Technology, Nature and Liberation: Shulamith Firestone's Dialectical Theory of Agency[*]

Tim Fisken

There is the appearance of something paradoxical in Firestone's dedication of *The Dialectic of Sex* to Simone de Beauvoir. Where de Beauvoir argued that "one is not born a woman, but, rather, becomes one,"[1] relegating biology to the section of *The Second Sex* on the "myth" of destiny, Firestone opens *The Dialectic of Sex* by calling the oppression of women "a fundamental biological condition."[2] Where de Beauvoir is one of the founders of a social constructionist view of gender, Firestone seems to regress to a naïve biological reductionism in which gender follows immediately from the biological fact of sex. As Judith Butler has pointed out, however, this distinction between social constructionist and biological reductionist accounts of sex and gender is not as clear as it seems to be.[3] I will argue that Firestone is aware of some of this complexity, and so appeals to biology not as a fixed substance to which women's oppression can be reduced, but rather as one element within a theorization of feminist revolution which would conclude by dissolving the specificity of the biological. The dialectic in *The Dialectic of Sex*, that is, is based on the mutually constitutive and mutually contradictory relationship between the social construction of gender and the biological facticity of sex.

The relationship between the social construction of gender and the biological given of sex, as Butler describes it, is an eminently dialectical one. Gender is defined by its difference from sex, by the assertion that "whatever biological intractability sex may have, gender is culturally constructed."[4] However, defining gender in this way depends on positing sex as fixed and "radically unconstructed."[5] A social constructionist account of gender thus depends on at the same time as it effaces a biologically reductive account of sex. The flexibility of gender depends on the fixity of sex, in a metaphysical operation whereby the essence, the sexed body, acquires a set of contingent qualities which make up its (or, rather, his or her) gender identity. The relation of sex and gender has a particularly important place in this metaphysics because of the link it makes between the body as a natural and a cultural object. It is this relationship, as we will see shortly, that is explored in *The Dialectic of Sex*.

For Butler, sex and gender are two sides of a particular metaphysical account of identity, in which identity defines a subject that is autonomous, that is, separate from and not determined by anything outside of itself. The metaphysical construal of identity posits identities as "self-identical, persisting through time as the same, unified and internally coherent."[6] Butler argues that the distinction between sex and gender is able to play a particularly important role in this metaphysics, because the distinction divides the fixed or given (sex) from the constructed or assumed (gender) in a way that articulates a linkage between the two. According to Butler, gender

---

* Published in Mandy Merck and Stella Sandford, ed., *Further Adventures of the Dialectic of Sex:Critical Essays on Shulamith Firestone* (New York: Palgrave Macmillan, 2010), chapter 7.

1 Simone de Beauvoir, *The Second Sex*, (New York: Vintage, 1989), 267.

2 Shulamith Firestone, *The Dialectic of Sex: The Case for Feminist Revolution* (New York: William Morrow, 1970), 1

3 Judith Butler, *Bodies that Matter: On the Discursive Limits of "Sex"* (New York: Routledge, 1993), 4-12.

4 Judith Butler, *Gender Trouble: Feminism and the Subversion of Identity* (New York: Routledge, 1990), 6.

5 Butler, *Gender Trouble*, 7.

6 Butler, *Gender Trouble*, 16.

has a metaphysical role, securing the coherence of the subject through a "metaphysics of gender substance."[7] In philosophical accounts dating back to Aristotle, substance is the principle by virtue of which particular beings exist; in the metaphysics of gender substance, then, gender is the principle by virtue of which individual subjects exist. Gender is able to play this role because of its conceptual linkage to sex, taken as something fixed, given and natural. The metaphysics of substance is particularly powerful here because it does not appear as metaphysics, as a philosophical theory about being, but is located within common-sense understandings of the material organization of the individual's body.

For Butler, it is precisely this positing of the material as a "primary given"[8] that allows it to function as a substance within contemporary understandings of sex, gender, and sexuality. The materiality of sex is produced by the act of proclaiming the material to be prior to the social (or sex prior to gender).[9] Now, this appears to describe Firestone's own practice, in her insistence that the sexual division of labor is natural. However, as I will argue in the remainder of this paper, Firestone's understanding of nature makes it something very different from the "primary given" that secures the substantiality of gender. I want to suggest that we need to take seriously the dialectical character of nature within Firestone's dialectic of sex, the fact that, as Butler puts it, "nature has a history."[10] Butler turns to Foucault for the insight that constraint both requires and produces the possibility of transgression, that "the law provides *the discursive opportunity* for a resistance, a resignification, and potential self-subversion of that law."[11] Butler adopts this idea to encourage us to think, not of a fixed and given materiality, but of an ambiguous and contestible materialization, in which the materialization of bodies and subjects that conform to norms cannot be disassociated from the materialization of bodies that transgress these norms.[12] Firestone's dialectics has something of the same quality, in that she attempts to show how the "natural" sex division, far from being fixed and given, produces the possibility of its own overcoming.

Firestone does not give us a definition of "dialectics" in *The Dialectic of Sex*, but we can get a sense of what the term means for her by considering how she characterizes the "dialectical method" that she appropriates from Marx and Engels. Firestone turns to Marx and Engels in order to supply "feminist revolution" with "an analysis of the dynamics of sex war."[13] This analysis is necessary in order to insert feminist action in the historical unfolding of women's oppression, that is, to grasp that oppression as something that can be altered. The superiority of the dialectical method lies in its injunction to "examine the historic succession of events from which the antagonism has sprung in order to discover in the conditions thus created the means of ending the conflict."[14] Firestone goes on to gloss a dialectical view of history as seeing "the world as process, a natural flux of action and reaction, of opposites yet inseparable and interpenetrating."[15]

---

7 Butler, *Gender Trouble*, 21.

8 Butler, *Bodies that Matter*, 35.

9 Butler, *Bodies that Matter*, 5.

10 Butler, *Bodies that Matter*, 5. Butler here refers to, but does not name, feminists who "have argued that a rethinking of 'nature' as a set of dynamic interrelations suits both feminist and ecological aims." Firestone would certainly fit into this category.

11 Butler, *Bodies that Matter*, 109.

12 Butler, *Bodies that Matter*, 3.

13 Firestone, *Dialectic of Sex*, 2.

14 Engels, *Socialism: Utopian and Scientific*, quoted in Firestone, *Dialectic of Sex*, 2.

15 Firestone, *Dialectic of Sex*, 3.

Now, a process, even one involving inseparable opposites, is not yet a dialectic; what makes this genuinely dialectical is, first, that this opposition contains its own negation, or, to put it another way, the existence of opposed elements is the condition of possibility for an overcoming of this opposition. The second key dialectical feature of Firestone's account is that it does not simply identify an objective, external process, but rather makes our own relationship to the process of history a moment of that process. Because we are embedded in history , it is "by understanding thoroughly the mechanism of history" that Marx and Engels "hoped to show men how to master it."[16]

There are thus three different dialectics at work in *The Dialectic of Sex*, although Firestone does not clearly distinguish them. The first is a dialectical method, taken from Marx and Engels, an attempt to grasp history as a process in which each moment of change develops from what preceded it. The second is an objective dialectic, an account of the natural and historical world as in fact containing opposed forces that exist in tension with one another. Finally, there is an epistemological dialectic, in which our ability to know the world depends on a developing process of engagement with that world. This division is something of an analytical convenience: the three dialectics are interdependent, in that it is not always easy to distinguish a dialectical description of reality (the dialectical method) from a description of a dialectical reality (the objective dialectic), or to distinguish this dialectic in the world from dialectics in our relationship to the world (the epistemological dialectic). Nonetheless, I think it is helpful in emphasizing that "dialectics" and "dialectical" mean different things at different points in *The Dialectic of Sex*, and that elements of the book which, from one angle, may not seem dialectical, can in fact be related to one of the other dialectics being played out in the text.

Though Firestone mentions the dialectical method explicitly, after its introduction by reference to Engels it receives little further attention. The objective dialectic, on the other hand, is not made very explicit and, although the book promises a dialectic of sex, the discussion of biological sex makes little reference to dialectics. I will argue, however, that Firestone's psychosexual account of biology does in fact have a dialectical structure that allows it to present an alternative to social constructionist theories of gender or biological reductionist understandings of sex. Firestone does, it is true, often express her thesis of the biological origin of sex class in ways that appear undialectical; indeed, it is this idea of biology as origin that is problematic from a dialectical point of view. For instance, Firestone's description of the biological family as "the basic reproductive unit of male/female/infant in whatever form of social organization,"[17] suggests that biological nature is a static given, an essence that underlies a range of inessential forms. Indeed, Firestone writes that "the biological family that we have described has existed everywhere throughout time," and describes references to the diversity of social forms of the family as "anthropological sophistries."[18] Nonetheless, there are some interestingly ambiguous formulations here. Firestone describes the biological limits on human nature not as necessities but as "biological contingencies,"[19] and calls them "fundamental—if not immutable—facts."[20] This last could equally be understood as claiming that facts are, or are not, immutable. This does indeed capture a contradiction in Firestone's account of biology, because

16 Firestone, *Dialectic of Sex*, 3.
17 Firestone, *Dialectic of Sex*, 8.
18 Firestone, *Dialectic of Sex*, 9.
19 Firestone, *Dialectic of Sex*, 9.
20 Firestone, *Dialectic of Sex*, 8.

biology has to ground both the immutability of women's oppression in the past, and the possibility of women's liberation in the future. When Firestone initially introduces her account of biology, this contradiction looks like a mere inconsistency, but in her later discussion of the psychosexual nature of biology, however, this contradiction becomes a productive, dialectical contradiction.

What allows biology to play this dialectical role in Firestone's discussion of psychosexual dynamics within the family is that is it not posited as an origin, but rather emerges as a result. Here, biology is not immediate or transparent, but rather is expressed through the formation of sexed psyches, through "specific psychosexual distortions,"[21] or "the development of classes [that] arises from the psychosexual formation of each individual according to the basic imbalance"[22] of power in the biological family. And it is in paying attention to this dimension of power that Firestone believes her psychosexual approach is materialist, in contrast to the utopian idealism of previous feminism[23] and the ideological obfuscation of psychoanalysis and "the cracker-barrel layman's Freud."[24] Firestone's approach is to re-interpret the psychosexual theories of psychoanalysis in terms of power; she writes that "the only way that the Oedipus complex can make full sense is in terms of power."[25] As power here is a social relation, rather than a feature of the individual psyche, to reinterpret psychoanalysis in terms of power is to shift the focus of study from the individual to the social causes of particular forms of individuality, from the Oedipus complex to the the social context which is "the cause of the complex."[26] This social context is, first and foremost, the family.

At first sight, Firestone's analysis of the family appears to have a rather schematic quality. The object of her study is "the *biological family*—the basic reproductive unit of male/female/infant, in whatever form of social organization."[27] The biological family, then, is an abstraction from concrete families, an abstraction from specific social forms. Firestone's analysis is not simply abstract, however, because she believes that there is one specific social form of the family that allows for a particularly clear view of the abstract mechanisms of the biological family: "the nuclear family of a patriarchal society, a form of social organization that intensifies the worst effects of the inequalities inherent in the biological family itself."[28] The nuclear family is the minimal form of the biological family, in that it contains the essential elements of the biological family (father, mother, child), and it contains those in their essential relationships, with the practical (if no longer legal or moral) dependence of the child and mother on the father. The nuclear family contains the bedrock of the biological family, so that "to make both women and children totally independent would be to eliminate not just the patriarchal nuclear family, but the biological family itself."[29] Because of this, studying the development of the child within the nuclear family, that is, the development of the Oedipus complex, is the clearest way to study the psychosexual effects of the biological family. Now, the Freudian account of the development of the Oedipus complex is also the account of the development of the child's ego, their awareness of

21 Firestone, *Dialectic of Sex*, 10.
22 Firestone, *Dialectic of Sex*, 8.
23 Firestone, *Dialectic of Sex*, 6-7.
24 Firestone, *Dialectic of Sex*, 73.
25 Firestone, *Dialectic of Sex*, 53.
26 Firestone, *Dialectic of Sex*, 53.
27 Firestone, *Dialectic of Sex*, 8, italics in original.
28 Firestone, *Dialectic of Sex*, 53.
29 Firestone, *Dialectic of Sex*, 54.

themselves as individuals separate from the mother, individuals like the father (this is especially true for ego psychology, the "cracker-barrel Freud" that Firestone situates her critique in relation to). Therefore, to re-read the Oedipus complex in terms of the power dynamics is also to re-read individuality in these terms; Firestone here interprets the apparent autonomy of the individual as itself socially produced.

While the historical specificity of Firestone's analysis of the development of individual psychology might appear to be largely an analytic device, the situation becomes more complicated in her discussion of childhood. While the oppression of children is said to be an outcome of the (cross-temporal) biological family, the category of childhood itself is specifically a feature of the modern nuclear family.[30] I don't believe this is merely a coincidence. Rather, the reason why the ills Firestone identifies in the biological family are especially visible in the modern nuclear family coincides with the reason, implicit in Firestone's account, for the invention of the category of "childhood" in modernity. Prior to the invention of this category, Firestone writes, the culture "literally was not conscious of children as distinct from adults."[31] This was a reflection of a different social organization, in which the status of children was on a continuum with that of adults: "children then *were* tiny adults, carriers of whatever class and name they had been born to, destined to rise into a clearly outlined social position."[32] Because of this, their subordination *as children* was not immediately visible; subordination due to economic dependence was a "common experience of children and servants,"[33] rather than something specific only to children. The fact that children are dominated because of the nature of the biological family was invisible here. It became visible only with the development of the ideology of childhood, when children are separated from adults, both physically, by their enclosure in schools, and culturally, through distinctive dress and activities.

Firestone's discussion of childhood follows that of her main source, Philippe Ariès, in describing the development of childhood without advancing an explanation of this development in terms of wider social change.[34] Unlike Ariès, however, Firestone locates the development of the concept of childhood within a much larger narrative (the history of sex dialectics) and we can see in her description of childhood ways in which its development, which coincided with the rise of liberal modernity, also reflects wider features of this change. Note the description of medieval children, these "miniature adults," as "carriers" of a "class and name," already assigned to "a clearly outlined social position."[35] This clearly reflects a feudal order in which the individual does not exist aside from her social rôles. The modern child, on the other hand, has no distinct social rôle, and is considered pure and innocent,[36] that is to say as yet unformed by the world. The modern child, then, is an abstract individual, a bourgeois subject. The development of the modern concept of childhood goes along with a more general development of modern social relations based

30 Firestone, *Dialectic of Sex*, 84.
31 Firestone, *Dialectic of Sex*, 86.
32 Firestone, *Dialectic of Sex*, 86.
33 Firestone, *Dialectic of Sex*, 86.
34 Philippe Ariès, *Centuries of Childhood: A Social History of Family Life* (New York: Alfred A. Knopf, 1962). Ariès does relate particular changes in attitudes towards children to other factors, such as religious practice, educational reform, or legal norms, but his interest is in charting changes in family life and corresponding conceptions of children largely in their own terms. He does not attempt to develop a general theory that would explain the development of the concept of childhood as a whole.
35 Firestone, *Dialectic of Sex*, 86.
36 Firestone, *Dialectic of Sex*, 89.

around the individual, and it is in this context that the biological family, which is, schematically, a relationship between three quite distinct individuals, becomes visible.

If the nuclear family is the paradigmatic form of the biological family, how are we to reconcile the nuclear family's quite recent development with Firestone's claims about the transhistorical universality of the biological family? One possibility is that Firestone simply projects the nuclear family on to the past in an ahistorical manner, as Assister claims.[37] Given that Firestone explicitly discusses the historical specificity of the nuclear family, however, I find it difficult to see how she could have failed to notice the ahistoricality of such a projection. I think there is another way of understanding Firestone's use of the modern family as a key to understanding the family structures of the past which does not simply reify and universalize modern conditions. Firestone's argument is not that the nuclear family in its concrete specificity has always existed. Rather, her argument is that the biological family is the appropriate abstraction with which to understand the different concrete family forms of the past. The importance of the modern nuclear family lies in the way in which, in the nuclear family, the abstract biological family has become a concrete reality, and so has become visible, giving us, now, a better understanding of our past.

Firestone's contention that the most recently developed form of the family provides us with the clearest view of the abstraction of the biological family shares a logical structure with Marx's claim that the history of economic forms displays a dialectical movement from the abstract to the concrete. In Marx's understanding, what were in the past abstractions come to take on concrete forms; ideal or purely mental abstractions become concrete or real abstractions. Marx argues that, "as a rule, the most general abstractions arise only in the midst of the richest possible concrete development, where one thing appears as common to many, to all."[38] Marx's primary example is labor. In pre-capitalist periods, he argues, labor could only be understood as one or another specific type of labor; any idea of labor in general had no reality, but was merely a "mental product."[39] Capitalism, on the other hand, has developed particular social structures that make labor in general a concrete reality: "indifference towards specific labors corresponds to a form of society in which individuals can with ease transfer from one labor to another, and where the specific kind is a matter of chance for them, hence of indifference."[40] This process of real abstraction is important for Marx, because it provides a way of relating the abstractions he believes are vital to science to the specific historical circumstances he believes are the only possible object of study: "this example of labor shows strikingly how even the most abstract categories, despite their validity—precisely because of their abstractness—for all epochs, are nevertheless, in the specific character of this abstraction, themselves likewise a product of historic relations, and possess their full validity only for and within these relations."[41]

Marx's real abstractions, then, have the same paradoxical mixture of universal validity and historical specificity as does Firestone's understanding of the biological family. Because they are abstractions and, as abstractions, they had no real existence in the past, they allow us to draw generalizations between the present and the past, without simply projecting the concrete

37 Alison Assister, *Althusser and Feminism* (London: Pluto Press, 1990), 72-3.

38 Karl Marx, *Grundrisse: Foundations of the Critique of Political Eonomy*, trans. Martin Nicolaus (New York: Vintage Books, 1973), 104.

39 Marx, *Grundrisse*, 104.

40 Marx, *Grundrisse*, 104.

41 Marx, *Grundrisse*, 105.

characteristics of the present on to the past. Marx describes this with the famous phrase, "human anatomy contains a key to the anatomy of the ape,"[42] which might suggest the kind of teleology sometimes associated with evolutionary theory in the 19th century, implying that earlier social forms were structured in such a way as to necessarily lead to certain real abstractions. In fact, however, understanding the past in terms of the real abstractions of the present is perfectly compatible with the contingency of these abstractions. The features of the past that we can identify by appeal to real abstractions are important to us because they help to explain the relation of the past to the present; it is only due to the contingencies of this relation that, as Marx puts it, the past's "mere nuances have developed explicit significance."[43] If we interpret Firestone's use of biology as the identification of a real abstraction of this sort, we can understand biological nature not as something fixed and given, but as something continuously developing in (dialectical) relation to concrete circumstances.

So, treating biology dialectically, that is, avoiding treating it as a fixed essence that merely assumes certain cultural forms, requires a theory of biological nature that sees nature as a part of a process which contains culture as one of its moments. This is not quite what Firestone gives us, or, not immediately. Rather, she moves from considering the dialectic of the biological family to what she calls the "sex dialectics of cultural history," which consists of a dialectic of cultural representations of nature.[44] Firestone identifies two basic modes of the cultural representation of nature, which correspond to the two organizing principles of matriarchy and patriarchy which she sees as characterizing, to a greater or lesser extent, previous historical periods. The first understanding of nature, historically, Firestone associates with matriarchy.[45] In this case, nature is viewed as something external to human beings, and thus beyond their control. Because of this, nature is seen as something "dark, mysterious, uncontrollable,"[46] and, following the traditional association of nature (opposite to human beings) with women (opposite to men), women are thus seen as something to be feared and worshipped (for Firestone, matriarchy is not real rule by women, but rather a situation in which the objectification of women takes the form of forcing women into the role of goddess—which is one way of saying, not quite human). In the economic and political sphere, this form of matriarchy lasted only until the development of agriculture; in the sphere of more abstract culture, however, what Firestone calls "the Female Principle" of "unfathomable Nature"[47] remained dominant until the end of the Renaissance.

The shift to the patriarchal phase involves a change in the way the objectivity of nature was construed. In the matriarchal phase, because nature was external to human beings, it was seen

42 Marx, *Grundrisse*, 105.

43 Marx, *Grundrisse*, 105.

44 I skip over here Firestone's discussion of racism, which I can't explore in detail here. It occurs to me, however, that understanding the biological family as a real abstraction might help in understanding why Firestone puts forward such a problematic theory of race. The overarching problem with Firestone's theory here, it seems to me, is the attempt to explain racism entirely in terms of sexism, the claim that "racism is a sexual phenomenon" (Firestone, *Dialectic of Sex*, 122). She derives this from an analogy between the biological family and the "Family of Man" (122); but though the biological family may be a real abstraction, the family of man is at best a metaphor, an imaginary, ideal abstraction. Attempting to understand racism by reference to the biological family in this way is thus to attempt to apply an abstraction too abstractly; rather than a concrete account of racism, Firestone's discussion of race is too often an ungrounded and imaginary generalization of her account of sexism.

45 Firestone, *Dialectic of Sex*, 200.

46 Firestone, *Dialectic of Sex*, 200.

47 Firestone, *Dialectic of Sex*, 200.

as opposed to and threatening to human beings. The patriarchal phase, on the other hand, drew the opposite conclusion from the same premise. Because nature was external to human beings, it was now seen as an object available for manipulation by humans: "the contingencies of reality are overcome…through the mastery of reality's own workings."[48] The separation of humanity from nature now became the precondition of human domination of nature; the analogical linking of women to nature remained, but the changed status of nature leads to women being seen as possessions, rather than goddesses.[49]

Firestone lays out a grand narrative of the changing relationships between these two modes of the cultural representation of nature in order to critique both modes, and it is in this critique that the sex dialectic of cultural history becomes properly dialectical. Firestone here applies the dialectical method and grasps the back-and-forth between two modes of cultural representation of nature as a totality, and sublates this dialectic of cultural representations into a dialectical relationship between culture and nature. The two modes of representation of nature share two fundamental features, and these are the targets of Firestone's critique. One is the mapping of the humanity/nature distinction on to the gendered binary male/female; the other similarity is this distinction between humanity and nature itself. The connection between the two is complicated: the division into two sexes is the origin of the objectification of nature; but, at the same time, it is *because* this sex division is natural that women come to be analogized to the natural. It is this complicated interrelation that gives Firestone leverage to break down the presumed naturalness of women. Her point is not that the identification of women with nature is simply false; the naturalness of women's oppression is all too real: "sex class sprang directly from a biological reality: men and women were created different, and not equally privileged."[50] If we accept the concept of nature in opposition to humanity, women are indeed tied to nature in a way that men are not (that is, through specific features of the female role in biological reproduction). But we do not have to accept this understanding of nature at all. Thus, it is through the rejection of the nature/humanity distinction that Firestone challenges the "natural" oppression of women.

Now, it might appear that Firestone accepts, even embraces this distinction, that it is by valorizing the human that she seeks to overcome the natural roots of women's oppression. In fact, however, the situation is more complicated. Take her invocation of de Beauvoir's claim that humanity is "against nature," which leads to her conclusion that "the 'natural' is not necessarily a 'human' value."[51] While this might seem to simply oppose "natural" and "human," the following sentence complicates matters: "humanity has begun to outgrow nature."[52] There is an opposition between humanity and nature here, but it is not a simple opposition, but rather a dialectical one. Humanity and nature exist in a relationship to one another, a relationship, furthermore, which is defined by "movements, combinations, connections, rather than the things that move, combine, are connected," to quote the passage from Engels's *Socialism: Utopian and Scientific* that Firestone chose as the book's epigraph. The product of this continuing dialectic of nature and humanity can be seen in Firestone's discussion of ecology, which rejects the calls (still common today) for a

48 Firestone, *Dialectic of Sex*, 196.

49 Firestone's account of the development of science here is supported by the prevalence of metaphors of sexualized possession and rape in the writings of early figures in the scientific revolution, for which see Sandra Harding, *The Science Question in Feminism* (Ithaca, NY: Cornell University Press, 1986), 113.

50 Firestone, *Dialectic of Sex*, 8.

51 Firestone, *Dialectic of Sex*, 10.

52 Firestone, *Dialectic of Sex*, 10.

nature-focused ecology quite decisively:

> Certainly it is too late for conservationism, the attempt to *redress* natural balances. What is called for is a revolutionary ecological program that would attempt to establish an artificial (man-made) balance in place of the "natural" one, thus realizing the original goal of empirical science: total mastery of nature.[53]

The turn here to "total mastery of nature" seems to put us back within the patriarchal mode of nature as something to be dominated. Haraway, indeed, explicitly criticizes Firestone in these terms. According to Haraway, Firestone "accepted that there are natural objects (bodies) separate from social relations" and so "prepared for the logic of the domination of technology—the total control of now alienated bodies in a machine-determined future."[54] I hope my discussion this far has cast some doubt on the first part of this claim. Rather than accepting a sharp distinction of the natural from the social, Firestone shares Haraway's "Marxist humanism," the belief that "the fundamental position of the human being in the world is the dialectical relation with the surrounding world."[55] Marx develops this theme in his *Economic and Philosophical Manuscripts*, in which human alienation from nature is seen as alienation from humanity itself because, in Marx's striking formulation, "nature is the inorganic body of the human being."[56] Marx emphasizes the impossibility of drawing any hard line between the human and the natural, and this is something we can also see in Firestone's use of cybernetics. Cybernetics is a historically specific account of technology that differs from pre-20th century understandings of technology particularly in how it conceives of the relationship between agent and environment, so Firestone's use of cybernetics distances her position from the patriarchal mode of " the logic of the domination of technology."

Though cybernetics is not a significant part of the 21st century intellectual fabric, in the period in which Firestone was writing *The Dialectic of Sex*, cybernetics was a key reference point for a wide range of disciplines. Haraway points the influence of cybernetics on post-war biology, culminating in Wilson's *Sociobiology*, published four years after *The Dialectic of Sex*,[57] and, while Haraway identified the utility of cybernetics to patriarchal capitalism, cybernetics was, during its heyday, also adopted as a framework by liberals and the left. Liberal social scientists such as David Easton in political science and Talcot Parsons in sociology drew on cybernetics and communication theory.[58] Cybernetics was also influential in the USSR[59] and in Allende's socialist Chile, which used a system for cybernetic economic planning called Cybersyn.[60]

Cybernetics is the science of control, but control here is understood in terms of systems of communication and feedback. Cybernetics, then, is the language in which Firestone expresses a

---

53 Firestone, *Dialectic of Sex*, 219.

54 Donna Haraway, *Simians, Cyborgs and Women: The Reinvention of Nature* (New York: Routledge, 1991), 10.

55 Haraway, *Simians, Cyborgs and Women*, 10.

56 "Die Natur ist der *unorganische Leib* des Menschen," Karl Marx and Freidrich Engels, *Werke*, Supplemental volume 1 (Berlin: Dietz Verlag, 1968), 516. I quote the German here to avoid the ambiguity between "man" as the human *species* and as the human *male*, which is unfortunately present in the standard English translations, see e.g. Robert C. Tucker, ed., *The Marx-Engels Reader* (New York: W.W. Norton & Co, 1978), 75.

57 Haraway, *Simians, Cyborgs and Women*, chapter 5.

58 David Easton, *A Systems Analysis of Political Life* (New York: Wiley, 1965).

59 See the Soviet papers collected in Joint Publications Research Service, *Cybernetics at the Service of Communism* (Washington: U. S. Dept. of Commerce, Office of Technical Services, 1962).

60 Eden Medina, "Designing Freedom, Regulating a Nation: Socialist Cybernetics in Allende's Chile," *Journal of Latin American Studies,* 38 (2006), 571-606.

notion of control that does not depend on domination of an external object. Firestone's cybernetic ecology depends on a reciprocal relationship between humanity and nature which is a relationship of interpenetration rather than domination. Firestone writes that "humanity will have mastered nature totally" not when it has achieved complete control over nature, but rather when humanity has "realized in *actuality* its dreams," that is, when there is no longer any distinction between human conception and external embodiment. In discussing cybernetics, Firestone uses a particular idiom, current at the time, to describe not the logic of technological domination, but the final stage of a dialectic in which the mutual dependence of the human and the natural achieves its full development in the ending of the distinction between the two.

That, then, is the overarching trajectory of the dialectic of sex. Firestone, however, does not stop at this level of grand visions, having insisted that her radical feminism is a scientific feminism, in the sense in which Marxism was supposed to be a scientific socialism, that is, a concrete account of a possible transformation rather than just an imagined future.[61] While the sex dialectic in its cultural form allows us to *understand* the divided culture that must be overcome by feminist revolution, the actual overcoming of this culture will require specific and focused action. While *The Dialectic of Sex* is not a manual of the tactics of feminist revolution, it does move towards such a discussion inasmuch as it focuses on the particular, concrete *embodiment* of this cultural dialectic. Firestone's primary example is the embodiment of the gendering of scientific culture in scientific practice. Firestone's enthusiasm about science is an enthusiasm for what science might be or, rather, an enthusiasm for what it is becoming under the presure of its current contradictions; this does not imply an approval of the current state of science,[62] but rather a critique of science which also shows how its limitations could be overcome.[63]

The question at issue here, then, concerns the embodiment of science in the scient*ist*. The gendering of science is realized as a particular psychology common to the scientist. It is not just the empirical fact that a majority of scientists are men.[64] Rather, science *itself* is male: "women in science are in foreign territory," because the development of modern science has been determined by the "sex duality."[65] Firestone glosses this in terms of science requiring "a 'male' mind," a matter of the particular psychology of science. It is important to see, however, that this does not simply involve male scientists having "male" minds rather than "female" ones. Rather, what happens is that the contradiction of sex dualism is itself reproduced or reflected in a particular way in the psychology required by science, leading to the emotionally divided psyche of the scientist who cannot integrate his "objective" scientific work with his own subjectivity. The contradiction between subjective and objective, or between public and private, is reproduced within the scientist, and for this reason it is possible for the dialectic of sex to play itself out on this

61 Firestone, *Dialectic of Sex*, 6.

62 See especially Firestone, *Dialectic of Sex*, 228.

63 Firestone, *Dialectic of Sex*, 238.

64 Besides which, the empirical situation is more complicated than this, concerning not simply the gender of those performing science, but the distribution of different roles within the scientific enterprise. Firestone equates "the absence of women from science" with her experience that women in science are likely to be found as "lab technicians, graduate assistants, high school science teachers, faculty wives, and the like" (Firestone, *Dialectic of Sex*, 193). Firestone here may be missing a relevant question about the institutional structure of science: how is it that the significant infrastructure required by scientific research is elided in the equation of science with the figure of the isolated scientist?

65 Firestone, *Dialectic of Sex*, 193.

individual level at the same time that it proceeds in the wider culture.

As the reflection of the sex division occurs within the "male" psychology of science, so is the division reflected within "female" minds, which accounts for the deficiencies of the subjective ("female") arts, as well as for the specific way in which women are marginalized within science. Aside from marginal positions (technicians or assistants, rather than "proper" scientists) within the hard sciences, women's incorporation into science has focused on the behavioral sciences or, in Firestone's less complementary terms, "pseudo-scientific bullshit."[66] The problem, for Firestone, with the pseudo-scientific character of the social sciences is that it renders them ineffective, incapable of having any effect on the social world, in contrast to "the real sciences—physics, engineering, biochemistry, etc., sciences that in a technological society bare an increasingly direct relation to control of that society."[67] Aside from being useful to continued male domination, this ineffectual pseudo-science is a further embodiment of the sex division in its cultural form. The ineffectiveness of the social sciences marks them as the importation of the female, aesthetic, cultural mode into science (although without the aesthetic mode's visionary idealism); if women's participation in science is restricted to social science, this does not represent a breaking down of the sex division in culture at all, but rather is a reconstruction of that sex division within science.

This still might represent progress, however, as a sharpening of the contradictions of the sex dialectic within science might accelerate science's overcoming of these contradictions. Firestone suggests that the social sciences, in the process of overcoming their current pseudo-scientific nature, might be particularly well placed to achieve "the reintegration of the Male (Technological Mode) with the Female (Aesthetic Mode),"[68] by combining an objective effectiveness with an end to the alienation of objectivity:

> There is a new emphasis on objective social conditions in psychology as well as in the behavioral sciences; these disciplines, only now, decades after the damage has been done, are reacting to their long prostitution with demands for scientific verification—but an end to "objectivity" and a reintroduction of "value judgments." The large numbers of women in these fields may soon start using this fact to their advantage. And a therapy that has proven worse than useless may eventually be replaced with the only thing that can do any good: political organization.[69]

Firestone's insistence on the concrete effectiveness of science explains, I think, why the move from social science to political organization in the final sentence here is not a non-sequitur. In Firestone's account, science or the technological mode is equivalent to agency: what defines the technological mode is its ability to intervene in and produce change in the world. Any effective political organization for women's liberation must thus involve the appropriation of the the male mode of agency, the technological mode, by women.[70]

The point here is not that women's oppression is merely a natural matter with a technological solution. Rather, the argument of the *Dialectic of Sex* is that the possibility of using

66 Firestone, *Dialectic of Sex*, 78.

67 Firestone, *Dialectic of Sex*, 78.

68 Firestone, *Dialectic of Sex*, 215.

69 Firestone, *Dialectic of Sex*, 80.

70 For Firestone's rejection of attempts to ground women's political organization in the passivity traditionally assigned to women, see her "The Jeanette Rankin Brigade: Woman Power? A Summary of Our Involvement" in *Notes from the First Year* (New York: The New York Radical Women, 1968), available online at http://scriptorium.lib.duke.edu/wlm/notes/#rankin .

technology for feminist ends is a result of the complex and continuously developing relationship between the natural and cultural connotations of "female." Firestone's specific technological predictions did not come to pass, and the language of cybernation no longer has the purchase it may have had when *The Dialectic of Sex* was written, but dialectical conception of nature that underpins Firestone's particular understanding of cybernetics remains valuable. The dialectical account of nature in *The Dialectic of Sex* suggests that we replace the sex/gender distinction with a sex/gender dialectic. As the sex/gender distinction has come to seem more problematic, the idea of a sex/gender dialectic represents an interesting possibility for rethinking that distinction. It is as a representative of this path not taken by second wave feminism that Firestone remains relevant today.

References

Ariès , Philippe. *Centuries of Childhood: A Social History of Family Life* (New York: Alfred A. Knopf, 1962).

Assister, Alison. *Althusser and Feminism* (London: Pluto Press, 1990).

Butler, Judith. *Gender Trouble: Feminism and the Subversion of Identity* (New York: Routledge, 1990).

Butler, Judith. *Bodies that Matter: On the Discursive Limits of "Sex"* (New York: Routledge, 1993).

Easton, David. *A Systems Analysis of Political Life* (New York: Wiley, 1965).

Firestone, Shulamith. "The Jeanette Rankin Brigade: Woman Power? A Summary of Our Involvement" in *Notes from the First Year* (New York: The New York Radical Women, 1968). Available online at http://scriptorium.lib.duke.edu/wlm/notes/#rankin .

Firestone, Shulamith. *The Dialectic of Sex: The Case for Feminist Revolution* (New York: William Morrow, 1970).

Haraway, Donna. *Simians, Cyborgs and Women: The Reinvention of Nature* (New York: Routledge, 1991).

Harding, Sandra. *The Science Question in Feminism* (Ithaca, NY: Cornell University Press, 1986).

Joint Publications Research Service. *Cybernetics at the Service of Communism* (Washington: U. S. Dept. of Commerce, Office of Technical Services, 1962).

Marx, Karl. *Grundrisse: Foundations of the Critique of Political Eonomy.* Translated by Martin Nicolaus (New York: Vintage Books, 1973).

Marx, Karl and Freidrich Engels. *Werke*. Supplemental volume 1 (Berlin: Dietz Verlag, 1968).

Medina, Eden. "Designing Freedom, Regulating a Nation: Socialist Cybernetics in Allende's Chile," *Journal of Latin American Studies,* 38 (2006), 571-606.

Tucker, Robert C., ed. *The Marx-Engels Reader* (New York: W.W. Norton & Co, 1978).