical, social, and aesthetic terms, as the participants recognized and exploited the relationship between description, perception, and what counts as knowledge. As this usually-unconscious language process and the hidden relationship it implies become visible to Fuller and available to her as pattern for a writing strategy, they are echoed in her revision and renewal of gender terms, her application of new terms to define gender characteristics, and her hope of changing what gender is by redefining it. For example, she describes male and female energy "perpetually passing into one another," producing combinations and reactions beyond the categories words such as "masculine" and "feminine" describe. Electricity provides a new model of a relationship in which the defining elements--"force" or "positive" or "negative"--change and cross permeable borders. These newly defined currents of

influence and exchange offer an entirely new possibility for gender definitions. Scientific language and gender language do not merely inform each other; they actually merge in a discursive interaction stronger than mere influence.

A familiarity with this self-conscious and intentional language-development animated, then, a discursive attentiveness in Fuller, an attentiveness perhaps lacking in today's reader. Fuller's most radical incorporation of a scientific concept is completely lost on a modern reader unable to hear the implications of Fuller's use of the word "electricity," as it encompasses her understanding of the word "energy." Electricity was, for a time, a force without a word to describe it. While "energy" was a good start, evoking many of electricity's attributes, its meaning had to be revised by scientists in order for it to serve as a more accurate description of this newly-understood power. Indeed, electricity, as it was being discovered and described in Fuller's lifetime, made "energy" a new word. Until electricity became a commonly understood phenomenon, "energy" referred to "vital energy," a corporeal force, or the level of that force, as it was believed to be controlled by bodily humours and other mechanisms affecting physical, sexual, and spiritual health. One had or did not have it in sufficient quantity. The really new, radical, essential

change that the science of electricity insisted upon, was that "energy" be understood not as an attainable or dissipative power, but as a constant force always present everywhere, whether it is being "used" or not. As a character in Victoria Glendinning's recent novel, *Electricity*, struggles to explain this new concept to a Victorian counterpart, energy is "[n]ot just a person working hard, but what it is that powers the animate and the inanimate"(81). We must understand electricity, Faraday explains, as energy, and an understanding of energy requires this new conception of power.

When Fuller repeatedly applies the term "electrical" to woman, she is assigning to women this constant, storable, real, limitless power. This may or may not in Fuller's mind be simply a metaphoric description of women's power, but it is a very *real* power that is being suggested as the analog to women's power. While today we may hear only the magical or pseudo-scientific resonances of "electricity," or while we may find it unsurprising that a force of nature be assigned to women, Fuller was in fact making some radical claims for women. First, this new energy, defined by scientists, was by definition "scientific," (already an arena of male authority and access,) not merely "natural," (the traditional site of female power). Fuller counters the

traditional notion of women's "natural" passions threatening to overwhelm their reason, presenting instead this disruptive quality men fear as a scientific, rationally-understandable force. On the one hand this can be seen as a reassurance to men that science offers an opportunity to understand and perhaps control women's passion; "scientific scrutiny" has often proven, as Ludmilla Jordanova writes, "a prelude to control"(42). On the other hand, Fuller's passage conceptualize's science as beneficial to women: representing their "natural passions" as (newly scientific) electricity, Fuller breaks the boundary between the scientific and the "natural," and the gender boundary it helps define. The least rational part of woman is claimed as a scientific phenomenon.

The confusion this move generates disrupts the male control science would seem to offer, by making obvious that gender is always defined by a multiplicity of cultural pressures. When Fuller can so easily collapse the science/nature dichotomy through figurative language and an intertextual overlaying of the scientific, pseudo-scientific or magical,. and sociological, we are reminded that science is, again in Jordanova's words, "but one route by which the world was rendered tame"(42).

Fuller insists that science is a powerful practice, as

influential as any, and deployable by women as well as by men. Electricity, in the many ways it was understood, from hypnotic force to sexual attraction, spiritual sensation, and Faraday's lines of current, was the most exciting power known at that time, on which would become focused many of the public's and scientists' most intense hopes and fears. Attributing it to women, Fuller emphasizes the force its newer, scientific meaning gives it. This *new* energy, when possessed by women, produces connections very different from ties of motherhood or of affection. *This* energy becomes more powerful as it becomes better understood, as it is seen properly, as old description and explanations are finally retired for new ones born of observation rather than tradition. While electricity is ultimately defined as neither male or female, defying man-made categories as it is said to be passing back and forth between individual men and women, Fuller does claim that "woman has more of it," thus emphasizing her challenge to normative gender definitions, and articulating that challenge in the terms of science. She provides a marker here, then, of her path linking science and gender. Observing the changes of science's term, "energy," she notes, and even exploits, the mutability of words and the power they hold in discourse. The power of *this* "energy" can only be seen as discursive power--neither

the linguistic artifact nor the physical force it defines have changed at all, yet the word now carries a different weight and its use causes different responses.

Fuller embeds the recent history of this word into the text of *Woman in the Nineteenth Century,* a text in which the mutability of words, their meanings, and their socio-cultural circulation, are exploited as resistance to rigid gender definitions and patriarchal gender systems. By bringing the lessons of one discourse, science, to bear on the situation of the other, gender, Fuller marks her attention to discursive power, challenging the reader's perceptions of the physical world, of gender relations, and of language.

Kindled from a Leibnizian concept of perception, and fanned by a resultant curiosity in scientific inquiry into perceptual processes, Fuller's text exhibits, as I shall illustrate in Chapter Two, a proto-modernist aesthetic which emphasizes perceptual and perspectival fragmentation and relativity. The contests of cultural authority--scientific and otherwise--represented in this aesthetic, played themselves out, Fuller saw, on the field of language. This recognition, I shall demonstrate in Chapter Three, propelled Fuller into an examination of language's operation within

discourse. Christina Zwarg proposes that Fuller's textual "diversions" exhibit a multiplicity and creativity stemming from an impulse related to that behind recent feminist engagements with poststructural theories of discourse, a recognition that representation not only skews knowledge but is in fact the material of knowledge--that, in other words, perception is knowledge. Zwarg sees Fuller's cultural critique as driven by her increasingly intense development of a feminist theory of reading. While many of her insights about Fuller's reading practice accord with my own, Zwarg limits her argument to Fuller's reading as the source of her radical engagement with alterity and her attention to processes of perception. This schema is problematic even when reading becomes, in Zwarg's thesis, more than a practice confined to the interpretation of a text, but rather a process that can also be applied to the study of the world. (I suspect Zwarg herself is aware of this slide from the presentation of reading as a textual practice to its employment as a metaphor. Perhaps her own poststructuralist view of a "text" that encompasses the world allows her to leave this distinction unmarked as she presents Fuller as a proto-poststructuralist.)

I agree with Zwarg that Fuller's attitudes toward texts and language anticipate poststructuralist ideas of

subjectivity, gender, agency, and discourse. Yet Zwarg's explanation of the development of Fuller's cultural critique does not satisfy, as it inverts the direction of the evolution of Fuller's thought, positing her attention to the process of perception as an outcome of her vigilant reading. And so, even while I recognize that Zwarg's "reading" can be read as a metaphor for a process of perception, the distinction I make here is not simply a semantic preference. It is essential to recognize that for Fuller, the impetus for these "poststructural" attitudes springs from a fascination with perception itself, and that this fascination carries over into her reading as well as into other activities, such as conversation, letter writing, and political action. For Zwarg, a theoretically informed critic in our post-Derridean moment, the move is reversed, from a poststructural understanding of language and text to an accordant view of the world. For Fuller, (as will become increasingly apparent in Chapter Three, on optics,) an increasing engagement with alterity, prompted by an increasing understanding of the processes of perception, led eventually to a poetics, and to an attitude toward language, that position her as a proto-modernist, and even postmodernist, or to use the term reflecting linguistic emphasis, poststructuralist.

Perception *is* knowledge for Fuller, but to her this means that there is a possibility, as long as we can perceive more carefully, to change the world as we know it. We might perceive anew gender, race, and identity, and so know ourselves differently. As our perceptions, like monads, constitute a world, we can *know* (as a transitive verb), through the exchange of discourse, a better world, perhaps even Leibniz's "best of all possible worlds." As evident in the passage on marriage relations explicated above, a reading of Fuller's work within a critical approach that builds from the theme of Leibnizian perception reveals more than does Zwarg's focus on "the play of reading" about Fuller's specific challenges to gender definitions, as well as about her politics and poetics in general. Ultimately, it is monadic relations, when combined by Fuller with other scientific and philosophical concepts, that allow her to imagine the very notions of subjectivity, gender, and even language that identify her as a proto-modernist, or proto-postmodernist.[3]

The emphasis on processes of perception and the tendency toward eclecticism and intertextuality that science fostered in Fuller's writing resulted in a text that allows for, provides for, and requires of the reader, extraordinary attention to subjective experience. At the same time, many

of the text's strongest arguments are grounded by and in ideas from science, a discipline, then, as now, insisting on the principle of objectivity. As the following discussion of optics will illustrate, Fuller's reconciliation of this tension grows out of Goethe's struggle in his *Theory of Color*, which employs the scientific method of experimentation, but with a completely subjective sample and analysis. Science and subjectivity create a synergy that animates Fuller's writing at every level. This energy directs the seemingly erratic movements of her text, opens a universe of source material for her arguments, and allows her to challenge commonly held biases. As I have also noted, and as I shall take up further, this synergy also drove Fuller to consider what constitutes language itself, and how words, from the smallest, ephemeral utterance to the grandest mythologized Idea, operate in texts, conversations, cultures, and minds.

Notes

1. Lucy Maddox's reading of Fuller on the Indians, while accurate on some of the political contexts of Fuller's writing, is blind to the evidence of Fuller's radical, anthropological revision.

2. Christina Zwarg's description of Fuller's theory of reading touches on some of these issues, and with some keen insights. While Fuller's reading of science does perform many of the same functions that Zwarg argues her readings of literature and history do, the text of science is different in kind from those of literature and history, and will therefore demand a different and more complex kind of reading.

3. Fuller's mockery of the certainty of "men of science"--or rather her claim that "Nature" and "history" "jeer" at this vanity--appears throughout her writings, and is particularly evident in the "Minerva and Muse" passage in *Woman in the Nineteenth Century*. Of course part of my point, above, is that it is the certainty, not the actual accomplishments, of science that she mocks.

4. Fuller recognized, as Zwarg's reading-based explanation emphasizes, that all knowledge is contestable. But Fuller's comparison of "frames" led her to conclusions about the construction of knowledge even beyond those Zwarg identifies. Fuller, claims Zwarg, understood knowledge to be a complex result of the formation of habits of mind through the dynamic operations of conversation, translation, and communication. But Fuller's fascination with how information is processed by the individual mind is left out of Zwarg's model.

CHAPTER THREE

FULLER'S VISION

Flaxman

We deemed the secret lost, the spirit gone,
Which spake in Greek simplicity of thought,
And in the forms of gods and heroes wrought
Eternal beauty from the sculptured stone--
A higher charm than modern culture won,
With all the wealth of metaphysic lore,
Gifted to analyze, dissect, explore.
A many-colored light flows from our sun;
Art,'neath its beams, a motley thread has spun;
The pris[m] modifies the perfect day;
But thou hast known such mediums to shun,
And cast once more on life a pure white ray.
Absorbed in the creations of thy mind,
Forgetting daily self, my truest self I find.
(Life Without 371)[1]

On February 21, 1841, Margaret Fuller wrote the following short letter to William Henry Channing:

> I have been reading, most of the day, the "Farbenlehre." [Goethe's *Theory of Color,* published in 1810.] The facts interest me only in their mystical significance. As of the colors demanding one another in the chromatic circle, each demanding its opposite, and the eye making the opposite of that it once possessed. And of nature only giving the tints pure in the inferior natures, subduing and breaking them as she ascends. Of the cochineal making mordants to fix its dye on the vegetables where it nestles. Of the plants which, though they grow in the dark, only make long shoots, and refuse to seek their flower.
>
> There was a time when one such fact would have made my day brilliant with thought. But now I seek the divine rather in Love than in law. (LF 2: 204)

All evidence suggests that we should not believe Fuller's claim in this last paragraph. She has by no means adopted an attitude in which nothing short of Love (with a capital L) can inspire her, and in which optical experiments

and scientific laws fail to excite her mind. On the contrary, the books and columns she had yet to write would reveal that the "facts" of science were among the most important foundations of her thought and her text. When she wrote this letter, Fuller was, as Joan Von Mehren points out, coming to the end of a winter of poor health and an almost programmatic "spiritual dedication" (134), an experience which reinforced in her mind the dichotomy represented in her letter by the words "Love" and "law." Only three days earlier she had written to Channing, reiterating the dichotomy, "Once I was almost all intellect; now I am almost all feeling." She already knew that for her this would not be a permanent condition. "This cannot last long," she continued, "I shall burn to ashes if all this smoulders here much longer." And then, as only she could say, "I must die if I do not burst forth in genius or heroism." By April, a letter to Channing shows her coming out of her reverie:

> I begin to revive, though I have had too much fatigue lately and my head still aches and aches. You are right to suppose I have been ill, in the month of January I lost too much blood in one of my nervous attacks and have been somewhat too ethereal and too pensive ever since. (LF 2: 206)

These letters provide evidence of how carefully Fuller read Goethe's scientific studies, and, despite her denial, they begin my argument that "the time when one such fact" inspired Fuller lasted throughout her lifetime, as demonstrated by the development of her work. I am also suggesting that the distinction, perhaps even a hierarchy, Fuller implies in the first letter above, of Love over law, is--in her own thinking and writing--a false one. Indeed, her texts present frequent suggestions that knowledge of "the divine," which is also knowledge of the world and humanity, must be sought in *both* the realms of Love--the emotional, spiritual, non-rational; *and* in the purview of law--the scientific and rational.[2]

In fact there was a science familiar to Fuller, eighteenth-century botany, which provided a transitional vocabulary linking the two elements of the Love/law dichotomy. Carolus Linnaeus (1707-1778), the Swedish naturalist who gave us the concepts and terms *class, order, genus, species,* and *varieties,* is remembered as the originator of rational classification, a foundation of modern science. Yet Linnaean botany, as presented in both Linnaeus's 1735 summary, *Systema Naturae,* and in its widely popularized form, was a strange hybrid of old and New science, bringing the two together more vividly than any

other natural history or fledgling science. Linnaeus's classificatory system straddled both old and new, striving for the rational systemization of the latter within the terms and perceptions of the former. Since the reproductive elements of some flowers physically resembled human sexual organs, Linnaeus grouped plants as male and female, and described their reproduction as sexual relations between bed-fellows. Illustrative of botany's hybrid roots is the title of Erasmus Darwin's poem inspired by Linnaean laws of plant classification, "The Loves of the Plants." In Darwin's verse, plants "woo and win their vegetable Loves," and it is not only botanic science, but a "Botanic muse" that leads "the Swedish sage" to explore nature's "secret haunts" (ll. 10, 31-33). The anthropomorphism of Darwin's plant relations, his notion that Linnaeus's greatest scientific contribution (the idea of scientific classification, which outlived Linnaeus's own particular, flawed application) was the product of a muse, and the Linnaean reliance on analogy drawn from visible external characteristics were all remnants of the kind of practice the New Science defined itself against.

This older botany not only sexualized the meaning of Love, with its descriptions of plants as lovers, husbands, and wives, but it also sexualized "law," since the laws of

classification were defined by such (imposed) sexual categories. As science in general developed as a discipline, botanical science would move away from such non-empirical classificatory guidelines. Botany would, by the late nineteenth century, become distinguishable from its older sister, more and more termed "horticulture," which preserved a respect for "the language of flowers," as well as a sense of aesthetic and even moral characteristics of plants. The "factual" and empirical science of botany would separate itself more clearly from this increasingly feminized horticulture.[3] But in the first part of the nineteenth century, botany still rode the cusp of old and New science, and brought together passion and fact. In the letters above and in her essays, Fuller's prose creates a space in which not only the hierarchy of, but even the distinction between Love and law, the non-rational and the scientific, disappear.

Reading Fuller's work within the contexts of the history of science and of Fuller's significant interest in scientific developments, the first letter stands out, not as a statement of any linear development of Fuller's thought regarding Goethe's text or science in general, but as an outline of themes informing her thought and writing. Many of the central tropes in Fuller's body of work turn on

scientific concepts mentioned in this first letter prompted by *Theory of Color,* as well as on concepts from other scientific texts by Goethe and others. Presented in various contexts and combinations, and inflected by other vocabularies--of gender, race, politics--science constitutes for her the foundation of a poetics.

This "poetics of perception," reflects Fuller's interest in the ways scientific terms function linguistically as markers of societal norms, cultural shifts, and individual resistance. Science attuned Fuller to the mutability of words, to the tension within language between on the one hand, new discoveries and new conceptions--of, for example, what "energy" means--and on the other hand, habit and deep cultural paradigms. It confirmed for Fuller a lesson already internalized from a variety of sources in her personal and intellectual background, including Locke's theory of language, the higher criticism, and her own attempt at self-knowledge within a patriarchal society and the language of gender definitions it produced: that language and knowledge both change, and do so in tandem. Science taught her two additional, related lessons as well: one, that the link between language and knowledge is forged in the process of perception, and perception in turn is mediated by received notions of

meaning and representations of knowledge; and two, that claims of objective observation can have no validity even within the most empirical of methodologies as long as these things are true. Fuller recognized specific ways knowledge is created in language, and she used these insights to create a text which confronts the contradictions of cultural assumptions and common "knowledge."[4] Fuller's interest in visual processes paralleled and informed her concern with linguistic processes. She considered optical phenomena occasions of distortion--cultural, moral, and textual--even as they are occasions of meaning-making.

Optics, both the new ways of seeing and the information about sight itself that science offered, drew on Fuller's lifelong fascination with the nature of representation and perception. Her interest in philosophy, science, public thought, and cultural trends attracted her attention to the rapid developments occurring in this field in the first half of the nineteenth century in an explosion of knowledge unsurpassed since the work of Newton and his contemporaries in the seventeenth century. Fuller's lifetime saw the development of highly specialized tools for investigating properties of light and color: serious instruments with names like polarimeter, spectroscope, and goniometer. Throughout Europe and America, new toys which exploited

optical effects included the kaleidoscope, thaumatrope, phenakistoscope, zootrope, and magic lantern. The 1830s found companies in America and Europe developing the stereoscope, which by 1850 would be widely distributed to an avid public, marketed as both a new entertainment and as a significant advance in "realistic" visual technology. Fuller's work shows an ongoing interest in how both the general popular and particularly scientific fascination with the analysis of sight alternately reiterated and resisted previous conceptions of what constitutes vision, truth, knowledge, and consciousness.

Jonathan Crary, in *Techniques of the Observer, On Vision and Modernity in the Nineteenth Century,* has pointed out the extent to which these devices, and the discoveries about vision which made them possible "produced a new kind of observer"(3) in the 1820s and 30s. In an investigation of the place of optics and *Theory of Color* in Fuller's poetics, some discussion of this new model of the observer provides a necessary context for my readings of both Goethe's and Fuller's texts. According to Crary, figurations of the observer prior to 1820 had excluded almost entirely any recognition of the role of the physical observer, in an odd sense assigning subjectivity to the object perceived, as the observer remained a passive receptacle of a perception

caused by the object. The new nineteenth-century observer that Crary describes, on the other hand, consists *primarily* of the physical object of the observing subject, and so is a *subjective* observer in two senses, as an active agent rather than an object acted on by sensations; and as the observer, or active creator, of an *individual* perception rather than an objective, or universal vision. Crary presents Goethe as an early, even a generative contributor to this new understanding of the observer, pointing out that his 1810 text confronts key issues arising from the clashing of old and new conceptions of vision, and, as I shall return to below, synthesizes the usually conflicting empirical and Romantic aspects of the developing nineteenth century observer (69). Because Goethe's *Theory of Color* did leave Fuller "brilliant with thought" and became part of the fabric of her text, a reading of Goethe will become part of the fabric of my own.

Reading Goethe in the German before he was widely read in America, Fuller employs the model of this subjective observer--a model arising largely out of scientific advances--in her readings of literary texts, gender relations, frontier America, and European cultures. Of course the perspective of the subjective observer was already present in Fuller's day in American letters and the

American psyche, in the form of transcendentalism and in Romantic conceptions of the individual and the rebel. But as Crary points out, this subjective vision has usually been understood to be a "perception that was somehow unique to artists and poets, that was distinct from a vision shaped by empiricist or positivist ideas and practices" (9). Crary's project is to show how a model of subjective vision born in the world of science and technology, because it would apply universally rather than to only a few artistic "visionaries," was in fact more important to a culture-wide modernization--comprising "a massive reorganization of knowledge and social practices that modified in myriad ways the productive, cognitive, and desiring capacities of the human subject"(3)--than that born in Romanticism's interest in subjective perception.

Fuller's work enacts a migration of a new model of vision from science to literature, art, aesthetics, and politics. Of course, she, like Goethe, embraced Romanticism's subjectivity whole-heartedly, so it is impossible to separate in her thinking the sensibility of the artist from that of the empiricist, and her Romantic model of subjective perception made her especially hospitable to scientific investigations which focused on the role of the observing subject. In fact, the extent of this

fusion motivates, especially within the context of a critical tradition that has read Fuller primarily as a Romantic, my project of tracing the scientific substructure of her thought. Furthermore, gender shaped Fuller's perception and so will inform the proto-modernism Crary locates in an appreciation of optical discoveries. Gender, exclusive neither to the artists and poets of Romantic subjective vision, nor to the empiricists shaping optical science's focus on the viewing subject, but always present in the world-views and language of both, will prove an inseparable part of the "modernization" marked by Fuller's vision of the "massive reorganization of knowledge and social practices."

In the description of Ohio's waters in *Summer on the Lakes*, Fuller's prose spins out from a metaphor of an optical device, the kaleidoscope, to a scene of shifting cultural frames in a passage emblematic of Crary's broad narrative of the cultural work of optical science. As the passage sounds Crary's note of the cultural implications of a fascination with optical devices which exploit the susceptibilities of the eye, it does so specifically in terms of questions of light and color as described and emphasized in Goethe's *Theory of Color*. I begin with Fuller's description of Cleveland's lakes:

> Next day, when we stopped at Cleveland, the storm was just clearing up; ascending the bluff, we had one of the finest views of the lake that could have been wished. The varying depths of these lakes give to their surface a great variety of coloring, and beneath this wild sky and changeful lights, the waters presented kaleidoscopic varieties of hues, rich, but mournful. I admire these bluffs of red, crumbling earth. Here land and water meet under very different auspices from those of the rock-bound coast to which I have been accustomed. There they meet tenderly to challenge, and proudly to refuse, though not in fact repel. But here they meet to mingle, are always rushing together, and changing places; a new creation takes place beneath the eye.
>
> The weather grew gradually clearer, but not bright; yet we could see the shore and appreciate the extent of these noble waters. (79-80)

The kaleidoscope, invented in 1815, was by 1844 a common enough diversion to be familiar to Fuller's readers, but it was also a new enough invention, and new enough tropic material, to draw their attention. When we grant it our attention today, we find that the kaleidoscope in fact organizes not only this brief passage, but nearly a page of

text following it, even as Fuller's scope becomes far wider than a description of the physical scene.

To begin, certainly the kaleidoscope functions well as a simple and particularly precise metaphor, containing the three elements that produce an actual kaleidoscope's effect: depth or varying visual planes, a "wild" character to the stimulus that makes predictable patterns impossible and seems chaotic in its design, and changeability or movement. The metaphor becomes increasingly complex throughout Fuller's application. The motion emphasized in Fuller's description of the water's colors and the meeting of land and water recapitulates both kaleidoscopic vision and a feature of visual experience central to Goethe's model of vision. Movement, and the element of time it introduces, underlie the "persistence" of vision, a key component of Goethe's model of vision. Early in his text Goethe elucidates this phenomenon, which often goes unnoticed:

> We look from one object to the next, and the succession of forms seems clear-cut. We do not observe that some residue of the first creeps into the one that follows. (170)

Goethe has earlier noted that this phenomenon, which William James would later elaborate, can become conscious either when a dramatically shifting eye or scene, or when the

passing of time after viewing a highly contrasting object and then removing it from the visual field, creates two contrasting, consecutive scenes. At these times, the "residue" produces an image, called an "afterimage" in a subsequent paragraph, from the initial scene, superimposed on the new scene.

> Nevertheless, either state induced in the eye [rest or excitement] by such a form continues to occupy space there and persists for a time even when the outer cause is removed. . .The duration of this impression varies with the condition of the eye. Like the recovery time of the retina following the transition from bright illumination to darkness. . .it is measurable in minutes and seconds. (170)

Afterimages occur, Goethe explains, not only with "forms" or images, but also with colors. In fact, the persistence of vision in color phenomena *specifically* is central to Goethe's entire theory of vision, as his text's title suggests. Goethe insists that we see, really, *only* colors, not forms or figures.

> Though it may sound a bit strange, we will now assert that the eye does not see shape as such, since brightness, darkness, and color operate together

> as the sole means for the eye to distinguish among objects or parts of objects. (163-164)

This seemingly strange claim rests on the main argument of *Theory of Color*, the point on which Goethe challenges Newtonian optics, and the point for which all of his experiments--with afterimages, persistence of color, chromatic contrast--serve as illustrations. Briefly, Goethe's theory begins with a model of white or "pure" light, rather than light made up of a combination of colors always potentially prismatically separated as in Newtonian wavelength theory. Goethe's light obtains color not because the prism's refraction exposes a true, hidden character, in which case light itself would seem the best focus for analyzing color phenomena. Rather, Goethe's color phenomena result when a boundary is imposed on a light field so that we experience a contrast or a transition from darkness to brightness. Colors, Goethe writes, are all "darker than white and lighter than black." They are not contained *in* light, and in fact appear only in partial light, because they appear only in our perception of a variation. Refraction is, then, in Goethe's words, merely a "secondary" phenomenon; prismatic color occurs when "colored forms [are] displaced by refraction," the refraction occurring only "at borders," "edges," or "scratches.":

> A large colored surface shows as little prismatic color as a large black, white, or gray one; prismatic color will appear only where there is an accidental or intentional variation in light and dark. Thus our observations through the prism must be limited to a colored surface separated from a differently colored surface by a border; i.e., to colored forms. (207)

In Goethe's model, it is the observer's experience of a variation that produces color phenomena, not the physical refraction, or bending, of light as it comes into contact with a prism. In other words, what we see is bright light, darker light, and the colors that appear when bordered by either. "Colored forms" are the only forms we see, and they will change shape as light fields move--or as the eye moves--shifting the borders. That Goethe would so defiantly refute the primacy of refraction, when in fact Newtonian theory does not preclude many of Goethe's other claims, including his explanations of afterimages, reflects his preoccupation with the inclusion of the subjective character and the subjective experience of vision in any optical model. As Crary writes, "[f]or Goethe. . .vision is always an irreducible complex of elements belonging to the observer's body and of data from an exterior world" (71). "[T]he absolute values accorded to color by Newtonian theory,"

Crary adds later, his words cleverly echoing the term whose implications he is describing, "are displaced by an insistence on color's transient unfolding within the human subject" (73).

Movement and displacement are at the heart of Fuller's visual experience of the lakes, where the effects of the always-subjective nature of perception are illustrated in her literal view of the water and landscape, in her and her fellow-travelers' metaphoric visions of what that landscape could become, and, finally, in the revision of racial stereotypes she presents to the reader. Describing the land and water rushing together, Fuller distinguishes between Atlantic coast rocks and waves meeting "tenderly" while remaining separate, and the "rushing together" of *this* scene, in which the persistence of vision presents the impression of earth and water "changing places." Fuller's phrase here describes a rushing and receding of water that alternately covers and exposes rock. But her entire passage on the Ohio lakes, which I continue to cite below, seems to be as much about the visual experience of the scenes as about the actual landscape itself. This subtext first becomes evident in the preceding lines' statement that the water "presented. . .varieties of hues." Quite different from a straightforward account, as in, for example, "the

water changed color," Fuller's description emphasizes that color is a visual phenomenon, not a characteristic of the water. The "wild" sky-light and the water's rush over "varying depths" and rocks result in colors only when experienced by the travelers. Their visual perception--and its characteristics as described in Goethe's optics--produce the colors before them. When Fuller next writes that this scene is "very different" from what she has been "accustomed," we understand not only that the east coast has not prepared her for the western experience, but also that her *visual* experience has not prepared her for this new, visual, scene. Having thus been alerted by Fuller to her interest in the visuality of the scene, we can easily imagine that as her eye darts and focuses to capture and define what it sees, as she, in other words, shapes this new scene, she experiences it *as* a visual phenomenon, the rocks "chang[ing] places" with the water as afterimages superimposed on the water while the "residue" of the water's image is superimposed on the rocks. "A new creation takes place," not actually in the physical makeup of the water or of the coastline, but "beneath the eye."

The kaleidoscopic movement of the scene continues to fold shifting meanings into Fuller's prose, as images and colors turn on themselves and change places. Fuller's

writing enacts a profound disruption in accepted ideas of the rights of the "civilized" whites, a disruption prompted by a sentiment described by Emerson in his 1839 "Circles," and one which heralds American pragmatism.[5] "[W]e now and then detect in nature," Emerson wrote, "slight dislocations which apprise us that this surface on which we now stand is not fixed, but sliding" (174). As Fuller's party moves up the river, a Goethian displacement, a "sliding," occurs along racial borders.

> Coming up the river St. Clair, we saw Indians for the first time. They were camped out on the bank. It was twilight, and their blanketed forms, in listless groups or stealing along the bank, with a lounge and a stride so different in its wildness from the rudeness of the white settler, gave me the first feeling that I really approached the West. (80)

The stride of the Indians is ascribed the customary "wildness" expected by the reader, but immediately this quality must be re-evaluated when it is contrasted with the "rudeness of the white settler." Fuller's own sentiments transgress the traditional racial and cultural border, aligning with the Indians, with whom this is her first encounter, rather than with those of her own race. "Our culture," Emerson had written, "is the predominance of an

idea which draws after it this train of cities and institutions. Let us rise into another idea; they will disappear"(169).

Fuller's passage heeds also another of Emerson's observations: "[T]his incessant movement and progression which all things partake could never become sensible to us but by contrast to some principle of fixture or stability in the soul" (176). Fuller recognizes with Emerson that change is defined by contrast--for instance the difference in her notion of the Indians before and after her western journey--but she is not content simply to note these contrasts; rather, she would direct them. Reaching even beyond an Emersonian proto-pragmatism of multiple perspectives and shifting ground, into a Jamesian philosophy of alternatives that make a practical difference, Fuller's experience extends Emerson's observation, anticipating James's explanation of how our ideas change--how, for instance, Fuller might change our minds about the Indians, breaking us free of old "truths." In "What Pragmatism Means," James writes:

> The point I now urge you to observe particularly is the part played by the older truths. . . Their influence is absolutely controlling. . .for by far the most usual way of handling phenomena so novel that

> they would make for a serious rearrangement of our preconception is to ignore them altogether, or to abuse those who bear witness for them.
>
> . . .The simplest case of new truth is of course the mere numerical addition of new kinds of facts, or new single facts of old kinds, to our experience--an addition that involves no alteration in the old beliefs.
>
> . . .But often the day's contents oblige a rearrangement. (59)

Fuller's racial consciousness is "rearranged" by her awareness of the accrual of new facts with previously held notions about the Indians. Clearly she has not retained the disinterest in "facts" she claimed in the letter to W. H. Channing, nor the rigid distinction between "fact" and "Love." Her text retains the residue of the wild after-image of the stereotype as it presents a new idea of the Indian, providing the reader with a necessary transition to the new "true" image. James would later describe the process thus:

> . . .A new opinion counts as "true" just in proportion as it gratifies the individual's desire to assimilate the novel in his experience to his beliefs in stock. It must both lean on old truth and grasp new fact; and its

> success . . .in doing this, is a matter for the individual's appreciation. (59)

Fuller realizes the falsity of the "old truth," the "stock" stereotype of the Indian, but she realizes that her recasting of the whites in the role of "rude" invaders will have to be built in the mind of each reader largely from the dismantled stock of the "truths" he or she brings to the text. This is not to say that the new truth will validate the old, but rather that it transforms what it cannot erase, in a conversion entirely within the consciousness of the individual, and subject to his or her "desire" for change. "When old truth grows, then" James would write, "by new truth's addition, it is for subjective reasons" (59). Fuller's text fosters a desire which might prove more effective than an admonition.

The scene's elements continue to spin, as Fuller's feeling for the Indians' different stride gives her another emotion, "the first feeling that [she] really approached the West." This feeling is indeed a *first*-feeling, a sentiment encompassing both empathy and an awareness of the dawn of this empathy. The import of the feeling increases when it is read as Fuller's discovery of truth "in Love" rather than "in law," for the fact that the passage itself reflects the

laws of (Goethian) optics demonstrates the merging of the terms of Fuller's opposition in her earlier letter, a breaking down of a false dichotomy at a moment of great insight. Fuller's words syntactically and stylistically disrupt and reconfigure the borders of these various stereotyped categories, displacing previous perceptions of the races and of the Love/law hierarchy as shifts in light-borders displace and redefine Goethe's color fields.

In the next paragraph, Fuller's focus shifts from the Indians to the whites:

> The people on the boat were almost all New Englanders, seeking their fortunes. They had brought with them their habits of calculation, their cautious manners, their love of polemics. It grieved me to hear these immigrants who were to be the fathers of a new race, all, from the old man down to the little girl, talking not of what they should do, but of what they should get in the new scene. It was to them a prospect not of the unfolding nobler energies, but of more ease, and larger accumulation. (80)

This paragraph's first sentence, following immediately upon her paragraph revising standard comparisons of the Indians and the settlers, makes explicit Fuller's awareness of how deeply cultural conventions and popular racial

representations lend themselves to white empowerment and privilege. She has already implied that these "habits" harm the Indians; now she says they are harmful to the settlers as well. When Fuller uses the word "race" in reference to the whites who, as western pioneers, will be "fathers of a new race," she begins a metaphor that communicates far more than the historical import of pioneer life and the great promise of pioneer progeny. Her disruption of the expected use of gender terms--"old man down to the little girl" not only describes the "all" who talk of what they may get, but syntactically also defines the *fathers* of the new race--lays the ground for her reassignment of racialized terms, and emphasizes the power of words and representations to sustain *or* to challenge the social and political status quo.

It is not coincidental that Fuller disrupts the language of gender in her recasting of racial terms. As her 1843 "Great Lawsuit" had already demonstrated, it is through her attention to the terms of gender that she recognizes the power of words (such as "woman"), when seen as true and unchanging, to retain oppressive social dynamics. In the "Lawsuit" and *Woman* she manipulates these terms to change their meanings and uses. Here, too, in *Summer on the Lakes,* Fuller chooses her words carefully in order to expose and exploit this discursive power. Her description of the

settlers as a "race" brings to mind the Indians, who have been the "racial" subject matter of the previous paragraphs. Fuller thus calls our attention to the fact that "the new scene" in which the new race of settlers will flourish includes an older race already present.

This subtle reminder that the Indians are, so to speak, still in the picture even as she discusses the whites, emphasizes how easily our perceptions are limited by our expectations, expectations formed by conventional social thought. I begin to trace here Fuller's attention to the ways aesthetic standards contributed to the power dynamic manifested in the imperialism of the white settlers. Standard judgments of what is beautiful and pure direct far more than artistic representation, but rather influence a whole range of social, economic, and political interactions. As Fuller recognized this dynamic, a politicized aesthetic became an object of her critique and a keystone of her poetic practice. For Fuller the connection of visual aesthetics with politics was in fact over determined. The Romantic imagination, in the process of subordinating enlightenment reason to non-rational emotion and intuition, demands a new way of looking at the world which includes a revision of what constitutes the beautiful. While Fuller's Romantic predecessors and transcendental contemporaries have

frequently been found lacking in political and social concern as their versions of beauty are seen to become more and more idealized and thus removed from everyday experience, Fuller's musings on the beautiful and sublime were part of a wide-ranging analyses of the power that adjoins representation, as exemplified in her descriptions of the western landscape, the rough lives of the settlers, and the Indian encampments. For Fuller, aesthetic value is from the outset one of the terms circulating within economies of representation. Contributing also to the merging of aesthetics and politics was science, which, as I have indicated above, both helped attune Fuller to the unstable character of *all* words, and emerged itself as a participant in the cultural work of meaning-making. Science, as it emphasizes the ubiquity of discursive power and provides a striking analog to aesthetics--in that both science and aesthetics purport to have special access to truth and yet both are shown to be part of the same web of signification that makes truth impossible to pin down--advances Fuller's understanding of the political dynamic represented in aesthetic judgement.

As Fuller's prose becomes increasingly contoured to highlight the lines of her scene *as* lines, these lines appear the result not merely of relatively mild cultural

convention, but of a violent opportunism, in a culture in which the powerful paint themselves in the foreground, ignoring, erasing, or distorting "other" images which might diminish their own appearance. When she describes the settlers speaking of what they could acquire rather than what they could do, she says they plan to "get" not *from* the new situation or the land, but "*in* the new *scene.*" "It was to them," she continues, "a prospect...of more ease, and larger accumulation." In the scene they will draw, all bounty will accrue, as all beauty already does in the conventional aesthetic, on them. The whites' "prospect" is not only the hope or promise of the new land, nor the value they will mine from the land; it is a view of their superior place in the hierarchy of man and in a scene in which they shine brightest. Bright white light, Goethe tells us, has no color, and the settlers see only the Indians as colored, separated by a defining border, "edgy."

"But all great expression. . .furnishes. . .to the faithful observer," Fuller has written earlier, "its own standard by which to appreciate it" (72). The shadowy sky, to which Fuller alludes six times on this one page, furnishes a new standard for Fuller's view, one which accords with Goethe's many demonstrations of color's emerging only in partial light. She experiences the scene as

"not bright," and in the "twilight" both colors--red and white--appear to her. In her view, in a perception privileging the subjective experience of seeing the Indians rather than the familiar sketch reproduced--stereotyped--by the settlers, a reversal takes place. Fuller's images of the two races are inverted in her text, much as contrasting light and dark images, and contrasting colors (of course red and white are not chromatic opposites, and I am not positing such a literal application of the Goethian metaphor) are reversed in the retina when, to recall Fuller's early letter, "the colors demand[ ] one another in the chromatic circle, each demanding its opposite."

Within the scientific model of perception that I have been delineating, the role of aesthetic experience and the influence of conventional aesthetic judgment--in matters ranging from "taste" to moral tenets--is, Goethe suggests, not only potentially significant, but actually unavoidable. But both before and after he admits this, his own judgments--even while he is trying to remain conscious of this susceptibility--render a quite vivid example of an inescapable mingling of aesthetic sensibility, scientific hypothesis, and conventional prejudice. I quote the passage at length, to exhibit the pull and push of his thoughts as he tries, and fails, to separate these threads:

> The color of skin and hair is unquestionably connected with differences in character; even blonds and brunets differ significantly. This leads to the conjecture that such a difference arises when a particular organic system predominates. A similar hypothesis might be applied to nations, and in the process we might note that certain colors also correspond with certain structures, as we an see in the physiognomy of the Moor.
>
> In any case, this would be the place to respond to the problematic question of whether every human structure and color might not be equal in beauty, with a preference for a particular one based purely on custom or prejudice. In the light of all we have discussed, however, we venture to say that the most beautiful is the white person. . .In a later discussion of structure we may find a similar culmination of human form. We do not pretend to have resolved this longstanding debate once and for all; there are many who have good cause to doubt the significance of external appearances. We only wish to express a conclusion which consistent exercise of observation and judgment might yield to the soul seeking calm and certain ground. . . (263-264)

Fuller sought not "calm and certain ground" on these matters, but rather quite the opposite: to shake up this kind of thinking. Certainly there are places in her text where her own prejudiced views affect her perception and representation of a scene, for instance at one point she complains, parenthetically, that a girl who ferried her party across a river was "unfortunately not of the most picturesque appearance," (108) suggesting that what was unfortunate was that her own vista of the "graceful stream" was spoiled. But it is noteworthy how few of these instances there actually are, given the near-saturation in nineteenth-century America and Europe of moral, racial, and gender

vocabularies with aesthetic associations. Fuller avoids the sort of quandary Goethe exhibits because she is not so interested in whether different colors, images, or representations are consistent or true, but rather in how these colors, images, and representations attain their significatory functions, and how these functions can be changed. Whether or not, in other words, Fuller believes blonds do have more fun, and whether or not she believes they do or do not because of what Goethe calls a "difference[ ] in character," she would be interested in why we think they do, and how society behaves based on their blondness and what it is believed to represent, to cause them to have, or not have, that fun. When Fuller turns to science it is for answers to questions of this latter type--especially as they relate to scientific models of how perception works--not for examples or proof such as Goethe seems to look for when aesthetics come loose from their groundings. In fact Goethe more than anyone taught Fuller that the interpretation of scientific observations also rests on subjective groundings, so we must assume he turns back to a notion of authoritative science only momentarily when he feels the verifiability, and therefore the validity, of his aesthetic (and racial) judgments slipping uncomfortably. Fuller, by simultaneously maintaining a

critical view of both realms, the scientific and the aesthetic, attained a position at the vanguard of a proto-modernism which, as it developed into modernism, not only continued to grapple with questions of subjective knowledge and a nonveridical world, but increasingly questioned the very distinction between the empirical and the aesthetic.

In Fuller's work, the issues of representation and perception raised by one of these meaning-producing modes--Romantic imagination, aesthetic representation, or scientific explanation--again and again are applied to the others. Her observations of Native Americans merge in her mind the first-hand experience valued by Romanticism, the material of artistic representation, and a scientific model of vision, to produce an enlightened new view invisible to any of these modes alone. The political ramifications of Fuller's conjoining of these three orders of thought are illustrated in two other passages, read together, from *Summer on the Lakes*. The first passage is Fuller's description of the effects of standing at Niagra Falls:

> I realized the identity of that mood of nature in which these waters were poured down with such absorbing force, with that in which the Indian was shaped on the same soil. For continually upon my mind came, unsought and unwelcome, images, such as never haunted it

> before, of naked savages stealing behind me with uplifted tomahawks; again and again this illusion recurred, and even after I had thought it over, and tried to shake it off, I could not help starting and looking behind me. (72)

The second passage occurs near the end of the book:

> Although I have little to tell, I feel that I have learned a great deal of the Indians, from observing them even in this broken and degraded condition. There is a language of eye and motion which cannot be put into words, and which teaches what words never can. I feel acquainted with the soul of this race; I read its nobler thought in their defaced figures. There *was* a greatness, unique and precious, which he who does not feel will never duly appreciate the majesty of nature in this American continent. (221-222; Fuller's italics)

In the first passage, Fuller describes the image as having come upon her. She hasn't looked for it, she doesn't want it, but there it is, a perception acting upon her passive mind. A few lines before this, she writes that the falls have "seized her senses." This seems, then, to be the model of an eighteenth-century perceptual experience, in which the observer's passive senses are acted upon. But when

we recall that Charles Brockden Brown was the eighteenth-century American author held highest in Fuller's esteem, we find even within her readings of this earlier model of perception a notion of illusion as the experience of the mind's perception of *something*. One way of reading Edgar Huntly's half-lit night visions is as scenes in which psychologically- and emotionally-wrought figures take shape and "seize" his senses, (as well as the plot and so the reader's perceptions to a degree). Read this way, his and our perceptions are seized only by the material of our own psyches, our own imaginations.

This speculation on Fuller's reasons for being drawn to Brown takes on substance as we attend to the role of the imagination in her analysis of her own experience of the illusion at Niagra, an analysis that places her notion of the observer firmly within Crary's nineteenth-century model, that of the producer of images. Of course Fuller's Romantic description emphasizes the image's genesis in the overwhelming experience of seeing and hearing the falls, a truly awesome, and for Fuller perhaps a sublime, connection with Nature. But that same Romanticism would, of course, locate the image's creation, (as opposed to its inspiration) in Fuller's imagination. Her passage shows that her experience does not match what her own paradigm would have

her believe, and she cannot understand the phenomenon. Since the image is "unsought," or unconscious, Fuller tries to make it conscious--to locate it in her mind--in an attempt to control it. She is, however, unable to think it there, or to think it away, and she leaves off the passage still "haunted" by the image.

But Fuller had another side as well, the scientifically-informed side that was aware of theories of vision that addressed this very problem. Optical devices, Goethe, and her attention to the culture-wide revision of the figure of the observer that I have been describing--all of these are relevant to her predicament. Whether Fuller ever actually used, for example, a stereoscope, is beside the point. Crary does present this device as an apt metaphor to describe a propensity to break vision down into its different elements and then to reconstruct the visual experience in a process which demonstrates that the observing subject manufactures the image it sees. But what he is suggesting is that the close examination of vision and the optical discoveries produced in the development and use of the stereoscope correspond to a larger cultural shift in which the definition of the observer, and of words such as "subjective" and "real" were called into question by a wide range of optical theories and experiments related to a wide

range of cultural practices--including the arts as well as the sciences--that suggested that the scene, or seen, was formed not in the real world of objects, but in the process of vision.

Whether or not Fuller read or misread the phenomenon demonstrated by the stereoscope, my argument here goes to reinforce Crary's identification of Goethe as a seminal figure in the history of the modern observer. Through Goethe's text Fuller was exposed to the same "broader transformation of the observer that allowed the emergence of [a] new optically constructed space" (126). Fuller's grasp of Goethe and the scientific debate he entered enabled her to see beyond common cultural representations. His experiments with optical effects, and with "illusions" of color and after-images, show, and his inclusion of clear instructions and illustrations allow the reader to prove to herself, that it is the eye, and not any object or device, that performs the "tricks."[6] Goethe's text illustrates that sensations are the result of physiological processes that occur entirely within the body of the sensing subject, and are not objects to be seized. In a strange coincidence of scientific logic and Romanticism, science tells Fuller that her mind, her imagination, must be producing the image of the Indian at Niagra.

To turn now to the matter, literally, of the illusion in the Niagra passage, I want to trace the thread of Fuller's optical thinking in her experience of the illusion by again reading the two cited passages together. On the one hand, the images of *both* passages are products of Fuller's mind; on the other hand both images are real as images available to her, and our, perception. The genesis of this vision, by Fuller's own testimony, can be located in the popular literature she read before her trip, "[a]ll the books about the Indians, a paltry collection, truly, yet which furnished material for many thoughts" (87). Among her survey of the literature would have been specimens of an aesthetic mode in which the figure of a savage Indian provided a foil for the physical and moral beauty of the civilized white figure. This representation remains in Fuller's mind like an afterimage remains in the retina, its negative emotional associations--for Fuller's is not the detached, intellectualized aesthetic of the enlightenment but rather a Romantic and emotionally-enriched one--linking the aesthetic to the imagination which, as I have delineated above, produces the illusion at the falls. Interestingly, Goethe not only draws a connection between the aesthetic and the emotional, but he also sketches the metaphoric connection in Fuller's illusion, the equating of the optical

afterimage with an emotional after-effect, even foretelling the difficulty Fuller has overcoming, or ridding herself of, this disturbing image:

> In eye disorders the persistence of forms on the retina for fourteen to seventeen minutes and even longer is a sign of extreme weakness in the organ, an inability to restore itself, just as a vision of things fervently loved or hated signifies not a sensory experience but a mental state. (171)

Finally, when we recall Fuller's reference to "feeling" in her letter to William Henry Channing, we once again see her discovering truth in a situation that collapses the binary of "feeling" versus "intellect," as well as that of "Love" versus "law," as Fuller's revision of the Indian figure is nourished by both the aesthetic and scientific, the Romantic and empirical, the irrational and the rational.

As the later passage on the Native Americans, taken with this earlier one, demonstrates, Fuller has "learned a great deal of the Indians, from observing them," and this passage shows that she has learned not only from her direct observations of them, but also from her attention to her own observation process. Paragraph after paragraph of the *Theory of Color* begins "with my own eyes I have found the following..." or "By blinking my eyes..." In much the same

way that Goethe uses self-observation to investigate optics in his work--literally watching his own eyes see--Fuller repeatedly watches herself watching. Fuller's passage, then, expresses a potent convergence of a self-observation prompted by Goethe's scientific and experimental method, and a self-reflexive gaze typical of the Romantic pursuit of what Emerson called a "critical conscience." But the science runs even more deeply than this, for the passage demonstrates a *doubly*-reflexive activity: Fuller analyzes her self analyzing what she sees. Furthermore, she presents a trope or description of this--an image or view of her self analyzing an image or view. Like Goethe's carefully described experiments, these visual descriptions instruct the reader how to observe a phenomenon--an optical illusion in Goethe, the formation of a racial stereotype in Fuller--and how to observe the process of observation. For Fuller, attending to observation is the way to break free of habits of perception and see things anew--the optical illusion is an optical fact; the once threatening Indian is precious. Fuller actually sees and draws the "Indians" differently. The "defaced figure," read and reread by Fuller during her travels, and here read and reread by us in her text, takes on a different appearance, is transformed from the "naked savage" of the second page to the "unique" member of this

nation in the book's final passages. This "Indian," then, is a "figure" in three senses of the word--a representative individual, a stereotypical portrait, and a tropic construct--that literally changes as Fuller analyzes how it is observed, and thus drawn, by white society, by the reader, and by herself. In this case it is, Fuller tells us, her experience of literally "observing" the native Americans that causes the image in her mind to change. Again, emotion emerges as an essential component in perception, as Fuller explains that "he who does not feel will never duly appreciate" the Indians. Here, then, are visual image, imagination, emotion, and thinking merged. Fuller's understanding of this phenomenon prompted her to compose *Summer on the Lakes* and *Woman in the Nineteenth Century* of varied elements designed to conjure, engage, even manipulate all of these aspects of her readers' consciousness, and so actually to change their minds, about gender, race, and perception itself.

This model of compound perception contributes, as we have seen, to Fuller's cultural analyses and compositional strategies, and when it in turn is understood through the lens of Goethe's *Theory of Color,* a new aspect of its consequences for Fuller's poetics is revealed. Goethe's optical experiments bring home the point that whether an

image (or a color) is stimulated by an object the eye sees, or by pressure on, or nerve stimulation of any type in, the eye, the perceptual process produces the same result: the observer's optical nerves send messages to the brain, the mind labels them "image," (or "light," or color,") and the observer thinks she has seen something. It still remains a mystery to Goethe, and to Fuller, and to scientists today for that matter, *how* delusional "visions" somehow get on that same path before or at the point when the mind labels them visions. But within the Romantic paradigm which posits the imagination as a real part of the mind, inseparably linked to a perceptual process that includes everything from sensory input to emotional, rational, and moral evaluation, Goethe's optical experiments demonstrate that the process can be entered at any point. As the mind treats (or creates) the perception as a "vision" even when the image is not born in the physical eye, Fuller, and the reader, can learn as well from an illusion or trope as from an "actual" sight.

The model of perception that arises is one in which visual images play a role at every level of consciousness, even those we think of as non-visual or abstract. Arrived at through her unique combination of optical science and Romantic imagination, and mediated by a politicized aesthetic born of both, Fuller's model resembles one more

recently described from a psychological perspective by Rudolf Arnheim as "visual thinking"--briefly, "[t]hinking calls for images, and images contain thought" (254)--and from a neurological perspective by scientists using cutting-edge technology to monitor brain processes, and to analyze the role of visual images in memory and perception.

More pertinent to my immediate project, this model of perception situates vision on two levels in Fuller's text. Vision is primary subject matter, encompassing the sight-seeing of Fuller's travels, society's vision of itself and of "others," mental images that reflect and affect our attitudes, and even mesmeric "seeing" and prophecy. Vision itself has, in cultural and feminist criticism of the last decade, been understood as masculine, but when Fuller places herself at the center of her text, describing the landscape and the people through her vision, and describing the very process of the development of that vision as Goethe describes the optical processes of the subject's eye, her project distorts and renders ugly a patriarchal vision of the west, and presents the possibility of a new way of seeing that is not only "modernist" and not only subjective, but is in the largest sense a feminist vision.

Vision is also the major component of a poetics which, in descriptions written with an attention to foreground and

background, in tropes of shifting and mutating figures,[7] and in overall structure, invites readers to focus on how we perceive. As Fuller's feminist, Romantic, pragmatic, and scientific perception revises the Illinois and Wisconsin landscape, the "kaleidoscope" becomes James Joyce's "colliderscape," a remarkably modern way of looking at the world and constructing a text. Fuller's is a modernism in which the slipping fragment and shifting identity offer hope and possibility at least as often as alienation or anger. Each time visions collide in her text, toppling hierarchies (noble/savage, objective/subjective, law/Love), this modernist shifting is brought about by a questioning or refiguring of identities--of self and other, subject and object, fact and feeling--revisions engendered by what today we call a feminist perspective. As Fuller's own experience brought her to see the false bifurcation of male and female, so she very soon came to see through the deceptive dichotomies of spirit and intellect, and fact and feeling, which she had held to in her 1841 letter. Categories merge and boundaries dissolve as Fuller's new view exploits a "persistence of vision" which can be, literally, in the production of the afterimage, and metaphorically, in the reiteration of a stereotype, a trick; or which can be, as it

teaches us literally about the eye, and metaphorically about the inaccuracies of our world views, a revelation.

Notes

1. I am grateful to Albert J. von Frank for pointing out the relevance of this Fuller poem to my points about her reading of Goethe's theory of "a pure white ray" as truer than the prismatic color spectrum measured by Newton.

The published text prints "prison" in place of "prism," which seems an obvious error.

2. Or, as I discuss below, the scientific and the pragmatic.

3. This feminization was largely accomplished by "men of science," and had two significant consequences. It made clear the greater status of the newer, harder science of plants. It also rendered less significant a characteristic unique to botanic science: women had been enthusiastically participating, and well-received, in the field for a century. These educated women, as a group, possessed botanical knowledge and interest as vast as that of their male colleagues, right up to the point at which the scientific method began to change botany. By segregating "real science" and old-fashioned folk-lore along gender lines, the new botany represented as outside its boundaries many women scientists rendered oxymoronic by the new notion of "science" in general, regardless of actual women's scientific abilities and contributions.

4. A note here for those following the Sokal/*Social Text* debacle: I am discussing the non-objectivity of theories and descriptions, not a non-objectivity of facts, nor the non-existence of fact.

5. I am intentionally presenting Fuller and Emerson together as early pragmatists, leaving off here any questions of the direction of their influence on each other. I am, however, particularly receptive to the evidence of a conversation and friendship infused with the challenges feminist ideas brought to bear on both of their philosophies, as presented by Christina Zwarg in *Feminist Conversations.*

6. Goethe's intention is not merely to argue or even to prove his points. It is, rather, to teach the reader about the eye, by providing her with all of the instructions and

the visual material necessary for the experiments. Indeed, according to Charles C. Gillispie, a better sense of the literal translation of "Farbenlehre" would be "Teaching on Color."

7. *Summer on the Lakes* and *Woman in the Nineteenth Century* are rich with such tropes, in addition to the "Indian" image I've used as an example. One of the more prominent is the position of Fuller's "I" (eye) in the final passage of *Woman* ("I stand in the sunny noon of life...").

CHAPTER FOUR

FROM LANGUAGE TO DISCOURSE

I. Science, Soul, and Society

> *There inquires the spirit, 'Is this rhetoric the bloom of healthy blood or false pigment artfully laid on?' (Woman 255)*

Reading Fuller in light of the ways scientific thought influenced early nineteenth century culture at large, and the transcendentalists in particular, I have traced in her texts the development of a modernist, feminist impulse correlative to, and in large part generated by, the questions science raised about perception and representation, and in turn, their relationship to aesthetics and language. At this point it is already becoming clear to what a great extent this scientific upheaval inflected Fuller's feminism and shaped her poetics, so much so that it seems probable that a similar interanimation affected the work of other American women writers exposed to the science excitement of the day. But before leaving Fuller to explore the wider literary web in which science, gender, and literature are entwined, I want to look further at the effects of her scientific reading not simply on a poetics I have been describing, but on a

thorough-going shift in thinking about text in which textual production and reception are understood as cultural practice.

In the preceding chapters I have taken account of the sciences that shaped Fuller's thinking, and as I have illustrated, her writing. Leibnizian monads linked perception to self-perception and subjectivity. Electrical experiments required the revision of the word "energy" and in so doing illustrated the impurity and instability of all definitions. Linnaean botany suggested a commingling of passion and reason in the search to understand and describe the world around us. Goethian optics demonstrated that what we see of the world can be a trick, and that what we see of our selves cannot be measured objectively. What we claim to see is only a claim, neither an account of a real world nor a description of the way light and color really work, but only words standing in for whatever it is we experience in a visual event. Each of these sciences affected Fuller's thought about perception, thus about consciousness, and finally about language. While I have traced specific connections between consciousness and language engendered by each science, there is as well a larger implication. As science exploded for Fuller the old model of nature as a stable structure constituted and controlled by God, her

attention to the cultural context and contests of science (the significance of which science denied) exploded an old model of language as a stable structure constituted and controlled by mankind. In a third step to this philosophical-linguistic deconstruction, Fuller's work overturns common notions of *text* as a narrative constituted and controlled by the author, centered on a "true" meaning,[1] and separate from the world it describes. This third step, an outgrowth of the understanding of cultures as economies of representation that I discussed in Chapter One, and of her readings of science within that understanding, as I shall further illustrate below, shapes Fuller's literary project fundamentally, affecting not only how she writes, but why she writes.

Terms from this century's poststructuralist theorists can help us understand Fuller's development from a concern with the rhetoricity of language--already a modern concern, as I have noted above--to a concern with textual *discourse*. Poststructural reexaminations of language and discourse are, after all, consequences of a philosophical crisis around scientific knowledge, a crisis represented, for example, by Thomas Kuhn's 1962 *The Structure of Scientific Revolutions*. Kuhn's observations of how the scientific process unfolds, and what it claims, led him to revise radically our

understanding of the connections among language, ideology, and knowledge production. He claimed that scientific knowledge arises not from "discovery" of new "facts" or a flash of insight from an iconoclastic individual, but from an ongoing argument among scientists about what observations mean. Scientific knowledge is marked by occasional consensus brought about by the "cultural conversion" of dissenters. His model had an especially significant impact on discourse theory because it implied a refutation of the objectivity of knowledge specifically within the neutral, cant-less world science claimed for itself. Kuhn is, in fact, one of a long history of thinkers who identified the roles of ideology, bias, and consensus within scientific discourse. Ludwig Fleck's *Genesis and Development of a Scientific Fact* (1935),is an important precursor. Fleck, a Polish microbiologist, argued that facts are collectively created rather than objectively discovered, and that scientific "truth" is a function of a predominant social and cultural "thought style" *(Denkstil)*. If we can go so far as to call Fuller a philosopher of science, she might take her place before Fleck in the genealogy of what has developed into today's "science wars"--in an increasingly extremist polarization exactly counter to Fuller's conception--between realism and relativism. In a sense, my project in this

chapter is to place her in this context, for the insights Fuller drew from her observations of science were much like those we find in Fleck and Kuhn. Observing science as an emerging discipline, Fuller could perhaps more easily than Kuhn see its claim of objectivity as a defining gesture initiated for power rather than by fact. Certainly Kuhn's argument was more unsettling to *science* than was Fuller's, because science was a century older and more than ever invested in its claims of objectivity, and because within a vastly more professionalized culture Kuhn was identified as, and granted authority as, an expert in the history of science. But his argument became unsettling for the general (or at least intellectual) culture only when its implications were picked up and explored in detail by those trained in rhetoric, linguistics, and literary theory. Because Fuller was a writer and literary critic herself, she could more directly than Kuhn connect the philosophy and history of science with literary theory. It is evidence of the deep-seated cultural authority science holds in our culture that the linguists and literary theorists taking up Kuhn's ideas continued to locate a foundation of their work within his work, even when their poststructural theories moved into realms not at all associated with science. Yet, in contrast, the genesis of Fuller's discourse *in science* is

an overlooked aspect of her work, even in studies, such as Zwarg's, which position Fuller within poststructuralism. This may mark both a reaction against a "scientizing" of literary studies that some see as a sort of compensation for the discipline's inferiority complex (or simply as old-fashioned) and a feminist rejection of science, its complicity with patriarchal authority, and its increasing abstraction. Fuller, as I will show, moves beyond these divisions, and into an attitude resembling a different strain of feminist poststructuralism identified most clearly today with, for example, Donna Haraway's treatment of science as deployable, and redefinable, by women; and most recently, Sadie Plant's "cyberfeminist" assertion that women are not victims of technoculture, but rather its genitors, developers of the binary system of "zeros and ones" at the heart of computing machines from the female traditions of spinning and weaving.

Today's poststructural terminology will, therefore, serve well in exploring Fuller's development. Within this vocabulary, "language" is a system of signs, stable or unstable as these signs' meanings might be. I have indicated several examples of Fuller's recognition of the rhetoricity of language, her awareness of language's great instability, and her attention to the ways words' meanings change when

put to different uses. These realizations suggest another step, as the fact that words are *put to use* implies that words can mean differently in different situations. In several letters to Emerson, Fuller remarks on his misunderstanding of her words because he could not see "the background" or "invisible thoughts" that colored them, shading their meaning in a way he did not grasp. This in turn implies that use shapes meaning. From here it is a single, but for Fuller a very significant step to find that *all* meaning is constructed for and in use--that language does *not* hold a neutral, stable meaning underneath the confusion of rhetoric. Still employing poststructural terminology, "discourse," signifies the use of language in an ongoing contest among users. In discourse, meaning is a commodity--produced, attained, exchanged, lost--through textual contests; meaning only exists in, and for, these contests.

Fuller's text manifests several aspects of this discourse-model of text. As the previous chapters have shown, she recognized the authority claimed by, and the "policing" performed by, accepted descriptions and definitions, and the hidden nature of this system. She came to see that most people go about their lives unaware that, as Foucault puts it in *The Archaeology of Knowledge*, ". . .

discourse is not the majestically unfolding manifestation of a thinking, knowing, speaking subject, but, on the contrary, a totality . . .." As well, Fuller's work exhibits a notion of discourse as dialogic, Bakhtin's term for the complex interaction of writer and reader which produces meaning.[2] Her preface to *Woman in the Nineteenth Century* demonstrates a marked concern with negotiating the differences between readers' responses to "The Great Lawsuit," and her own intentions in revising that article. "This article excited a great deal of sympathy, and still more interest," she writes. "It is in compliance with wishes expressed from many quarters, that it is prepared for publication in its present form" (245). Next, in a long paragraph, she relates criticisms of the former version, particularly the title, and explains in detail why she was persuaded to rename the work, *and* why she prefers the original. This is an especially thorough treatment of perhaps standard preface material, but two things make it especially notable. The first is that throughout the preface, Fuller describes this negotiating process—this dialogue—at work at every stage of her writing, in composing the original article and title, in revising and republishing the essay, and finally in writing this preface, which allows her to revise again the title revision, even as she uses the title she prefers less. Also

remarkable is her explanation for preferring the original title: "partly for the reason others do not like it." In this alone we see a dialogic process between author and audience (albeit a seemingly oddly contrarian one). Fuller's clarification of this statement performs two more dialogic moves, as the control of meaning shifts back to the reader once again, and then returns (of course) to Fuller: "that it requires some thought to see what it means, and thus might prepare the reader to meet me on my own ground" (245).

Fuller extends this idea into another Bakhtinian theme, that a social situation shapes the struggle of reader and writer, and so shapes the meaning produced. She witnessed the extent to which meaning and "knowledge" are contextual, as she understood the worldly forces which defined the oppressive contexts of gender and race. She realized that what we have learned to call "knowledge" is really an assertion of knowledge, and what have we have become used to calling "natural" is really man-made assertion writ large, its discursive history become unconscious, its content become status quo. Furthermore, because she recognized the worldly forces which assert meaning, and she knew from her observations of the oppression of women and of American Indians how real the power of these assertions can be, she understood that these utterances must be countered with

opposing assertions. Or, more precisely, they must have their contextual, contestable nature exposed, at which point counter-utterances will present themselves.

I am not, and would not, claim for Fuller a truly poststructural position, from which "knowledge"--in the traditional sense of the word--is impossible, and is reduced to a metaphor for cultural consensus, or wishful thinking, or a straw man behind an assertion of power. Fuller's deeply-held religious beliefs and transcendentalist ideals were founded on the conviction that truth exists for those with eyes to see it. Indeed, this purpose contributed to her great skill at discourse analysis, as she never tired in pointing out how much common thought, masquerading as "common *knowledge*" and embodied in common language, obscures; how its very existence *as* "common" blinds one to the individual, subjective thinking one needs to do to allow the imagination to reveal the connection of matter to spirit, in which connection is found true knowledge. Fuller immersed herself in a struggle to reveal, and bridge, the gap between a truth she believed accessible, and the truth society thought it knew. Because she understood the discursive construction of the latter, she set about deconstructing discourse in a manner that we might equate too easily with poststructuralism.[3] While some of Fuller's

linguistic insights and practices do anticipate poststructural developments, her faith in a higher truth prevented her from assuming the nihilism that is the logical outcome of an extreme poststructuralism. Rather, she finds in a linguistic "play" which is the liberatory side of poststructuralism's unhinging of language, the mechanisms to create texts aimed at changing, not writing off, the world. In fact, while Fuller's concern shifted from literary and artistic matters to social reform, most notably in her dispatches from Italy, this marked not a move away from text, but rather a firm belief that writing could make a difference. Far more optimistic than Foucault's model of a master discourse into which all text is subsumed, Fuller's text never abandons the hope that it can--that text can--somehow mean, and somehow matter. This is especially important to my study, for if we forget this, we will fall into the trap of attributing to her, among other things, a suspicion of science that is far too simplistic, and which would obscure, ironically, some of her most brilliantly proto-poststructuralist textual work. For often her sophisticated textuality is born, as I shall show, of her complex thinking on science.

Fuller was wary of the dominant discourse's pull; she considered it the largest obstacle to the kind of free

thinking that leads to absolute truth. "[T]he gain of creation consists always in the growth of individual minds, which live and aspire, as flowers bloom and birds sing, in the midst of morasses" (*Woman* 253). When she herself felt the need to remove herself from town and immerse herself in nature in order to hear herself think, she expressed how difficult it was to maintain her own thoughts as they were nearly drowned by social discourse around her. She wrote to her brother Richard from Fishkill Landing in 1844, "Can I tell you how much I enjoy being here in this scene of majestic beauty, away from hacknied human thoughts and petty cares. . . I am so glad to be enfranchised for a few weeks and left to the society of Nature and the current of my own thoughts" (LF 3: 234). To Anna Ward in 1845 she complained, "I worked too hard at human intercourse while in N.E. to enjoy myself much. I need long intervals between of 'skiey influences and solemn concentrations'!!" (LF 4: 167). And in a piece of advice which reminds us that the prohibitions the common discourse placed on women were among Fuller's strongest evidence of that discourse's very real power, she advised women to avoid "the slavery of habit" imposed by "the press of other minds," and to "meditate in virgin loneliness" (*Woman* 312-313).

This resistance to common thought also takes a

spiritual caste. Frequently in *Woman in the Nineteenth Century* and in her letters, Fuller contrasts "Soul" or "spirit" to "Society," assigning the former the capacity for truth, and defining the latter as a corrupting influence which soul must resist.[4] "I do not believe in Society," Fuller wrote to W. H. Channing in 1841, in a letter in which she claimed she was "so unrelated to this sphere" that she could more easily "look at society" and "be true" than could those closer to Society. "I feel that every man must struggle with these enormous ills in some way, in every age," she writes. So sure is she that individual souls have the capacity for goodness and truth if only they have the "steadfastness and earnestness of purpose" she saw in George Ripley, that she can state: "it has not moved me much to see my time so corrupt" (LF 2: 205). Here she echoes her longer letter to Channing the previous year, in which she echoed Fourier: "[H]ope for man is grounded on his destiny as an immortal soul, and not as a mere comfort-loving inhabitant of earth, or as a subscriber to the social contract. . . Man is not made for society, but society is made for man" (LF 2: 109).[5]

Soul's access to truth is represented specifically as being dependent on its privileging of subjective perception, while Society's main detriment is a conformity which

distorts or limits perception. "We sicken . . . at the pomp . . .of words," Fuller writes in *Woman in the Nineteenth Century*. "We start up from the harangue to go into our closet and shut the door. There inquires the spirit, 'Is this rhetoric the bloom of healthy blood or false pigment artfully laid on?'" (254-255).

The opposition of independent Soul to conformist and constricting Society is a common Romantic and transcendentalist theme, central to Emerson and Thoreau as well as to Fuller, but the scientific concepts and conflicts formative to Fuller's poetics lead her to see that the relationship between Soul and Society cannot be one of simple adversity. Just as Fuller refuses to see science as incommensurate with prophecy and mesmerism, religious faith, Romantic imagination, or intuition--because in her experience each informs the others, as when, for instance, optical science revises Fuller's understanding of the Indian figure she *imagines* at Niagra--so she finds that Soul and Society are inseparable. Although independent thought must be allowed dominance over those "whose opinions are already labelled and adjusted too much to their mind to admit of any new light . . ." (*Woman* 257), it can achieve this dominance only through a sort of cooperation with them. Understood as reader and writer to each other in the ongoing textual

conversation Bakhtin describes, Soul and society themselves form a dialogic relationship. Necessary is a synergy in which the text of the free thinker would not simply reject the dominant discourse and its "false pigment" to find truth, and the authoritative text would not erase what it would call unspeakable. Rather, the two would combine, rearrange their elements, and produce a new discourse.

How Fuller arrives at this understanding of discourse as a cultural practice rather than a reflection of, or distortion of, the world, has to do not only with science's demonstration of the discursive nature of its own authorizing powers, but also with specific characteristics of some of the particular sciences subtending Fuller's thought. We recall that in Fuller's model of Leibnizian perception and representation, the monadic Soul "always expresses within itself its relations to all others" (463). Fuller's free-thinking Soul, then, cannot fully disentangle itself from Society. Its own discourse, through which it perceives and represents the world, will inevitably participate in the power dynamics manifested in the dominant discourse. The form of this participation will mirror the model of electrical charge illustrated by Faraday, and taken up so avidly by Fuller in her descriptions of female and male energy in *Woman in the Nineteenth Century.*

Within Fuller's text, gender becomes a metaphor for this necessary reciprocity of Soul and society, *through* the metaphor of electricity. Following a discussion of man's "two-fold relations, to nature beneath and intelligence above," Fuller presents a one-sentence paragraph which seems a logical development of that idea: "But you cannot address him wisely unless you consider him still more as soul, and appreciate the conditions and destiny of soul" (*Woman* 343). Upon closer examination, however, it seems this sentence merits its own paragraph because it can be read not only to conclude the thought preceding it, but also to introduce the ideas following it. While at first it seems irrelevant to the section it *heads*, a long passage on the reasons for the current state of gender discrimination, it is in fact the beginning of a carefully rendered relation between the two topics it bridges.

Fuller's next "paragraph" is actually a table of male and female attributes:

> Energy and Harmony.
>
> Power and Beauty.
>
> Intellect and Love.
>
> Or by some such rude classification, for we have not language primitive and pure enough to express such ideas with precision. (*Woman* 343).

Fuller conforms to accepted norms (read "society"), describing the "two methods" of the masculine and feminine, but then immediately admits her table's inadequacy, articulating the problem as one of inadequate language. She goes on to enumerate the social reasons that these distinctions are inadequate, but she cannot express *how* they are inadequate—there is no language to do so fully. She makes three attempts to express her frustration, each of which identify this passage's relationship with Fuller's writing elsewhere on the contest of Soul and Society, and all of which, taken together, tie this subject to the problems of discourse as I've defined it above. The first articulation of why we have inadequate gender categories is that we are not "primitive" enough—in becoming a civilized society, we have lost the truth. The second is that "there is no perfect harmony in human nature," and the third is that were there harmony, male and female would be "discoursing an obvious melody" (*Woman* 343). When Fuller uses the word "harmony" in relation to gender categories (and she does so four times on this page), we must recall her frequent descriptions of women as superior in instinct and "natural tendencies" conducive to harmony. Earlier, as we have seen, she has conceived of this harmonizing ability from the model of electricity, ascribing it to a "magnetic

element" which sensitizes its possessors to "the fine invisible links" connecting all around them (*Woman* 302). When we note Fuller's description of the work of the *New-York Pathfinder* author of "Femality," whom she admires for his representation of women, this association of the "feminine" with a harmonizing force is further reinforced, and moreover, is linked to the competing discourses of Soul and society. The metaphors begin to come together within the text of this passage:

> He views woman truly from the soul, and not from society, and the depth and leading of his thoughts are proportionably remarkable. He views the feminine nature as a harmonizer of the vehement elements, and this has often been hinted elsewhere; but what he expresses most forcibly is the lyrical, the inspiring, and inspired apprehensiveness of her being.
>
> This view being identical with what I have before attempted to indicate, as to her superior susceptibility to magnetic or electric influence . . . (*Woman* 309)

On the following page Fuller clarifies the model of electric influence: through electricity "[m]ale and female . . . are perpetually passing into one another," and "[f]luid hardens

to solid, solid rushes to fluid" so that "[t]here is no wholly masculine man, no purely feminine woman" (*Woman* 310). Reading these passages together, we see how Fuller's text becomes just the sort of intertextual performance the problems of discourse call for. When gender alone serves as metaphor for the Soul/society opposition, "woman" represents Soul, and "male" stands for society. And to a certain degree that trope is true to Fuller's feminist project of disrupting patriarchal discourse. When women are accorded better instincts and even when they are called better harmonizers, this too seems a fairly straightforward feminist promotion of women's strengths. But, when instinct and harmony are represented through the metaphor of electricity, it becomes clear that Fuller is not simply promoting a female voice to combat the dominant male discourse. I shall return to this point more fully below; here it must be noted that the greater quantity of electricity women posses no longer means anything as simple as their superiority, but rather means that women--who in the gendered metaphor at work here represent Soul--have the greater energy to pass *to men*.[6] The current then moves back and forth between these poles, existing as neither female nor male, just as an electrical current *must* move between positive to negative charges in order to exist. To hook on

the rest of these related metaphors, as electricity must flow between charges, and female voice must interrupt patriarchal discourse, and female and male traits must flow between sexes, and Soul must visit with society, so individual thought must come to terms—literally—with common "knowledge."

Dialogic interaction of Soul and society is necessary, in Fuller's experience, to familiarize the Soul with what it must overcome with its truth. After a busy visit to Boston, Fuller wrote to W. H. Channing: "I am always most happy to return to my solitude, yet willing to bear the contact of society, with all its low views and rash blame, for I see how the purest ideal natures need it to temper them and keep then large and sure." (LF 2: 191-192). Her vision of a new, independent national literature, in her essay *American Literature*, asserts that no true American text can arise until we become "deeper" than "the prevalent tone of society," but that transcending society's discourse will take more, even, than being "sternly severe. . .eschewing cant, compromise, servile imitation, and complaisance" (American Literature 383). Soul must search itself: in a footnote to a passage in *Woman in the Nineteenth Century* in which she warns that we might become "'word-heroes,' . . .word-Catos, word-Christs" if we "do not reserve a part of

[our] morality and religion for private use," Fuller comments:

> Dr. Johnson's one piece of advice should be written on every door; "Clear your mind of cant." But Byron, to whom it was so acceptable, in clearing away the noxious vine, shook down the building. Sterling's emendation is worthy of honor:
>
> "Realize your cant, not cast it off."(*Woman* 255)

Realizing one's own ideological slant, or cant, requires an understanding of the larger economy of social practices shaping all discourse. Fuller entertains an idea later expressed by Bakhtin's assertion that "[i]t is essential that the two individuals [exchanging utterances] be *organized socially,* that they compose a group (a social unit); only then can the medium of signs take shape between them. The individual consciousness not only cannot be used to explain anything, but, on the contrary, is itself in need of explanation from the vantage point of the social, ideological medium" (Marxism 930, Bakhtin's emphasis). Soul cannot merely pierce through Society's veil (or "slant" beyond it, as Dickinson would hope) but rather Soul and society must alter each other's discourse. Soul, Fuller realizes, must change Society's discourse *in order to* see beyond it, and to have words for what it finds there.

That process will demand an engagement with the dominant discourse so strong that the material conditions from which the dominant discourse arises are exposed as mutable. Even then Soul will only seek a new truth it cannot yet describe or create. Only by perceiving actual changes in social conditions will Soul realize for what it would speak. When Fuller seeks a literature different from England's, through which "we receive, in torrents, the influence of her thought . . in many respects, uncongenial and injurious to our constitution" (American Literature 382), she finds "[T]hat day will not rise till the fusion of races among us is more complete. It will not rise till this nation shall attain sufficient moral and intellectual dignity to prize moral and intellectual, no less highly than political, freedom . . ." Only then "national ideas shall take birth, ideas craving to be clothed in a thousand fresh and original forms" (383). The change in social conditions makes possible, in what may seem a tautological statement but is rather an anticipation of both Marxist and pragmatist themes, a discourse which *would* change them. "Could we indeed say what we want," Fuller writes, "could we give a description of the child that is lost, he would be found . . . But we *say* not, see not as yet, clearly, what we would . . . hearts crave, if minds do not know how to ask it" (*Woman*

250, my emphasis).

In this move Fuller's discourse theory takes her further than other transcendentalists in confronting the connection between social conditions and the textual nature of our knowledge of, and construction of, the world. Emerson claimed that words are signs of natural facts, which in turn are signs of spirit--a sort of transitive property of text which emphasizes the word's relationship with nature. Within a Romantic paradigm of the individual seeking the sublime through a lonely wandering into nature, Emerson's formula tends to depict the deciphering of words as a solitary enterprise. Fuller saw that words--words themselves, all language, not merely language *about* politics--are also signs of political and economic struggles, and the material facts these struggles engender, as the word "energy" is political when its meaning weakens or strengthens women. Society, subject to the "law" of the dominant discourse it sanctions, will do all it can to "outlaw" or constrain those who would change words to change the world (*Woman* 286). Thus her understanding of how we use words and know the world will entail a socio-political component that Emerson perhaps imagines but does not require.[7] Going off into nature, away from society, avoiding the dominant discourse, will never fully free one from its control and deception, nor enable a

new truth to come into words and being, because there is no "outside" of the system of discourse, no "space of wild exteriority," to use Foucault's phrase. Able to step only far enough onto the margin to have a good look at the text, Fuller must re-tool discourse for new uses, as the word "energy" was reshaped to serve the emerging discourse of electricity, and in turn to serve her feminist cause.

Thus early in *Woman in the Nineteenth Century,* in the descriptions of Niagra, Fuller's sympathy, and even outrage, over the plight of the Indians, are nearly inexpressible--they have no place in society's discourse. Fuller must replay stereotypical images and phrases over and over in her mind, and on the page, in order to rework them. Now it is clear how crucial this textual work is. Only by manipulating discursive elements--reassigning the word "masses," redefining the Indian "figure"--can Fuller alter and put forward her perspective. For really, it is not against the government, but against common descriptions of the Indians that Fuller must wage her battle once she understands the power of discourse to construct "common knowledge" and the government policies it supports. The same holds true for her project of overcoming "The Wrongs of American Women," in the essay of that title and in *Woman in the Nineteenth Century*: Fuller's subject is the *representation* of women--as weaker,

or more primitive, or more spiritual, or Minerva, or Muse. The accrual of representations demonstrates their rhetoricity, as I noted in Chapter Two, and undermines their validity. It also opens the way for other, previously unimaginable, unspeakable representations, as Fuller's discursive act of placing these representations in her essay puts them where they need to be to undergo revision: in text. Because she recognizes her textual power, Fuller can write a woman "sea captain," and can even represent women within the discourse of science, imagining a "female Newton."

II. Science, Gender, Discourse

> *I dare to trust to the interpreting spirit to bring me out all right at last-- (Summer 149)*

The contests over knowledge and truth instated by science were, as I have shown, contests of language as well. These scientific conflicts, both internal contradictions such as those about the nature of light, and external rivalries such as those represented by religion and romantic imagination, led Fuller to invent a narrative practice which could tolerate, even exploit them. As do the contests of science, the contests of discourse which they reveal become for Fuller powerful mechanisms of change, shaping utterly

the form, content, and purpose of her literary work. Fuller's discourse theory, then, shares it main roots and tenets with today's poststructural theories: a root in scientific history read as discursive assertion rather than as a truth beyond cant, ideology, and dialogue; a deconstruction of binaries such as fact/fiction and subject/object; and a rejection of the hierarchical categorization of epistemological modes.

The well-known passage in which Fuller describes the feminine as both Muse and Minerva exemplifies the new vision that can appear when the text speaks "from society" and from "the soul," and when contradictory ways of knowing and meaning are tolerated side by side, rather than reduced or silenced. When it is reread with these things in mind, its dimensions and proportions change. A description of women's characteristics expands not only to a redefinition of gender in general, as Jeffrey Steele and others have noted, but also to a consideration of how we know and how we define.

I cite from the passage at length below to display its discursive mechanisms. Fuller creates an intertexual dialogue which emphasizes the interconnectedness of her several themes in *Woman in the Nineteenth Century*. As her sentences combine and exchange ideas about women, gender, and various ways of knowing, we see that Fuller herself has

already arrived at a way of knowing that entertains both contradiction and synthesis. While science seems at first to be discounted by Fuller and to have little role in the passage or in my reading to follow, it is important to realize the texture of the whole passage in order to see how central is Fuller's scientific reading to its boldest experiments. The passage reflects an origin shared with poststructuralism when it explicitly displays the epistemological disruption presented by science.

> There are Two aspects of woman's nature, represented by the ancients as Muse and Minerva . . .
>
> The especial genius of woman I believe to be electrical in movement, intuitive in function, spiritual in tendency. She excels not so easily in classification, or re-creation, as in an instinctive seizure of causes, and a simple breathing out of what she receives that has the singleness of life, rather than the selecting and energizing of art.
>
> More native is it to her to be the living model of the artist than to set apart from herself any one form in objective reality; more native to inspire and receive the poem, than to create it . . . Such may be the especially feminine element, spoken of as Femality. But it is no more the order of human nature that it should be incarnated pure in any form, than that the masculine energy should exist unmingled with it in any form . . .
>
> There is no wholly masculine man, no purely feminine woman.
>
> History jeers at the attempts of physiologists to bind great original laws by the forms which flow from them. They make a rule; they say from observation, what can and cannot be. In vain! Nature provides exceptions to every rule. She sends women to battle, and sets Hercules spinning; she enables women to bear immense burdens, cold, and frost; she enables the man, who feels maternal love, to nourish his infant like a mother. . . She enables people to read with the top of the head, and see with the pit of the stomach.

> Presently she will make a female Newton, and male Syren.
>
> Man partakes of the feminine in the Apollo, woman of the masculine as Minerva.
>
> What I mean by the Muse is the unimpeded clearness of the intuitive powers which a perfectly truthful adherence to every admonition of the higher instincts would bring to a finely organized human being. It may appear as prophecy or as poesy. It enabled Cassandra to foresee the results of actions passing around her; the Seeress to behold the true character of the person through the mask of his customary life.(Sometimes she saw a feminine form behind a man, sometimes the reverse.) It enabled the daughter of Linnaeus to see the soul of the flower exhaling from the flower.*[8] It gave a man, but a poet man, the power of which he thus speaks: 'Often in my contemplation of nature, radiant intimations, and as it were sheaves of light appear before me as to the facts of cosmogony in which my mind has, perhaps, taken especial part.' He wisely adds, 'but it is necessary with earnestness to verify the knowledge we gain by these flashes of light.' And none should forget this. Sight must be verified by life before it can deserve the honors of piety and genius. Yet sight comes first, and of the sight of the world of causes, this approximation to the region of primitive motions, women hold to be especially capable. . ..
>
> Let us be wise and not impede the soul. Let her work as she will. Let us have one creative energy, one incessant revelation. Let it take what form it will, and let us not bind it by it by the past to man or woman, black or white.(309-311)

It might seem that one of Fuller's points here is to denigrate science, herself jeering at the physiologists. But as we continue to read, it becomes clear that what she is criticizing is the scientists "bind[ing]" of laws that are based merely on "forms," or physical attributes.[9] Fuller is distinguishing what today we would call gender, from sex, and this theme continues throughout the passage. The former

is created by social and cultural forces; the latter is "the forms which flow" from biological processes. We can hear echoes of another scientific debate raging around Fuller, in lectures and Lyceums in Boston and New York. Theories of "Development," which would mature into Charles Darwin's theory of evolution, specifically debunked the "argument from design" Fuller's passage jeers at. It is clear, then, that Fuller is not rejecting scientific knowledge; on the contrary, she is participating in a shift in scientific thought which would, in later writers, provoke the kind of radical cultural critique ignited by theories of optics and electricity in her own work. More specifically, and here Fuller's thinking takes a radical leap even from the radical science of Development, she rejects the mistake science makes in conflating gendered traits with sexual characteristics.

In fact, then, Fuller recognizes that science can teach us much by studying "forms," but only when these "observation[s]" are "verified by life." The new conception of gender Fuller is developing will depend upon the complicated attitude toward science she has already adopted. An odd convergence here marks a problem inherent in Fuller's conception of science, and central to her poetics and theory of discourse. For Fuller, gender is a descriptive, revisable

system, and the social and cultural forces shaping gender include, in Fuller's view, science. Sex, on the other hand, is a "real" category to Fuller, not a discursive one, and the biological processes marking sex are defined by science. Thus, the role science plays in our knowledge of sex is essentially the same as that it plays in our understanding of gender; it describes and, with new data, revises. The difficulty Fuller encounters in attempting to separate gender from sex parallels the contradiction she tries to tolerate in her attitude toward science: science can be both a cultural practice, reflecting ideological and social "thought styles" rather than discovering and describing truth, *and* a useful tool in understanding the world.

In a more general form this problem occurs throughout the book as a whole: scientific evidence accepted by Fuller as fact comes into conflict with other ways of knowing she also accepts as valid. Thus science not only shapes Fuller's discourse through the tropes it inspires and the epistemological concerns it raises, but finally through the adjustments it demands in her discursive method. It is a problem which comes to the fore, as well, in *Summer on the Lakes,* particularly in her sketch of the Seeress of Prevorst. This remarkable account of the life of a German clairvoyant, Frederica Hauffe, to whom Fuller also refers in

Women in the Nineteenth Century, was deemed by Perry Miller to be a "digression," and was omitted from editions of Fuller's work for over a century, from Fuller's brother Arthur's in 1856, to Joel Myerson's in 1978. But this tale of prophecy, visions, and "magnetic healing" can be read, as Marie Urbanski has argued, as the actual center of Fuller's text.

Urbanski emphasizes the importance of this passage to Fuller's overall intention in *Summer on the Lakes,* stating "[t]he Seeress's 'ghostly vision' is the central carbuncle in [Fuller's] associative chain that connects the Unseen World of the vanquished with the incompatible world of greed and violence. . . What Fuller seeks in *Summer on the Lakes, in 1843* is a transformation of consciousness" (157-158). I agree with Urbanski on this point, and with her suggestion that the new vision of consciousness is manifest in this passage's presentation of what Emerson called Fuller's "pagan" beliefs, such as her belief in the power of gems as talismans and in "extrasensory" perceptive powers. But in fact the passage is even more "multivocal" than Urbanski maintains (151), presenting as well Fuller's belief in scientific knowledge properly conceived. The new consciousness is manifest in the passage's incorporation of these different belief systems; it is this more difficult

synthesis that makes the Seeress passage the "central Jewel" of Fuller's text. This text provides a point of departure from which Urbanski can examine how Fuller's new consciousness, a mode of thinking which assumes "[t]here is a connection between body and soul," and "[c]lairvoyance is a misunderstood source of energy" (Urbanski 158), reads the "Unseen" as being as real as the visible world. Urbanski equates the "unseen" with the silenced voice of the oppressed, and so links the Seeress's "ghosts" with the illusional Indian figure Fuller senses behind her at Niagra, which then stands for native Americans in general. Clearly, Urbanski's reading on these points coincides with my own. But by ending her analysis at this point, she leaves us with little more than a standard transcendental model of consciousness with an extra dose of the mystical or occult. As for the contradictory epistemologies of empirical science and subjective, intuitive pseudo-science, Urbanski's reading suggests at least a failure on Fuller's part to recognize this conflict, as if Fuller were unaware of the contemporary professionalization of science and the growing distinctions being made between science and pseudo-science. In her explanation of Fuller's attitude toward clairvoyance, Urbanski diverges even more from my reading, attributing to Fuller a reactionary, anti-science posture.

Urbanski solves the problem of the epistemological contests of pseudo-science and science in Fuller's texts by stating quite bluntly that Fuller was "psychic herself," and made "a direct connection between the emotions and health" (155). Urbanski emphasizes how the Seeress passage "challenge[s] the efficacy of patriarchal medical treatment," declaring:

> How Margaret Fuller would shudder at medical technology today! She linked unhappiness, frustration and disappointment with illness. She understood the essential connection between body and mind, as a means of holistic healing. (156)

These statements oversimplify the complex attitude to science Fuller displays throughout her body of work, and even specifically within the Seeress passage. Urbanski herself, a few pages earlier, notes several aspects of the Seeress's experiences which were related to science, and states that "Fuller has uncovered in her translation of the Seeress a remarkable amount of material that should be of interest to scientists and thinkers of our own time" (150). Fuller, according to Urbanski, saw Frederica's descriptions of sun-circles as bringing together "mathematical concepts" with "the world of creative thought." When Fuller relates that the Seeress "ascribed different states to the right and

left sides of everybody," Urbanski notes the correlation with today's knowledge of the left and right hemispheres of the brain (150). But from this notice of science--rare in Fuller criticism--Urbanski draws little, because she is looking only for examples of Fuller's critique of science. She finds this critique in Fuller's consideration of several pseudo-scientific ideas, including the belief in the power of gems, and a curiosity in mesmerism and somnambulism. Throughout her essay, Urbanski reads these interests as an opposition to empirical science, but I read them as merely a critique of the privileging of the empirical method within the practices of science, and more specifically even, within medical science. This passage is a critique of, specifically, medical "knowledge" and practices which ignore the subjective components of illness and healing powers lacking empirical foundations. Kerner, the author of the German text, is a physician, called upon to treat the Seeress. He himself acknowledges the inefficacy of various treatments, such as bleeding, tried on Frederica before his attending her, and he learns to listen to her to best treat her illness. The treatment she requests evokes both the physical aspects of "magnetism" explored in the new science of electro-magnetism and the intuitive, prophetic pseudo-scientific meaning of the word: she "prescribed a magnetic

treatment, which was found of use," and "described a machine, which she wished to have made for her use . . . and she derived benefit from it" (156).

Fuller's notion of the subjective component in scientific, medical, and perceptual practices was vastly more complicated than Urbanski recognizes. Science had led Fuller to deconstruct the subjective/objective binary, and in so doing, to dismantle also the mind/body and spiritual/physical dichotomies Urbanski discusses. Urbanski herself, because she holds onto these categories, forces Fuller to "decide," to choose the first term in each dichotomy. But one of the earmarks of Fuller's radical thought, and of the new discourse it produced, is that she did not decide.

My reading of Fuller's Seeress passage emphasizes the dialogic development and the epistemological eclecticism characteristic of Fuller's new understanding of discourse, a discourse that proceeds not by mitigating the differences among these components, as Urbanski's reading would do, but by putting them into play with one another as discursive material, letting the text produce, and be shaped by, the meaning its parts insist upon. Oppositional utterances and epistemological contradictions were neither obstacles to the point of Fuller's text, nor beside the point. They were part

of the point that all meaning arises through dialogic interaction. Fuller's position on clairvoyance and on medicine reflected her deep interest both in subjective, pseudo-scientific *and* in rational, scientific ways of knowing. What fueled that interest was her conviction that both could tell the truth, and that, in fact, when they seem to tell different truths we must see how they speak to each other. Fuller's passage insists that, rather than obscuring one another or canceling each other out, the dialogue of textual parts and of different epistemologies reveals a clearer vision.

Fuller's introduction of the Seeress passage joins the very physical, but invisible, lines of Faraday's magnetism to the metaphysical lines the clairvoyant draws between the earthly and spiritual worlds, and connects both to the physiological nervous state of an individual, to the cultural ethos, and to language:

> He here gives a biography, mental and physical, of one of the most remarkable cases of high nervous excitement that the age, so interested in such, yet affords, with all its phenomena of clairvoyance and susceptibility of magnetic influences. (145)

Fuller emphasizes her concern not merely with the phenomena of the Seeress or of the publication of Kerner's book, but

with the response of her culture and herself to these phenomena. And there is as much to be learned from the observation of these reactions as from the Seeress's tale itself. The story is in fact framed with the reactions of its audiences, contextualized within a contemporary German culture "so interested" in phenomena such as this, and by implication of Fuller's summarizing and translating it for us, within an American culture similarly fascinated. She then immediately recounts her own reaction to the book, presenting both her critical response to Kerner's text, "a thick and heavy volume, written with true German patience, some would say clumsiness"; and promises to reveal her "own mental position on these subjects." Having thus emphasized the textuality of the Seeress--we already suspect we may not be able to see Frederica for all of these contextual frames and responding voices around her--Fuller literalizes her dialogic method, stating that her position "may be briefly expressed by a dialogue between several persons who honor me with a portion of friendly confidence and criticism" (145). Three pages then render textually the competing voices Fuller must grapple with in interpreting the Seeress story. The voices, labeled "Old Church," "Good Sense," and "Self-Poise,"[10] make clear the epistemological conflicts presented by the story of an ill clairvoyant, told by a medical doctor

who believed in magnetic spiritual states. Fuller's self-moniker, "Free Hope," hints at the "position" she will come to, a fluid, shifting, "free" interpretation which is hardly an interpretation, nor a position, in the usual sense.

This frame of dialogue made visible on the page, reminds us that the tale itself is a frame, Kerner's account of the Seeress's life. As we read the narrative that follows, if we are trying to establish the truth about the Seeress, we throw up our hands--we cannot distinguish Fuller's account of Kerner's account from Kerner's own perspective, nor Kerner's perspective from the Seeress's own understanding of what was really happening to her, nor the Seeress's understanding from the explanations her contemporaries would give, nor from those Fuller's contemporaries would give. This is Fuller's very point--the telling of the tale accrues various contexts, meanings, connotations, and levels of validity as it proceeds; it is this accrual, the inevitable result of the give and take of discourse, which becomes Fuller's subject matter. While she began perhaps most interested in the phenomenon of the Seeress itself, her text puts that aside and becomes more and more a textual tale rather than an historical account or a pseudo-scientific, mystical narrative.

This description of Kerner's book brings together

emotional and what today we would term psychological response ("high nervous excitement,") with both the new "real" science of "magnetic" forces and the older mystical power of "clairvoyance," in the sort of non-hierarchical pastiche I have emphasized throughout this study. But again we must look to the particular aspects of this passage to understand better Fuller's text, rather than simply note the presence of these various influences. For the passage of the Seeress itself produces new meanings when we pause to look at the specific role of each of these strains in the text. The phrase "high nervous excitement" begins an associative chain of various medical models, as it simultaneously evokes an eighteenth-century "science" of bodily humours and dissipating energy, and the beginnings of nineteenth-century scientific understandings of neurobiology and electrical charges within the body. It marks the transition stage from a physical science based on traditional ideas rather than objective observation, to a more empirically-based science of physiology, yet it does so in language still resonant with an emotional, thus subjective, sense. At the same time, because this is an excitement "of the age," there is an implication of a socio-cultural element resulting from these sciences, and perhaps, resulting in them as well, and in the revision of them traced by the changing understanding of the

very phrase "nervous excitement." The word "excitement" has further significance as it sounds the note "energy" plays in *Woman in the Nineteenth Century*: people, cultures, magnetic objects, and spirits, can all be described as "excited." Because the literal meaning of the word is different in each case, its status as metaphor is emphasized. Each of the meanings of the word then influences our sense of the other definitions or connotations, so that the word continues to change.

Frederica's "second sight" represents as many conflicting models of perception for Fuller in her negotiations among medical and magnetic sciences and pseudo-sciences as literal sight did in her readings of competing theories of optics. This "second sight" is a way of knowing different from those usually encouraged in women of Frederica's class (indeed, she was "unlearned" in foreign languages, history, etc.), and so its portrayal through multi-faceted uses of the words "excitement" and "magnetic" emphasizes its status as hybrid epistemological mode, these words evoking the scientific, rational, and mystical ways of knowing that textually surround and constitute it. The Seeress's prophesies and somnambulic visions are, within a few paragraphs, explained as the imaginative energy of subjective experience, as scientifically-explainable

magnetic effects, as spiritual abilities drawn from the magnetic forces of physical bodies, and even as illness, described as a profound lack of physical energy. This last suggests the two possibilities that the second sight is brought on by an imbalance of physical, emotional, and spiritual energies, or that such an imbalance leads to the second sight. The words "energy" and "magnetic" slip in and out of all of these meanings, frustrating the reader who would pin them, or Fuller, down.

Fuller continues her epistemological wandering, blurring the lines between the science of the physical body and the pseudo-science of mesmerism. For example, at one point her attitude toward mesmerism seems simple: "As to magnetism, that is only a matter of fancy," she declares (148). And yet this is not a rational dismissal of it, for a few lines later, in a paragraph which beautifully locates Fuller's writing subject in the midst of her discursive world of epistemologies, Fuller writes: "I would beat with the living heart of the world, and understand all the moods, even the fancies or fantasies, of nature. I dare to trust to the interpreting spirit to bring me out all right at last--to establish truth through error" (149). In this light, the "fancy" of mesmeric magnetism is as important to interpret and understand as any of Faraday's experiments.

Fuller's first description of Kerner's book states that it concerns "the projection of a world of spirits into ours" (145). Considering the various possible explanations for the "ghosts" Frederica sees, Fuller claims they are not real ghosts, for her own religiosity consistently places such occult spiritualism outside of the realm of reality. But she does not dismiss them merely because they are "fantasies," and she remains open to different explanations for their source. When she says they are "spiritual facts of high beauty"(*Summer* 162), she sounds like a typical transcendentalist. The "spirits" are both ghost/saints and, by definition, the essence of the spiritual world, in other words, the spiritual facts of which "our" world's natural (and scientific) facts are the symbols, according to basic transcendentalist tenets.

But Fuller's words offer other interpretations as well. The world which is "ours" is nature (and science), the everyday world. When Fuller associates Frederica's visions with her own at Niagra, "our" world is also the world of the whites, which in turn projects itself into that of the Native Americans, suggesting a social-political force behind the appearance of ghosts. She also seems to accept Kerner's argument that the ghosts are "projections" of the Seeress's own consciousness, a vividly psychological explanation.

As Fuller's text on the Seeress unfolds, all of these metaphoric worlds project onto one another. What becomes clear is that this is not a case of worlds colliding, but rather conversing; the passage of the Seeress is an extraordinary discursive performance, in which content, context, form, and meaning shift yet remain, in the terms of the text, valid in all of their forms. This becomes a text about textual inclusiveness, in which inconsistencies and disruptions become discursive material to augment, rather than diminish the "meaning" of the narrative.

When introduced as textual material, as subject matter itself, the contradictions science introduces require Fuller's most radical discursive innovations, including mechanisms such as the dialogue which introduced the Seeress passage, and the extreme form of intertextual dialogue evident there and in the passage on Muse and Minerva, to which I now return. As Fuller concentrates on a varied array of topics in this long passage, her topic is now revealed to be the epistemological eclecticism noted in the Seeress narrative. She combines accounts of miraculous physical phenomena—people "read with the top of the head"--with gender critique, and validates knowledge produced by a combination of mechanisms: the transcendental contemplation of nature; subjective experience; and other ways by which

one can "verify the knowledge we gain." While she does produce a hierarchy of epistemological modes—"Yet sight comes first"—her privileging of subjective sight over other ways of knowing is an inversion of the common paradigm, and her larger point is that no one way of knowing functions well alone, but rather all should work together.

The fact that all of these examples of the Muse's power are given in service to a gender critique emphasizes the feminist subtext with which this examination of "the world of causes" is enmeshed, and indicates the correlation between the problems of discourse raised by science and by gender in Fuller's thought. Fuller presents a portrait of "woman's nature" as dual, its two sides represented by the intuitive and inspirational Muse and the warrior Minerva. When she goes on to claim that it is more "native" to woman to inspire than to create, we must keep in mind how complicated the question of nature versus nurture has become for her, complicated not only in measuring the effects of each, but even in simply defining the differences between them, as illustrated by the different influence science has had on the "nature" of sex and the "nurture" of gender.

The passage's reference to a "native" trait in women, then, needs to be accorded careful attention on several points. First, this entire paragraph describes Muse-like,

not Minerva-like qualities, and as such does not provide a full description of women, while is does serve as a description of the feminine side of men. Second, these comments are immediately followed by the statements that it is *not* "the order of nature" that femininity should be "incarnate pure in any one form," and that "[t]here is no wholly masculine man, no purely feminine woman." Woman "partakes . . . of the masculine as Minerva," so what is more native to the "especial genius" of the Muse is to be reimagined as complemented by "the Minerva side," the side that will allow women to "create" poems (or essays), or "be sea captains." Also, as Muse and Minerva exist in both men and women, the characteristics of both should be valued in either gender, so that a Minerva-like woman might fight and write, while a Muse-like man might intuit and harmonize. At this point, it is clear that attributing a passive role to women's "native" character means almost nothing without taking account of the passage as a whole. And within this context, the attribution loses any essentialist meaning. We see here what amounts to a language problem: the vocabulary Fuller inherits, of "feminine" and "masculine," "manliness" and "Femality," hinders her attempts to revise the idea of gender. The terms cross meanings in her text, pressed into service sometimes to describe sex, other times to describe

what she wishes to separate from sex. Language, like science--indeed because science has disrupted the terms of both sex and gender--occupies both camps.

Rather than ignoring or denying the complications science and terminology present, Fuller's text embraces them, recognizing these as discursive issues, and drawing them out through the entire passage. Her response here is a reflection of the mechanisms necessitated by the temporary linguistic vacuum new scientific discoveries created: a careful composition which recasts common terms, puts different discourses into play with one another, and anticipates reader response.

For example, directly following the passage cited, Fuller acknowledges that the Minerva, warrior-like side she finds in women is her more radical proposal, and might therefore seem to have received more attention in her text. But she insists that she wishes the Muse side to be valued just as highly, that both elements are necessary for the "religious self-dependence" which comes with breaking "the weakening habit of dependence on others" (311). Thus she draws our attention, even after we have read it, back to the passage in which she has explained carefully her idea of the Muse, lest we find it over too quickly and neglect to give it the weight we assign her more lengthy remarks, throughout

the book, on Minerva. This is important to my emphasis on her consciousness of the reader's response, and of habitual meanings which would obscure her own. As Jeffrey Steele has pointed out, had she failed to detail her notion of feminine Muse, the term might have been read as an equivalent of the nineteenth-century "true women," summed up by Steele as "pious, pure, domestic, and submissive" (xxxiv). Fuller's Muse, however, "retains primarily vestiges of the first two qualities . . . at the same time that she embodies a power threatening domesticity and submissiveness" (Steele xxxv). Even Fuller's description of the "feminine" Muse within us includes assertiveness, brutal honesty, and judgment. Fuller takes on the common term "Muse" in order to write anew the terms of gender.

Her redefinition of the term which becomes a key element in her redefinition of gender, then, is clearly an important step in her project. And yet her definition can hardly be called that. One defines by marking boundaries, showing what *is* a man or a woman's nature, and what is not. But as Fuller pulls down traditional gender boundaries, rather than creating new ones, she presents a model which is defined by its fluid nature, its "no wholly" definable status. This new model describes gender as a continuous current *between* poles, rather than representing it by

parameters marking the boundaries of those poles. This new description marks a sort of negative capability which Fuller's text will increasingly demand. Just as we must begin here to conceive of feminine men and masculine women as simple accounts of gender rather than as exceptions to gender, in what follows we shall have to conceive of subjective perception and objective knowledge as bound together rather than apart, as mutually inclusive rather than exclusive.

As we return to Fuller's repeated claims that women are "especially capable" of discerning "the region of primitive motions," of intuition, and of prophesy, and that they can best see "invisible connections" and so achieve harmonious relations, we must keep in mind the discursive attention I have been indicating above. Within a text which validates subjective perception and experience over "universal" knowledge to the degree this one does, such abilities certainly hold great importance, and Fuller's describing them as electrical energy demonstrates, as I pointed out in Chapter Two, her understanding of these as very *real* powers. We can now see another dimension to her trope: the back-and-forth flow represented by the electrical current is also the dialogic flow of discourse, as word-use itself is recognized as an energy, its power to describe, control, and even

create gender always moving between--in fact existing only by moving between--the polar opposites of male and female. It is also worth noting that Fuller's radical departure from the separate-nature/separate-sphere gender ideology of her time, through the metaphor of electricity, includes the implication that energy--Muse-energy, Minerva-energy, or electrical energy--actually accumulates according to subjective perception. Fuller's model, curiously, anticipates later scientific discoveries about the laws governing the accumulation and dissemination of energy. Gillian Beer has written of the ways literature often draws on the same "resource[s]" and "restiveness" that prompt scientific inquiry, and the resulting "crossing to and fro, between physicists, philosophers, and poets." Beer writes in particular about late-nineteenth to early twentieth-century "wave theory," which leads both to the wave-particle duality intrinsic to quantum physics, and the constant flow of energy waves described in thermodynamic entropy. Beer points to shared "modes of thought" behind Eliot's *The Waste Land* and descriptions of quantum phenomena, both of which emphasize "the relativity of description . . . crucial both for advances in quantum mechanics and in modernism" ("Wave Theory" 194). She proposes also that in *The Waves,* Virginia Woolf accepts wave theory "without quarrel," aligning

herself with both the physicist Schrodinger and the psychologist Jung, and employing the idea of thermodynamics' "oceanic communality" as a creative force,(210) despite entropy's prediction of the flow of our "universe of waves" dissipating to fatal cold. I read a similar "scientific" concern about the structure of the universe in Fuller's text. When one thinks of our age's discoveries of the characteristics of quantum phenomena, in which charged sub-particles accumulate in wave patterns or disseminate in random designs according to an individual observer's perception (through measurement), Fuller's metaphor of flowing, accumulating, and dissipating energy is reversed, and almost eerily literalized, the stuff of scientific knowledge seemingly exhibiting the behavior of subjective, changeable human traits.

Given this alignment of gender with discourse, and the representation of both through the metaphor of electricity, we must read carefully Fuller's references to woman's greater intuition. This is not, it becomes clear, an essentialist alignment of women with nature and the primitive. What women are "especially capable" at discerning is, within Fuller's model of discourse and eclectic epistemological practice, *discursive activity.* As marginalized participants in patriarchal discourse they

experience most intensely the power dynamics at play in textual exchange. "My position as a woman, and the many private duties which have filled my life, have prevented my thinking deeply on several of the great subjects which these friends have at heart," Fuller wrote to William H. Channing in 1840. "I suppose, if ever I become capable of judging, I shall differ from most of them on important points" (LF 2: 109). Of course we know that Fuller did soon feel herself capable of judging nearly everything, and of deciding for herself what were the great subjects. She felt her "position as a woman" a distinct advantage in doing both of these, as it afforded her practice in deviance. Then when her *experience* as a woman clashed with the "position" society granted her, she found herself far enough from the center of common discourse to resist its pull. She wrote to Channing the following year, "I felt so unrelated to this sphere [society], that it has not been hard for me to be true. Also, I do not believe in Society" (LF 2: 205). To not believe in society is both to reject its descriptions and proscriptions, and to remember that it represents only one discourse, which is not necessarily more "true" than another.

Discriminatory discursive acts are real to women, and keep them conscious that the text is never neutral. Finding

their experiences so often diverging from what "society" describes, women like Fuller and those she praises in her text learn not to adhere to the definitions thrust upon them. "I am only a woman, and unlearned in such affairs," Fuller writes in *Summer on the Lakes,* as she diverges from common opinion on the decision of William Hull to surrender Detroit to the British during the War of 1812. "[B]ut, to a person with common sense and good eyesight, it I clear, when viewing the location, that. . .he had no prospect of successful defense" (223). Fuller's false modesty in this refutation of received opinion (and in this challenge to the dominant opinion that war strategy is strictly a domain of male expertise) marks her real boldness both here and in the text as a whole, throughout which she constantly measures her own experience, as a woman, against what she has heard and read about the landscape, the Indians, and the settlers.

The sense of difference being female provides is in fact, Fuller suggests in letters to Channing and Emerson, a perspective all people should pursue, and one which they can attain, since the feminine resides in both men and women, and can be contrasted with the pervasive "masculine" character of society's assumptions. In the letters to Channing cited above, and in *Woman in the Nineteenth Century* and *Summer on the Lakes,* Fuller locates her ability to see

beyond the common "opinion" in her personal experience, specifying that the key to her insight is the marginality produced by her gendered experience. But she also implies that other experiences of marginality such as the social, often class-related, discomfort that makes her feel "deeply homesick" and "forlorn" at times on in her western travels, can lead to an introspection which re-emerges as cultural critique. In her own case, the alienating experience of travel produces a text which reevaluates marginal groups such as frontier women and Indians. As Fuller's notion of what constitutes a "feminine" perspective or a "masculine" perspective expands, as she sees more and more of her cultural critique as enabled by the sense of otherness provided by both her sex's and gender's marginality from the masculine dominant discourse, her discourse becomes "feminist" in today's broadest sense, challenging not only anti-feminine actions and assumptions, but also discriminatory and oppressive practices of all sorts.

So, too, Fuller's model of human relations emerges more and more explicitly as the product of a gendered perspective. As Steele, Showalter, Chevigny, and Zwarg have pointed out, Fuller's argument in her well-noted 1840 debate with Emerson over the nature of friendship is a feminist argument, as she attempted to break through the solitary

self-reliance which fostered reserve in Emerson's relationship. She insisted that she needed to "be recognized" even when--indeed because--her "manifold being," with its "darting motion, and restless flame" exposed a "labyrinth" of identity, rather than a "singleness" (LF 2: 159). In a journal entry about Emerson, Fuller writes,

> Mr. E. scarce knows the instincts. And uses them rather for rejection than reception where he uses them at all . . . He is not to his friend a climate, an atmosphere . . . he weighs and balances, buys and sells you and himself all the time. (Hudspeth, in LF 2: 161)

In a letter to Channing, she criticizes his "view of friendship, which is the same Waldo E. takes," saying it is "not enough for our manifold nature" (LF 2: 214). She goes on to describe how a better friendship would recognize "temporary character," not only "absolute worth," as an aspect of human nature. In these and other letters, in her journals, and in *Woman in the Nineteenth Century*, Fuller has emphasized her own and "woman's" fluidity in relationships, their better ability to "harmonize" and "dart hither and thither" (qtd. in Chevigny 59); we begin to see how these two models of human nature, and the two models of love which they produce, align themselves according to gender. By the end of the letter to Channing, Fuller is explicit that this

critique of friendship has a feminist foundation, as she contrasts the love of "the manly mind" with that of "the woman" (LF 2: 215).

For two reasons, both relevant to my project, Fuller and Emerson come to see the problem of friendship as a problem of discourse. First, in the autumn of 1840, they followed up their conversations with letters in which they continued the analysis not only of their friendship, but also of the nature of friendship, and of the meetings and letters in which they have previously discussed friendship. Thus, three attempts at understanding coincide: the emotional/spiritual understanding between them that *is* friendship; the ability to understand, to make sense of, the other's conception of friendship in general; and the textual understanding by which they might achieve the latter.. Finally, lurking behind these three attempts at understanding is a fourth (perhaps felt more by Fuller than by Emerson): the hope that they might, after sorting out each other's meanings, actually reach an understanding about--that is, come to share a view on--what friendship is. Finding words to bear these multiple demands in their letters stretched their language to its limits.

On another level, Fuller and Emerson could see that the need for this triple (or four-fold) reading is not

coincidental; they understood that how we see human nature will determine both what we seek in friendship and how we use language. It was an understanding which in Fuller generated a discourse anticipatory of a "feminist" theory of today. Her "free flow" model of consciousness allows an individual a "temporary character" and the ability to take on different roles; combined with her vision of social reform which would redefine how we identify each other and ourselves, this conception changes the definition of identity, and so must change language use. Urbanski misses Fuller's feminist features when she emphasizes the similarities between Emerson and Fuller, positioning both as followers of "the transcendentalist organic theory of literary art." I do agree that such a thing existed, and that for both Emerson and Fuller it produced an experimental text. But Urbanski too-easily equates its "prophetic mode" with "that which contemporary theorists consider feminine style, with its subjective, autobiographical voice" (241). I would argue that while Emerson's essays do exhibit many of the characteristics of what is described today as "feminine style," these traits are not necessarily indicative of a "feminist discourse," and that the distinction separates Fuller from Emerson in significant ways, including on the definition of friendship, and also on the uses of language.

In general Emerson did not share with Fuller--and the "feminist" position--a belief that fundamental change in discursive practices must occur in tandem, as I've described above, with social reform.

In one letter to Fuller, Emerson seems quite dubious about the possibility of a friendship between them, writing,

> I . . .do constantly aver that you and I are not inhabitants of one thought of the Divine Mind, but of two thoughts . . . We meet and treat like foreign states, one maritime, one inland, whose trade and laws are essentially unlike . . . our friend is part of our fate; those who dwell in the same truth are friends; those who are exercised on different thoughts are not, and must puzzle each other for the time (qtd. in Chevigny 123-124)

Fuller responded in a sort of reluctant agreement, writing that he "will never understand my fire. . . will never discern the law by which I am filling my circle . . . will never interpret my need of manifold being"(LF 2: 159). Emerson's reply brings together clearly what he calls the "difference in our constitution" with the difficulties of communication:

> We use a different rhetoric. It seems as if we had been born and bred in different nations. You say you

> understand me wholly. But you cannot communicate yourself to me. I hear words sometimes but remain a stranger to your state of mind. (Qtd. in Showalter 31)

In Thoreau, Fuller senses a man more open to her feminine lexicon, and more open to her sense of human nature--a man with a sense of the clarity marginality provides, as he sets out "to go to the lonely hut." She does criticize him for a still-too-masculine view of nature: "he says too consistently of nature She is mine." Yet, although she fears that perhaps her "words will say nothing" (LF 2: 243) to him, she imagines that they may already speak similar languages:

> If intercourse should continue, perhaps a bridge may be made between the minds so widely apart, for I apprehended you in spirit, and you did not seem to mistake me as widely as most of your kind do.(LF 2: 243)

III. Conclusion: Classification, Irony, and Discourse

> *Let me stand in my age with all its waters flowing around me. If they sometimes subdue, they must finally upbear me, for I seek the universal--and that must be the best.(Summer 149)*

At or around the time of these exchanges with Emerson, Channing, and Thoreau, Fuller had come to the realization through which she would eventually recognize the connections among these struggles--over friendship and its definition, over definitions of identity and consciousness, and over language. This was her realization that gender was at once her most liberating and constricting trait. In a journal entry from the early 1840s, she emphasizes her understanding that both the constriction and liberation are effected through discourse:

> For all the tides of life that flow within me, I am dumb and ineffectual, when it comes to casting my thought into form. No old one suits me. If I could invent one, it seems to me the pleasure of creation would make it possible for me to write . . . I love best to be a woman; but womanhood is at present too straightly-bounded to give me scope. (Qtd. in Chevigny 63)

Far from reiterating an essentialist, separate-trait model of gender, then, Fuller's suggestion in the Muse and Minerva text is that a feminine perspective is a marginal one to the extent that it sees something different from the "universal" view, and that as such it affords a perspective from which one can critique gender, science, and other

cultural constructions. The critique will require and produce a new discourse, which will in turn provide new models of gender, science, and culture, all of which will reject the binary distinctions between subjective perception and objective knowledge.

The most vivid example of the consequences of Fuller's developing theory of discourse is found in this same passage--or rather it is not found there, which is why it is significant. It is a footnote, signaled by Fuller's asterisk in the paragraph on the Muse. Fuller describes the Muse as "the unimpeded clearness of the intuitive powers," and among other examples, states that this force "enabled the daughter of Linnaeus to see the soul of the flower exhaling from the flower." A footnote then adds:

> The daughter of Linnaeus states, that, while looking steadfastly at the red lily, she saw its spirit hovering above it, as a red flame. It is true, this, like many fair spirit-stories, may be explained away as an optical illusion, but its poetic beauty and meaning would, even then, make it valuable, as an illustration of the spiritual fact. (310)

In one move, Fuller condenses several ways of understanding this phenomenon, which are also the ways of knowing played out in the passage as a whole. One might find truth in a

spiritual experience, in "stories"--"true" or not--which describes these experiences, in the "poetic beauty" of the phenomenon, or in science. So radical is this epistemological convergence, really a condensation, that it cannot be contained within the passage itself. Within the body of the text, these contradictory ways of knowing can flow around each other, but distilled and collected into the single specimen of Fuller's explanatory note, a density forces the note to the very bottom of the text. So radical is this world view in its inception, made possible by Fuller's marginal perspective, and in its claims, it can exist only, literally, on the margin of the text. Its epistemological contradictions exceeding the capabilities of discourse, this new world view generates a new discursive mode, and is itself placed by Fuller in dialogue with the rest of the already dialogic text, marking a point on a concentric circle of meaning around any utterance, becoming a concrete example of the always-deferred state of meaning.

I have already noted above the extreme epistemological eclecticism that allowed Fuller to merge even science with other ways of knowing; here the specific sciences evoked--optics and Linnaean botany--provide especially provocative material for Fuller's multifarious text. Fuller's presentation of both the subjective vision of the "soul of

the flower" and her indication that there is an objective, scientific explanation for this "optical illusion" recalls the complex sense of the relationships among intuitive, spiritual, and empirical knowledge generated by her reading of Goethe's *Theory of Color*, as I discussed in Chapter Two. Linnaeus, as noted in Chapter Three, furnished botanical science with one of its most important features, a system of classification within which plants could be defined and related.[11] Linnaeus's classification scheme presented types of plants according to a "sexual System," in which "marriages" and covert sexual relationships among "wives" and "husbands"--often polygamous--defined plant sexuality. In yet another example of the discursive desperation faced by scientists at the frontiers of their fields (such as Faraday and Charles Darwin), Linnaeus employed a metaphor from common discourse, hetero-sexual relations, in his attempts to explain two scientific concepts: the importance of scientific taxonomy, as organized knowledge was knowledge which could be applied; and the sexual reproduction of plants.

Evoked by Fuller's reference to "the daughter of Linnaeus," both of these concepts provide revealing subtexts to her footnote. Much of science's professionalization, and the classification of itself as the apex of epistemological

modes, rested on its demonstration of the knowledge to be gained from empirical observation and systemization. But Linnaeus's classificatory system had a particularly profound cultural impact and became common "knowledge" *because of* its *risque* nature (Browne 156). Fuller's note thus serves both to accord real value to "scientific method" and to remind us that knowledge is never fully objective or empirical. One lesson Linnaeus's presence provides might be simply that Fuller does credit scientific knowledge rather than dismiss it, as I discussed in my reading of her passage on the Seeress of Prevorst. But the authority of this knowledge is tempered by the marginal position it occupies in the text. As an explanation of what the daughter observed, as knowledge of what "really" happened, it seems to be both more real--it "corrects" the explanation of the phenomenon the daughter herself gave--and less real--it is the daughter's explanation that serves Fuller's point in the body of the text, and at the end of the note she emphasizes the value of the *illusion* over that of the optical facts.

The tension sustained within the footnote, and between the note and the passage, is a crystalline illustration of the *irony* that subtends Fuller's new model of discourse. Rooted in the alternating enthusiasm and skepticism, creation and annihilation, characteristic of Romantic irony

and a "negative capability" which could negotiate these tensions, Fuller's irony reaches beyond Schlegel and Keats, anticipating both a (post)modern feminist and a poststructural irony. That Fuller would demonstrate this irony through a reference to Linnaeus is all the more remarkable when we recognize that one of today's most vibrant strains of feminist poststructuralism traces its roots to a resistance to scientific categorization, working against Linnaeus's very project. Both Donna Haraway and Sadie Plant insist on grafting together what science and technology would declare fundamentally distinct, creating such hybrids as cyborgs and cyberfeminists. Haraway's definition of the irony at the heart of her "political myth" of cyborgian figures produced at the "leaky" boundaries of human/animal, organism/machine, and physical/nonphysical, reads as a manifesto not only for cyborgs, but for Fuller's new model of discourse as well:

> Irony is about contradictions that do not resolve into larger wholes, even dialectically, about the tension of holding incompatible things together because both or all are necessary and true. Irony is about humor and serious play. It is also a rhetorical strategy and a political method . . . (190)

One of the lessons this century's feminist critique of science has made clear is that science (like language) is put to *use*. As I understand Haraway and Plant, their simultaneous embracing of science and technology in the interest of women, and resistance to the classificatory systems which define scientific and technological advances, force into relief not only the ways patriarchal categories serve patriarchal domination, but also how different science could look if these categories were erased, and if our whole notion of taxonomy were reimagined; if hybridity, fluidity, and mutability became traits privileged above current descriptive categories, specimens--scientific, linguistic, and conceptual--giving way to processes.

Fuller's invocation of Linnaeus introduces further complications as well. On the one hand he based strict scientific categories on visible physical forms of plants and animals; on the other hand he blurred the even more deeply inscribed boundary between plants and humans, as he described plant reproduction in terms of human passion. But perhaps, as I have detailed above, the former is not problematic even given Fuller's suspicion of biology as destiny, if it is sex which is being described, rather than gender which is being prescribed. The presence of Linnaeus in a passage which simultaneously erects hierarchical

categories and dismantles them, may in fact be Fuller's textualizing of this distinction: we read the scientific categories represented by the "physiologists" here, and by Linnaeus below, as representations of a science which claims primacy of the observable and physical over any other ways of knowing. If we then understand this science's observations as representing gender, we quickly see that it affords an inaccurate, incomplete knowledge; if we see its conclusions as representing sex, we see that in describing what it sees, this science accurately portrays both the generalities of sexual difference and the "exceptions" which mark the variety within sexual categories. Because science can accurately describe sex, a stable, observable category, and is unable to describe gender, gender is exposed as a category separate from sex, created and mutable.

In its form, its content, and its relationship to the rest of the text, this footnote performs an array of what today we might term poststructuralist moves, noting a Bakhtinian dialogue and multivocality and Derridean notions of the deferral of meaning and the inversion of textual hierarchies. The footnote is emblematic of the literary form which arose from Fuller's new model of discourse. This notion of discourse sprang from her new model of gender, which emerged in tandem with a new model of friendship. Both

had their genesis in her observations of science's complicated epistemological status and its fitful linguistic development.

In Chapter Two I identified the notion of "economies of representation," the recognition of which helped Fuller both to attain a critical distance from scientific claims and to deploy scientific knowledge for political ends. These economies become to Fuller, once she has fully integrated her critique of science into her poetics, intertextual utterances in a discursive system anticipatory of some of the most radical of contemporary poststructuralist tenets. The eclecticism I described in Chapter Two can now be seen to develop into textual practice with wide implications for literary-critical work. Fuller produces a text which preserves the consciousness of its unresolved contradictions to a remarkable degree, and which suggests that it can do more good, have more literary and social impact, by putting competing discourses in dialogue, than could a text which refuted or ignored complicating speech acts. This is a model of text which presages not the nihilistic, extreme relativism today's poststructuralism can produce, but rather a feminist poststructuralism which embraces textual "play" in order to imagine, describe, and create a better world.

Notes

1. Fuller's refutation is of a text being *centered* on truth; previous chapters have already made it apparent that Fuller would refute the notion of the text's being purely, accurately *representative* of truth. One can understand language as opaque and slippery, and yet still maintain it has a true center, obscured but present. But Fuller goes beyond this, as will the later poststructuralist critics, denying that text has a "center" at all, conceiving instead an always dialogic, intertextual discourse for which meaning is, for any single utterance, at any one moment, indeterminate. It is in this that Fuller stands as a proto-poststructuralist.

2. This notion certainly correlates with her proclivity for conversation, as much as with the scientific models of influence I discuss below. Or perhaps both her Boston Conversations and her later dialogic understanding of discourse are informed by her interest in Faraday's invisible literalizing of the flow and ebb of force between bodies; in both actual conversation and in dialogic discourse, felt force is both very real and invisible.

3. Indeed, it seems to me Zwarg comes too close to this.

4. Of course one thinks of Emily Dickinson's poem "The Soul Selects her own Society," which confronts many of the issues I am discussing in Fuller. As I discuss in Chapter Four, Dickinson shares with Fuller an attention to the terms and claims of science.

5. Fuller's relationship to Fourierism is in fact quite complex, and is a subject beyond my focus. But it is relevant to note that in my argument here, I present Fuller as diverging from Fourier in her focus on a harmony created in a dialogue between soul and society, rather than, as Fourier would have it, in a (passionate) dialogue among souls. While Fourier would redefine society as that which united souls would constitute, Fuller could not ignore the power of the already existing society. Moreover, and this is my main point here, she believed the greatest social reform would result from the individual's reconceiving her relationship with this society, rather than attempting Fourier's impossible "absolute divergence."

While her focus is different from mine, Christina Zwarg presents a rich reading of Fuller and Fourier.

6. It wasn't until 1855 that the physiologist Claude Bernard would advance the theory (further treated by Walter Bradford Cannon in the twentieth century) of homeostasis in the body, stating that a body maintains a constant internal environment. Fuller would not have had to consider this, then, in her model of internally charged bodies.

7. As Sacvan Bercovitch writes in his discussion of Emerson and Socialism in "Emerson, Individualism, and Liberal Dissent," "we know that Emerson never really gave serious thought to social reorganization"(325).

8. I discuss the footnote indicated by Fuller's asterisk, below.

9. I shall return to the observation of form as a scientific methodology in a discussion of Fuller's reference to Linnaeus, and of the gender/sex distinction, below.

10. "Self-Poise" is recognizable as parodic version of Emerson; "Good Sense" and "Old Church" are self explanatory.

11. While aspects of his theories were contested in his own time and throughout the nineteenth-century, Linnaeus remains a central figure in the history of science because of the importance he placed on systematic classification.

AFTERWORD

AFTER FULLER: SCIENCE AND GENDER IN DICKINSON, STEIN, AND BARNES

Leibniz's monadic cosmology, Goethe's optics, Linnaeus's botany, Faraday's electricity, and Chambers's evolution shaped Fuller's work in both specific and general ways; an attention to the contexts of science thus enriches both close readings and wide-ranging interpretations of her work. My examination of particular passages from *Summer on the Lakes* demonstrated how the concepts of optical science, concepts which challenged simple subject/object and fact/feeling distinctions, operated in the background of Fuller's thought as she considered the scenes before her, influencing both her politics and her poetics. Fuller's curiosity about the new science generated the proto-modernist multiple perspectives of her descriptions of the American frontier, while her wariness of its epistemic and authoritative claims anticipated a pragmatic epistemological mode, a modern feminism, and, as I have discussed in Chapter Four, a poststructuralist engagement with language as dialogic discourse.

Given the intricately-woven connections of science,

gender, and textual creation that I have traced in Fuller's work, it becomes apparent that where these strands can be identified as parts of the fabric of other writers' thought and work, an analysis of their influences will enrich our understanding of those texts as well. Emily Dickinson (1830-1886), Gertrude Stein (1874-1946), and Djuna Barnes (1892-1982), for specific reasons I shall outline below, merit the sort of exploration I have undertaken for Fuller, for they shared with her and each other not only a nationality, a career, and a gender, but also an interest in science overlooked by most readers. These four writers, whose work spanned a century that saw a shift from a world in which the "scientist" did not exist to one utterly shaken by scientists' discoveries, shared also a complex attitude toward science; they were simultaneously fascinated by its advances and wary of its epistemic claims. Moreover, all eventually came to recognize science as cultural practice, even cultural construction. For all four women, the cultural conventions marking gender were among those most in need of interrogation. Challenges to gender conventions played a role both in the analysis of science and in the creation of the literary text, functioning in combination with other key elements treated in the text, including religion, race, and sexuality.

Scientific discourse elicited an attention to the ideological framing of knowledge precisely in its denial of such a bias, and so led these writers to reconsider, in varying degrees, how language operates in texts and in individual minds to hide the ideologies that engender it. As writers, each would grapple with this issue in the language of her own text. A detailed account of the ways specific scientific concepts shape Dickinson, Stein, and Barnes's texts, similar to what I have undertaken for Fuller, would provide new readings of their works.

Furthermore, such analyses would likely suggest intersections of science, gender, and language in addition to those I am recognizing through my study of Fuller, and thus would add to the consideration of a larger theme suggested by my readings of Fuller. Feminist negotiations with science, and in a larger context with mathematics and linguistic theory--that is, a feminist resistance to *and* exploitation of authoritative epistemological claims and abstractions--links all four of these writers. The role of the abstract is complicated within a tradition of American pragmatism--both within the philosophical pragmatism of C. S. Peirce and William James, and in the colloquial sense of practical meaning-making--anticipated by Fuller and Dickinson, and reflected in Stein and Barnes. These writers'

works spring, in part, from the tension between attempts to say what they know, and their recognition that knowledge "happens," to use William James's famous term about truth, within discourse.

Even more complicated is the role of the abstract within feminist discourse. This role warrants theorizing. Such a project would entail analysis wider than I undertake here, but this proposition underlies my work as I sketch the ways one might follow the tie of science and language so ubiquitous in Fuller's work, to explore this connection in the works of other writers for whom identity and knowledge are political as well as personal.

To the extent that nineteenth-century scientific development shaped the general, educated culture and raised questions about the universe and the self, it will be found to shape Dickinson's work, which critiques so keenly her culture and its claims of knowledge, and probes so deeply possibilities of self-definition. Stein allows us to ask how the role of science in the culture, and in literature, changes, after science has become, in the twentieth century, the firmly established discipline it was aiming for in Fuller's lifetime. She also raises questions about connections among consciousness, instinct, and creativity, questions located at the borders of psychology, neurology, a

Romantic model of Imagination, and language theory. Barnes's writings and drawings present challenges to the epistemic claims of science similar to those evident in Fuller's and Dickinson's work, and Barnes draws connections between the workings of consciousness, language, and identity related to those considered by Stein. At the same time, the intense examination of what it means to be human evident in all of Barnes's work makes her engagements with science seem somehow more fervent than those of the others. A brief examination of the inflections of science in these writers' works points to new readings significant both in their specificities and in their contributions toward a general theory of a feminist deployment of science as discursive material.

Emily Dickinson's wide-ranging symbolic vocabulary draws deeply from botany, astronomy, and electricity, and she alludes to scientific methods in a number of poems. As with Fuller, some of Dickinson's strongest statements go unheard when the context of scientific thought is unrecognized. The claims and definitions of science were shifting dramatically throughout Dickinson's lifetime, and became for her important material for thought and for poetry. Positioning her self in resistance to the dominant cultural authorities in virtually all of her work (through a

range of techniques from polemical outbursts, to irony and satire, to more subtle questioning) Dickinson strove to understand the world and herself without, or despite, the relatively easy explanations religious faith--and the conversion imperative surrounding her in Amherst--would have offered. For Fuller, less pressed than Dickinson by religious revivalism, and surrounded by a Concord circle far more prepared to identify science as an epistemological challenge to religious doctrine, science became quite easily one of a network of conflicting epistemological modes, and in turn, one of the many discursive economies available to her. For Dickinson the status of science as a distinct discursive mode was more difficult to recognize. As Cynthia Griffin Wolff emphasizes in her important argument about the impact of science on Dickinson's thought (a rare instance of this attention, and a brilliant one), science was seen, in general in the 1830s and 40s in England and America, and especially in Amherst's conservative religious atmosphere, as an ally, not a foe, of theology. Edward Hitchcock, the president of Amherst College at the time of Dickinson's studies at Amherst Academy (which was nearly adjoined with the College by Dickinson's day), was in fact one of the most vocal proponents of science education, *and* of the belief that the new science supported rather than refuted biblical

knowledge. A world-renowned scientist himself, in paleontology, Hitchcock played a central role in Dickinson's education, in both the curriculum she undertook and the intellectual atmosphere that prompted frequent lyceums and public lectures on scientific subjects. The curriculum at the Academy during Dickinson's tenure there included, Wolff tells us, "Smellie's Philosophy of Natural History," "Day's Algebra," "Playfair's Euclid," "Gale's Chemistry," "Paley's Natural Theology," "Smith's Anatomy," and "Wilkins's Astronomy" (564), contributing to an education that made Dickinson, in Wolff's words, "conversant with the most sophisticated science then available in America" (79). All of this scientific education was meant to serve, however, not a belief in reason over Divine revelation, but rather to serve the Argument from Design itself. As Hitchcock stated in his inaugural address in 1845, "The wide dominions of natural history, embracing zoology, botany, and mineralogy, the theologist has found crowded with demonstrations of the Divine Existence and of God's Providential care and government" (Qtd. in Wolff 79).

Dickinson's work retained the marks of the earlier contradictory impulses initiated by a science associated with, yet separable from, biblical authority. Wolff provides a potent exposition of Dickinson's poetic treatment of the

complex contradiction of the simultaneously subversive and oppressive potential of science. Reading the poem "A Clock stopped" with an attention to the scientific meanings of the word "degree" along with its other cultural meanings, much as I have read the word "energy" in Fuller's work, Wolff identifies "a titanic but quiet struggle for supremacy" over the authority of God, the world of Amherst society, and the dominant discourse which would drown out the voice of the poet saying "No" to all of them.

An extension of Wolff's idea would be to trace Dickinson's deployment of science *as* discursive material throughout her body of work. Reading not only scientific texts in her early years, but also the leading journals and newspapers throughout her life, Dickinson would have encountered the shifting claims of science, and would have noted the epistemological contests being played out in the defining and naming of scientific concepts and specimens. Her engagement with this shifting language became a way of addressing science's challenges and resisting both its co-optation by Hitchcock's theology, and the agency-nulling authority it tried to impose. Science and language thus became entwined as tightly for Dickinson as for Fuller, and so careful close-readings throughout Dickinson's *oeuvre* would reveal the importance of science to her entire poetic

practice, not only in poems about microscopes, or science, or explicitly addressing scientific subjects.

Dickinson, Wolff emphasizes, would to some extent always consider science as part of a religious epistemology, and an ideology, she rejected, even as she herself, through her studies of actual scientific concepts, came to believe in many of the truths science offered. In her negotiations with science, Dickinson began to see the discursive nature of scientific thought in many of the same ways Fuller did, through an awareness of the mutability of scientific words such as "degree" and "circumference," and of course the terms of life and death. Dickinson perhaps even more than Fuller--she was after all the poet Fuller could not, and knew she could not, be--cast a searing light on the language of her own work to illuminate the nature of language itself: the changing definitions of words in light of scientific discoveries and explanations were for her markers of the instability of language in general. When she manipulated these markers to serve purposes contradictory to the aims of the men of science and the men of the Church, her poetry exhibited literally the mutability, and the contests of power located around, the Word.

This mutability of words, when those words so earnestly claimed to represent knowledge, drove home to Dickinson how

changeable "knowledge" is. It would also have resonated in her thought with one specific scientific concept, evolution, which was debated in the publications her household read, before and after the publication of Darwin's *Origin of Species* in 1859. When not only words, and not only knowledge, but species are mutable, the concept of identity becomes unglued from any defining authority.

Thus not only was Dickinson's sense of religion and faith fundamentally bound up with her complex attitude toward science, but so too were her notions of self and identity. Dickinson's body of work reads as a nearly life-long record of experiment, as she tries on various voices, family and social roles, sexual identities, and genders. Reading the "I'm Wife" and "Loaded Gun" poems, one can see a developing sense of discourse similar to Fuller's. All of these identities, wife, Czar, "Woman," threat, powerful weapon--and the very notion that identity is something that can be "tried on"--spring from Dickinson's awareness of the ways epistemological authority is claimed through the presumed right and/or ability to define and identify, and of the ways she can deploy this "naming" to assert her own authority.

Both of the poems cited above suggest something else relevant to my larger interest in moving toward a theorizing

of the place of the abstract in feminist discourse. While they are made possible by a sense of mutable identity rooted in scientific study--in both the terms and the discoveries of science--the poems emphasize the gendered nature of the voices, and of the power dynamics represented. A study of the significance of science to Dickinson's poetry(a study linking Dickinson even more significantly to the other writers in my study, and moving beyond Wolff's work,) would include an examination of the many instances in Dickinson's poetry in which the defining and labeling of science parallels the defining and control of gender.

Gertrude Stein's texts, both her prose and verse experiments in general and specific themes and symbols in her body of work, arise in part from her background in anatomy, physiology, "brain-mapping," and nineteenth-century pseudo-sciences. Stein's engagement with science is complicated in ways different from those encountered in Fuller and Dickinson. Unlike those earlier writers, Stein was born into a world in which "science" as a discipline was already established, and she actively participated in that world, working in the classroom and the laboratory with Hugo Munsterburg and William James at Radcliffe, and completing all but her final course of medical school at Johns Hopkins. Her turn away from a life in science to one in literature

and art, rather than a simple rejection of everything scientific, appears much more complex when specific scientific concepts with which she was familiar are examined in relation to her literary work. For example, her stated quest to portray the "bottom nature" of people in *The Making of Americans*, and the literary techniques she employs to do this--repetition, sound- and visual-puns, broken syntax--take on deeper meaning when associated with her background in psychology and the physiology of the brain. When modes of thought were so much the subject matter of Stein's work, we should not so quickly explain away her years of scientific training, but on the contrary, recover the impact of this experience on her text.

A study of Stein's work which emphasizes the significance of scientific thought will build on the work of a variety of critics, from those focusing on the formal characteristics of her linguistic play, such as Richard Poirier; to those interested in issues of sexuality and the body, such as Harriet Chessman; to those eager to associate her with modernist and proto-postmodern projects, such as Marianne DeKoven; to criticism focusing on her psychological experiments in "automatic writing" at Harvard, including, most recently, Tim Armstrong, who revisits B.F. Skinner's 1934 reductionist reading of *Tender Buttons* as the product

of automatic writing, to discover other, more complex links between Stein's composition and the psychological experiments. What all of these critical approaches share, whether implicitly or explicitly, is a recognition of Stein's interest in the relationships among language, consciousness, and identity. I read her project, from the automatic writing experiments through her expatriate years as an author of increasingly experimental texts, as a study of the workings of the human mind through an attention to language processes. In Stein's understanding, consciousness and identity are enmeshed, and language both reflects and inflects their constitution. Given her medical training, Stein never forgot that the body was inseparable from either consciousness or identity. Thus her studies--both scientific and literary--of language are best understood as investigations of "brain processes," rather than of "mind processes," the distinction conveying the physiological emphasis of the pre-Freudian psychology Stein first studied, and the sense that consciousness and identity are inseparable from the body.

Yet at the same time, Stein rejected an overly concrete model of identity, noting how much of people's "nature" is inexplicable through the language of scientific taxonomy. She sought to make language operate between categories, so

that thought, and the identities we imagine, could as well. Both at Harvard and at Johns Hopkins, Stein had seen how rigidly science attempts to define brain processes. She records frustration at the Harvard laboratory's insistence that "automatic writing" was an *un*conscious phenomenon, preferring that it be understood as a tracking of the moves of *consciousness.* She declared that she was uninterested in physiology itself, and in chemistry, because she "did not like what is not what people are doing" (*Everybody's* 272). She wished to describe the automatic-writing laboratory subjects by "watching what they were doing" (274) rather than by the preconceived notions of the experimenter. Language becomes for Stein, then, both a marker of identity and a key to freeing one from the habits of thought which construct a rigid sense of identity. The inaccuracies of science's descriptions of the mind and of people's behaviors, science's inability to shed light on "people as one knows them," (272) brought home to Stein how ineffective descriptive and interpretive systems--science or language--can be, and how much knowledge can reside outside of those systems, if one can subvert them enough to see it. Her texts undo language to de-scribe it, the world, and herself.

Ultimately Stein found that thought and language are coextant, and that by influencing one she could influence

the other. She probed the thought processes of others, including Pablo Picasso, Carl Van Vechten, the figures in *The Making of Americans*, and the fictional characters in *Three Lives*, and of herself, maintaining an awareness of identity's constitution in the thought patterns of the individual mind in tension with the thought patterns and verbal definitions of the culture. Her language becomes designed to disrupt those patterns in others and in herself. This self-referential thinking Stein practices in her explorations of her own consciousness--thinking about her own thinking--parallels the self-referential nature of language itself, as she writes language that emphasizes how language works.

Stein's writing practice becomes oddly, simultaneously abstract (as she abstracts habitual meaning from language), and remarkably concrete, words taking on the status of objects, taking on the characteristics of the objects they describe, such as the household objects in "Tender Buttons," for example. In fact, locating Stein on an abstract-concrete continuum complicates my proposition that her work might imply an attempt to theorize a feminist response to scientific ways of knowing and abstract formulations of knowledge. She seems to explicitly flout my contention when, listing the academic subjects she disliked, she writes,

"astronomy and mathematics were too far away and again too frightening" (272). Yet it was the too-concrete brain diagrams and formulaic explanations of mental phenomena produced by the abstract categories of another science, the psychology she was taught at Harvard, that made her recognize that neither mind processes nor language were reducible to formulas and diagrams. Stein's deeply contradictory attitudes toward science and the abstract warrant all the more, not less, analysis for their complexity.

When one recalls that throughout Djuna Barnes's lifetime the scientific world was striving harder and harder to define the human by looking more closely at the body--through x-ray technology and surgery--and by labeling the categories of the unconscious and of sexuality, the medicalized bodies and psychoanalytic images Barnes creates resonate more strongly. One of the main characters in her novel *Nightwood* is a medical doctor who finds his own identity--sexual, gendered, social, moral, and intellectual--excruciatingly undeniable *and* undefinable, yet very much real.

In *Nightwood* and in the poems and sketches of *The Book of Repulsive Women,* Barnes draws and describes half beast/half woman figures that incorporate concepts from

evolutionary theory, anatomy, psychology, and even relativity. A concern with questions about the constitution and mutability of gender is represented in a female grotesque, a powerful illustration, as Meryl Altman points out in her study of the novel, of modernist negotiations with arguments about the location of identity in "biology" (163). Barnes's female figures are joined by other parodic images raising similar questions about homosexuality and race. O'Connor's homosexuality and his rantings about his identity reflect the great contemporary scientific interest in "inverts" by Magnus Hirshfeld, Havelock Ellis, and Sigmund Freud, while Felix Volkbein's Jewish self-estrangement evokes "scientific" racial theories circulating in Paris during Barnes's time there.

In all of these "sciences"--evolution, "inversion," and racial taxonomies--there is a turn to the past, however pessimistic that move or however bleak that past. Looking to the past can be an attempt to understand or to avoid the present. As the figure of Felix demonstrates, in either case what one sees may be more unsettling than the denial of the past, the confusion of the present, or the uncertainty of the future.

Through the images, the stream-of-consciousness prose, and the non-linear narrative structure of *Nightwood*, Barnes

evokes evolutionary and psychological theories concerned with both the past of humanity and the past of the individual. The backward and forward movement Barnes's text enacts through these scientific associations is related even more directly to language when one notes Barnes's life-long fascination with the etymology of words. The past of language, and the transitive quality of words, parallels the past and always-transient state of gender, of race, of human kind, of sexuality, and of individual identity.

Looking at her own sketches, studying her own mental images in a self-observation related to the Romantic consciousness Fuller achieves and the modern perspective all of these writers attain--but here with a more desperate searching--Barnes raises questions about identity, subjectivity, time, and images: "Sometimes one meets a woman who is beast turning human. Such a person's every movement will reduce to an image of forgotten experience. . .." It becomes clear that the question of how one attains an image of a past one has forgotten, the reasons for the forgetting, and the importance of the image, are concerns at the heart of Barnes's work. This context would enrich readings of her work, including the novels, as I've begun to outline above; her short fiction, in stories such as "Aller et Retour" and "The Jest of Jests"; her journalism, including her pieces on

the French singer Yvette Guilbert; her poetry, especially *The Book of Repulsive Women;* and her drawings there and in *Ryder* and *Ladies Almanack*.

These concerns are also the concerns of the writer struggling with the possibility that language has lost its ability to contain and communicate the things that make us human. The image of the past is the image of a self simultaneously connected with others and distinguishable from them, a figure of identity, which, if constituted only by language, is a tragi-comic, desperate figure. Barnes, high modernist and on the cusp of a postmodern nihilism, places what hope she has back into language, language loaded with the contradictions of scientific confusion and the epistemological exhaustion it marks. *Nightwood* is a text in which within individual sentences, even within individual images, the threads of science, identity, and language are inseparably fused.

In the texts of all four of these writers, abstract formulations do challenge notions of subjectivity, but they also suggest valuable new models of identity and language. Scientific thought provided these writers with new paradigms, new vocabularies, and rich aesthetic material. Even more significantly, incorporated into their texts, scientific concepts became part of the play of language

through which they could allow imagination to mediate their susceptibility to limiting cultural forces, including science itself.

These readings begin to bring together two branches of feminist criticism which seem to draw opposite conclusions about the place of the abstract within feminism. The first branch is feminist criticism of science, represented by critics such as Evelyn Fox Keller, Ruth Hubbard, Londa Schiebinger, and Ludmilla Jordanova, which illustrates the extent to which gendered paradigms shape science, which in turn shapes gender definitions. While Donna Haraway's science critique, informed by poststructuralist models of identity, provides a notable exception among feminist critics of science, (and one which informs my reading of Fuller,) in general these critics portray science, its claims of authority, and its abstract categorization of gender traits, as deceptive and destructive. Fuller, Dickinson, Stein, and Barnes, I demonstrate, all arrived at this same conclusion at certain points in their work.

The second type of criticism I draw on is poststructural feminist literary criticism, represented by figures such as Patricia Yeager and Barbara Johnson, which demonstrates how the abstractions of literary theory can be put to feminist use, specifically, to show that gender is

itself discursive, and so mutable. My move to this second branch of criticism, to note the ways in which Yeager and Johnson actually grapple with the abstract in their texts, parallels a movement within feminist criticism between a critique of paradigms and aesthetic models informed by sexual politics, and a gynocritical recovery and revision of women's actual work. Both within the larger history of feminist criticism, and within my project, this movement occurs in both directions, the general critique informing the specific criticism, and vice versa.

A preponderance of feminist literary criticism mirrors feminist criticism of science in its distrust of the universalizing gesture of the abstract, which constricts individual agency. But when one turns to Yeager's and Johnson's texts, one sees such constraints broken, through their reconception of knowledge as contingent and identity as mutable. In Haraway's work, the possiblities explored and described in these literary-theoretical works texts are pressed into service to critique individual scientific studies as well as the "rules" of science. Moreover, the "irony" Haraway employs, and the similar posture Sadie Plant assumes, goes beyond a rejection of science to an always-contingent deployment of it to help women "translate knowledges among very different--and power-differentiated-

communities" (*Simians* 187). Haraway's work points out the ways that "[s]cience has been about a search for translation, convertibility, [and] mobility of meanings," as well as about the universality and reductionism feminism defies" (187). The preceding chapters have shown Fuller's recognition of this point. Reading science in her work, and in Dickinson, Stein, and Barnes, the exploitation of poststructuralist theories by Haraway, Yeager, and Johnson appears to be only the latest manifestation of a largely unrecognized tradition of a feminist abstract.

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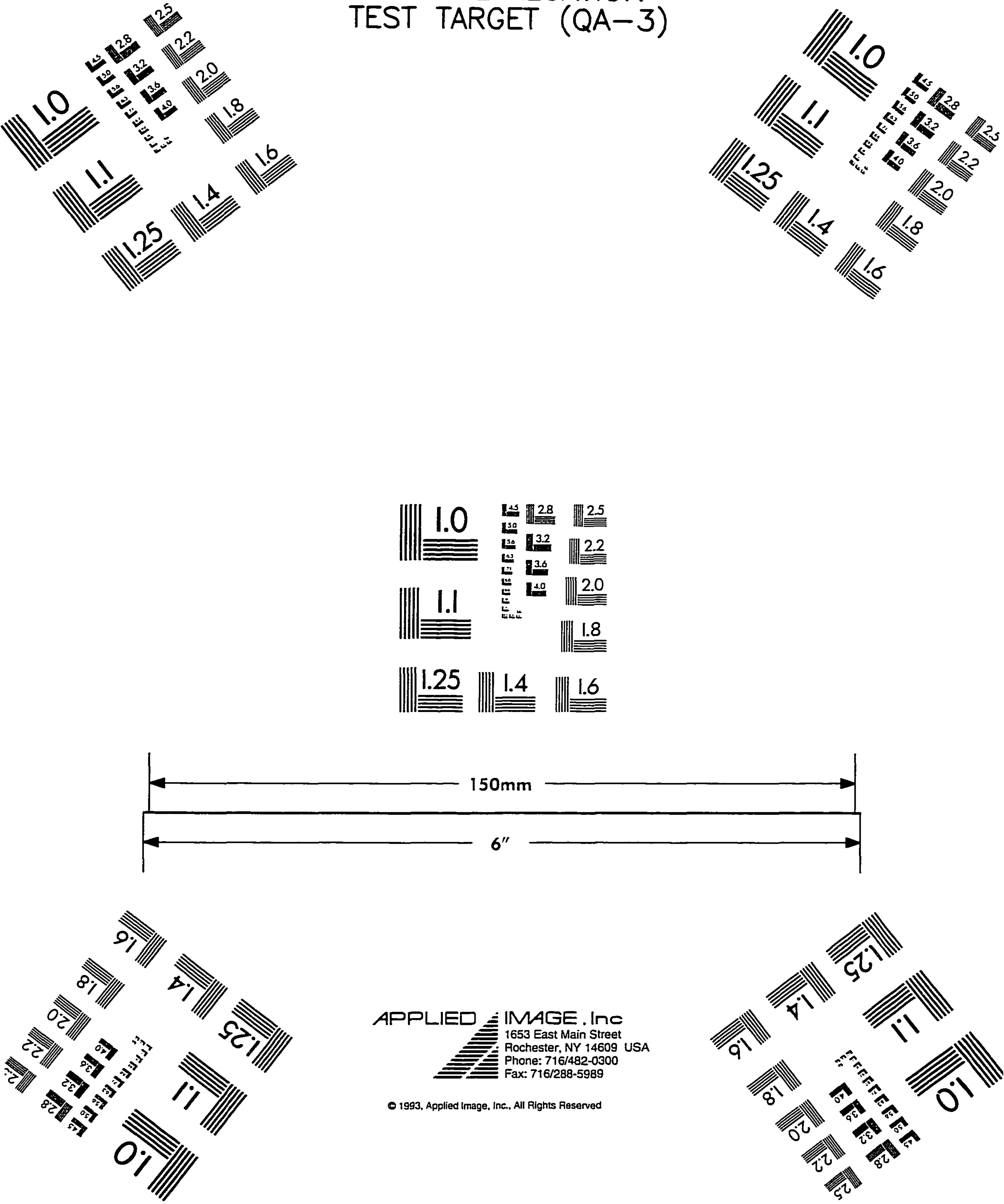

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