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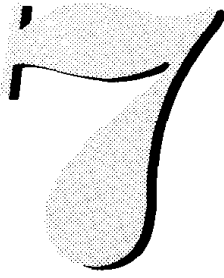
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Sexual Biopolitics in *Man's World*:

The Writings of Charlotte Haldane

“What would the effect be on society if human beings could determine in advance the sex of their children?”<sup>1</sup> Six years before Aldous Huxley’s *Brave New World* (1932), sixty years before amniocentesis and the selective abortion of female fetuses, a feminist radical published a novel dramatizing the results of such a scientific advance.<sup>2</sup> Charlotte Haldane’s *Man’s World* (1926) portrays a society in which women are reduced to biology, categorized by their reproductive roles, and ruled by a coterie of racist male scientists through a network of cybernetic surveillance and biologically based control.<sup>3</sup>

Despite her prescient analysis of the gendered threat of reproductive technology, Charlotte Haldane is more likely to be remembered now for her sixteen-year marriage to the British geneticist J.B.S. Haldane. Perhaps this is because the tale of their meeting has the popular appeal of the romance genre: a young woman journalist planning to write a novel on a scientific theme seeks out the scientist whose writings inspire and educate her. They fall in love, and after a celebrated divorce case, they marry.<sup>4</sup> Finis? Hardly, since marriage was no more conclusive in Charlotte Haldane’s life than it is in feminist fictions. Escaping the constriction of the romance plot, separating from and later divorcing J.B.S. Haldane, Charlotte Haldane went on to work as a prolific journalist, novelist, political essayist, and editor of the anti-Fascist magazine *Woman Today*.

Charlotte Haldane was a woman of deep contradictions: a self-declared lifelong feminist who wrote an "antifeminist classic" supporting vocational motherhood and blaming suffragists and spinsters for the devaluation of mothering; a severe critic of anti-Semitism and racism whose first novel concerns a white-only eugenic society led by the "particularly Jewish" visionary Mensch; a vocal champion of the meliorist project of scientific control who used that same first novel to dramatize the dangers of state government by scientists.<sup>5</sup> How could a woman of such conflicted and turbulent allegiances produce a novel critical of scientifically based reproductive control and, only a year later, the pro-natalist tract *Motherhood and Its Enemies* (1927)? One answer would be to say that Haldane's dystopian novel reflects the discursive and historical pressures faced by feminists in the early modern period. It oscillates, in a way characteristic of female modernism, between critique of and collaboration with the modern scientific project, dramatizing the oppressive potential, for women, of the scientific control of reproduction while constructing its plot and characters in terms of the dominant scientific discourse. The novel thus records the interactions of a feminist radical with her context: the scientific, social, and literary milieu of early-twentieth-century Britain.

Biology was a powerful language in which to express the changing sense of the human condition at the turn of the twentieth century.<sup>6</sup> In the wake of Darwin and Mendel, biologists increasingly called on theories of evolution, degeneration, and heredity to draw parallels between the development of the human race and the development of other species.<sup>7</sup> The dominant discourse of biology spawned other, more focused discourses linking the reproductive histories of individuals to the fate of the human race: eugenics, sex reform and sexology, and vocational mothering.

Founded in 1907, the Eugenics Education Society sought to advance "the science which deals with all influences which improve the inborn qualities of a race; also with those which develop them to the utmost advantage."<sup>8</sup> Although its membership was always small, the influence of the Eugenics Society increased with World War I, when the population decline caused by battlefield deaths renewed the popular interest in aggressive policies of both positive and negative eugenics.<sup>9</sup> Pioneers in the new scientific field of sexology, among them Francis Galton, founder of the Eugenics Society, studied human sexuality as part of the scientific project of "the discovery, description, and analysis of 'the laws of Nature.'"<sup>10</sup> Celebrating the consolidation of sexology as a scientific discipline at the Third Annual Congress of the World League for Sexual

Reform (1929), Dr. Magnus Hirschfeld identified the sexologist's proper terrain as the fields of "sexual biology, sexual pathology, sexual ethnology ['the sexual life of the human race from prehistoric times up to our own'] and sexual sociology."<sup>11</sup>

Sexologists constructed new taxonomies of sexual pathology, prominent among them the category of the *intersex*, a term used for a condition of gender nonconformity ranging from the social (i.e., "mannish" behavior in a woman) to the physiological (i.e., individuals who appear outwardly to correspond with one sex but whose sexual organs are appropriate to the other sex).<sup>12</sup> Some biologists in the 1920s used such categories to argue for universal potential bisexuality, but when the biological data were applied to society by the sexologists, they were typically used to police gender boundaries and shore up the differences between so-called normal male and female behavior and appearance.<sup>13</sup>

Common to these discourses inspired by late-Victorian biology was the new sense that human sexual behavior, and perhaps even the human species itself, might be capable of scientific and/or social reconstruction. Yet despite this shared assumption, neo-Darwinians, eugenicists, sexologists, and sex reformers ignored the constructed nature of the *gender* distinction central to their investigations. As Sheila Jeffreys has shown, the sexologists and sex reformers built their "progressive" sexual program on an antifeminist foundation. They used scientific discourse to validate three unscientific (and tiresomely familiar) misogynistic notions: that there are innate, biologically based, immutable differences between the sexes (especially in the realm of sexual behavior); that ideal sexual relations are male-dominant, female-submissive; and that the womanly ideal is wholly embodied by motherhood.<sup>14</sup>

Although contraceptive education was an important goal of the sexologists and sex reformers, who supported the scientific separation of sexuality from reproduction, many sexologists also vigorously promoted the notion of vocational or "racial motherhood," holding that to produce healthy children was a woman's duty to the nation and the race.<sup>15</sup> This biologically based construction of woman's "proper role" recycled feminist rhetoric to masculinist eugenic ends, exalting motherhood at the price of female diversity.

The late-Victorian and early-modern fascination with biology also reinvigorated the reproductive fantasies that have played a prominent role in utopian and dystopian fictions since Thomas More's *Utopia* (1516) and Francis Bacon's *The New Atlantis* (1627), both of which experimented with notions of selected breeding.<sup>16</sup> H. G. Wells drew on that utopian tradition to explore different modes of reproduction in his turn-of-the-

century writings, but the notion of scientifically controlled reproduction achieved cultural prominence with J.B.S. Haldane's *Daedalus; or, Science and the Future* (1923), which in the first year after publication sold fifteen thousand copies and went through five printings.<sup>17</sup> Indeed, the climate of scientific enthusiasm in the first three decades of the twentieth century made the notion of reproductive control seem, if not yet fully practical, something more than just a fantasy. While novelists and social theorists considered the social impact of scientific techniques for controlling reproduction, biologists and embryologists were experimenting with techniques of mechanically induced parthenogenesis, embryonic grafting, tissue and cell culture, and prenatal sex determination.<sup>18</sup>

The contemporary cultural fascination with biology led to a deep interest in the question of the mechanism of sex determination in the early 1920s. Charlotte Haldane published a column on the social impact of prenatal sex selection in the *Daily Express* six months after J.B.S. Haldane predicted extrauterine gestation in *Daedalus* and before Charlotte sought him out as scientific adviser for her first novel. In "The Sex of Your Child," Haldane explores current developments in the scientific project "to probe, reveal, and ultimately to control the forces behind the phenomena of existence." The column forecasts the issues to be raised by a technique for prenatal sex determination, only to foreclose them by the scientific parameters defining the debate. Haldane predicts that such a technique will result in major changes in the social organization of race and gender. The ability to produce male babies will give crucial support to colonialist projects, whereas the ability to choose the sex of children will eradicate gender-based social inequality: the "surplus women" problem will disappear, and every woman will be able to become a mother.<sup>19</sup>

These meliorist predictions ignore the links between gender and war, the implicit racism in the construction of the colonizing project, and the phallocentrism of the assumption that only women who are legally married may become mothers and that unmarried women are problematic because "surplus." Haldane's response to the possibility of prenatal sex determination is overwhelmingly positive because she sees in it a biologically based control that can be exercised on both the individual and the group, the physiology and the psyche, to ensure that "male" and "female" continue to be distinctly different categories. Once prenatal sex determination is possible, Haldane predicts, children will no longer

be burdened with parental resentment for being "the wrong sex" and society will no longer be burdened by the "intersex".

Haldane gave her fullest treatment to the issue of the intersex in *Motherhood and Its Enemies* (1927). This volume advances certain limited feminist positions, among them contraceptive access (for married women), subsidized motherhood, and increased research into, and use of, anesthetics in childbirth. Yet those feminist interventions rely on a disturbingly antifeminist distinction between mothers and "abnormal" women (spinsters, war workers, suffragists, and feminists).<sup>20</sup> Central to Haldane's argument in *Motherhood* is an attack on the intersex woman, whom she blames for male-female "sex-antagonism." Haldane holds that competition among women, rather than sexual oppression, has caused the particular "problem of sex" that concerns her: "the [debased] position of motherhood in the modern world" (146, 8).

*Motherhood and Its Enemies* grounds tendentious social observations in the purportedly authoritative discourse of biology and constructs female sexuality as almost totally limited to reproduction. Haldane condemns the intersexual woman not for her homosexuality but for her failure to have children, which she claims poses a grave threat to the human race. Jane Lewis has suggested that such a privileging of motherhood may have been unavoidable at the time. "[Few] women would have dared to speak against motherhood when the quality and quantity of population was considered to be of such great national importance."<sup>21</sup> Yet if Haldane's volume idealizes motherhood, it also criticizes eugenics as potentially open to racist and class-based abuses, asserting that "as certain ordained and even lay preachers of eugenics prove, this science holds potentiality of great danger" (238).<sup>22</sup> Despite its pronatalist bias, *Motherhood and Its Enemies* shares the concern of *Man's World*: the scientific control of female reproduction threatens female agency and autonomy.

*Man's World* (1926) dramatizes Haldane's assertion in "The Sex of Your Child" that the discovery of a technique of prenatal sex selection could change the relations between sexes, nations, and races. Yet the nature of that change, as well as the way the novel resolves the "problem" of the intersex, articulates a powerful critique of the scientific project "to probe, reveal, and ultimately to control the forces behind the phenomena of existence."<sup>23</sup> Critics disagree on whether Haldane's novel is utopian or dystopian. I question the very possibility of reconstructing a unitary authorial intention for *Man's World*. To my way of thinking, a more useful approach to the novel—the approach I take in this essay—

is to consider it as a record of the conflicts in Haldane's own response, as a feminist, to the dominant discourse of modern science.

Remarkably, half a century before Michel Foucault, *Man's World* dramatizes how reproductive technology can produce power and knowledge for a patriarchal state through control of the (female) body.<sup>24</sup> The novel's premise is the invention of a technique of prenatal sex selection. Developed by a geneticist well versed in animal husbandry, the "Perrier exercises," performed regularly by the pregnant woman, are her way of advancing the state goal: the progressive development of the white race "by the scientific mastery of man's instincts . . . to propagate his species" (10). Although designed to empower the pregnant woman (to produce sons), the Perrier exercises transform female choice into female necessity. They enable the state to choose the sex of each generation and so use the scientific search for enlightenment to further its patriarchal, nationalist, and racist-colonialist mission.

Haldane's fictitious state is dedicated to the perpetuation of the "entire white race," a task that recalls the theory of the survival of the germ plasm. Promulgated by the nineteenth-century German zoologist August Weismann, this theory held that a "particular sort of protoplasm . . . was transmitted substantially unchanged from generation to generation via the germ-cells, giving rise in each individual to the body-cells (soma) but itself remaining distinct and unaffected by the environment of the individual."<sup>25</sup> This early articulation of the genetic basis of heredity was later embraced by eugenics groups, concerned with inherited racial purity, as an answer to those who pressed the influence of environment over heredity.<sup>26</sup> As it was portrayed by biologists of the day, the theory was unconsciously, if not intentionally, gendered male, a gender bias that Haldane's dystopia fully exploits.<sup>27</sup>

Haldane's novel not only portrays the sexism integral to eugenics in the late twenties but also anticipates the rise of Nazi eugenics within the decade. In 1933, the counselor of Germany's Reich Ministry of the Interior would justify the Eugenic Sterilization Law, passed by Hitler's cabinet, by evoking the purity of the racial bloodline. "We want to prevent . . . poisoning the entire bloodstream of the race."<sup>28</sup> A similar mythology of the purity of the blood gives structure to the dystopian state of *Man's World*: modeled on the human cell, its central city is named Nucleus, and its official propagandists have "translated the terms of the social organization into those of the human body [which stands] symbolically for the entire white race" (63).

Anticipating the abuses of the Nazi doctors, Haldane's fictitious state uses biomedical science to produce racial division and white supremacy.

The state relies on a worldwide network of “communication and direction,” on a surveillance and control group called the “Ears,” “founded strictly on the principles laid down by their psycho-pathological researchers,” and on a technique for race-specific chemical warfare known as Thanatil, targeted to “that enzyme which produces the black pigment in negroes, and which, when attacking the tyrosine ester of Thanatil absorbed by the dusky skin, gradually liberates the poison till the central nervous system is invaded, causing paralysis and death” (63–65).

Haldane’s narrative of the political uses found for the Perrier exercises dramatizes the gendered objectification that contemporary critics have argued is integral to the scientific method.<sup>29</sup> Although the Perrier exercises testify to woman’s power (for the woman’s physical work produces the desired-sex fetus), once governments realize the method’s potential to consolidate “Man Power,” the prenatal production of male fetuses takes top priority (36). Boys are needed, the narrator explains, to perpetuate patriarchy, the patrilineal class system, and industry.

The disproportionate value placed on masculinity in Haldane’s dystopia translates into a biologically based vision of gender roles. Women are divided into three categories according to their reproductive activity. Vocational mothers are selected by state committee to participate in “a career which had its grades like all others.” They devote their lives to “the theory, as well as the practice, of race-production” (55).<sup>30</sup> “Neuters” occupy themselves with the professions, and “entertainers” serve men sexually and aesthetically—as dancers, actors, singers, poets, and novelists—and smile “perpetually” (130). These categories are rigid and impermeable. Women must choose their category at puberty, and at that point the other two are permanently closed to them by the intervention of state-enforced science. “Either you become a mother or you must be immunized” (127).

Haldane’s novel chronicles two tales of individual, body-centered resistance to the compulsory reproductive categories enforced by this scientific state. There is Christopher, whose mother, mourning the loss of a daughter born “abnormal,” refuses to practice the Perrier prenatal exercises during his gestation. As a result, he is born “intermediate sexually” (296). Resisting conscription into the ranks of the professionally and biologically “normal” males, Christopher prefers to be a musician and philosopher rather than a scientist and to remain celibate rather than mate with an appropriate female partner.

The second resister is Christopher’s sister, Nicolette, who refuses to choose between motherhood and the two other socially enforced women’s roles, a Neuter professional or an Entertainer. Instead, with



her brother's help, she procures an antidote to the state-enforced sterilizing "immunization," planning to become pregnant *not* according to state policy but by her own free actions.

Both attempts at resistance fail, not because they are defeated from without but because they collapse from within. Haldane's representation of the power over human bodies produced by her fictional reproductive technology reveals that the very terms within which resistance arises may transmute it into an effect of the power it seeks to dislodge. Christopher's opposition to heterosexual normality is hollowed out and possessed by the normalizing discourse it opposes. With fatal consequences, he internalizes the restrictive categories of Nucleus, which label some people normal and others deviant depending on their sexual and reproductive behavior. He comes to see himself in the terms of the dominant society: as one whose "submasculinity" prevents him from contributing to the improvement of the race (297). Unable to find support for his beliefs either from Nicolette or within himself, Christopher commits suicide by flying too high in his airplane. He crashes for lack of oxygen, a Daedalus turned Icarus.

Nicolette's resistance is directed not at gender roles but at sexuality, defined narrowly as reproduction. The state controls women's reproductive lives through the Motherhood Council, which assesses the women's fitness to be mothers in terms of their genetic makeup, character, and education and assigns reproductive partners—"mates"—to the women permitted to reproduce. Nicolette resists this state regulation of motherhood, arguing that it reduces female liberty, and chooses instead to regulate her reproductive life herself.

Freedom is an elusive condition in Haldane's biologically deterministic society. Although Nicolette's resistance does not end tragically—as does Christopher's—she suffers a kind of death, for she is co-opted by the patriarchal and instrumentalist values of "Man's World." She falls in love with Bruce Wayland, chief experimental scientist of Nucleus, and her resistance is transformed to loyalty. Pregnant by her scientist-lover, who calls her his little "mother-pot," Nicolette comes to think of herself as but an instrument for producing "his" son (295). High-placed in government, Bruce recasts her pregnancy as an act not of defiance but of submission to the state ethos of auto-experimentation: "an experiment, although . . . unusual and a bit risky" (239). Accepting the romantic-reproductive-scientific contract, Nicolette both objectifies herself and accepts the objectification of others.<sup>31</sup>

Thus, power produces resistance that turns into power—both Nicolette's socially constructed, limited power as a mother-to-be and

the patrilineal power soon to be enjoyed by the archetypal masculine subject who will be (re)born from her womb. Pregnant, Nicolette affirms not just experimental science but also the specifically *vocational* motherhood she previously resisted, whose central concern is the creation of a son through the Perrier technique of prenatal sex selection.

To argue that Haldane's novel embodies the oppressively gendered implications of prenatal sex selection is not to say that Haldane consciously planned to write a dystopian novel. Rather, the novel may have been intended, and was certainly received, as a feminist utopia. Critics praised "the wife of the well-known Cambridge biologist" for enriching "the literature of Utopia" while they ironically emphasized the novel's feminist agenda, as "a protest of modern woman against opposition to her ideals."<sup>32</sup> The novel betrays an ambivalent response to the scientific project, nowhere more vividly than in the character of the scientist Bruce Wayland. Bruce must have been conceived of, at least to some degree, positively, for he is modeled on J.B.S. Haldane and is explicitly associated with the two scientific activities that first attracted Charlotte Haldane to her husband-to-be. As she recalled in her autobiography, *Truth Will Out*, J.B.S. was "a biologist who specialised in making experiments on himself with some substance called acid sodium phosphate. His imagination seemed to equal his physical courage. With humorous audacity he was . . . making startling predictions about the biological future of the human race, including a fantastic but matter-of-fact account of the growing of a human foetus in the laboratory. 'This is my man!' I thought instantly" (16–17). Yet despite this initial attraction to J.B.S., and the ectogenesis and auto-experimentation with which he was associated, *Man's World* dramatizes the oppressive foundations of these scientific activities. Haldane also shows the frightening side of Bruce Wayland, in both the early scene in which Wayland defends ectogenesis to the vocational mothers of Nucleus and the later scene in which he protests his ban from the laboratory where he engages in auto-experimentation.

The early scene, in which the vocational mothers of Nucleus discuss ectogenesis, contrasts dramatically with Huxley's ungendered treatment of the topic in *Brave New World*. It reveals Haldane's fear that the new technology will displace women from their reproductive (and social) roles. A visiting geneticist, who has developed the technique in his work on cattle, asks the mothers how they think "the suggestion of human ectogenesis will be generally received." The response he receives is unequivocally negative. "You will be the most unpopular man in the world" (59). Yet despite the women's horror at the notion of "a sort of

human termite queen from whom the entire race shall be bred," Bruce Wayland joins the geneticist in impassioned defense of the reproductive technology on eugenic grounds. He states: "Ectogenesis provides the means to select on the most strictly accurate lines. The number of mothers chosen diminish year by year. Until at last, those who supply the race are the supreme female types humanity can produce" (61–62). Claiming a stance of scientific objectivity not yet shaken by the revelations of Nazi biomedicine, Bruce Wayland shows frightening indifference to the reduction of women to breeders.<sup>33</sup>

Haldane continues her attack on scientific objectification in the debate between Wayland and the company director, who bans Bruce from further auto-experimentation. The very parameters of this debate express the limitations of instrumental rationality: either Bruce can do what he wants with his body and continue auto-experimentation, or the company director can do what the company wants with Bruce's body and Bruce cannot continue with his dangerous auto-experimentation. But no matter which form of instrumentality prevails—scientific or industrial—the outcome is the same: Bruce's body is objectified and alienated, constructed as something to *use* rather than to *be*. Indeed, the scene dramatizes the breakdown of that very opposition between scientific and industrial instrumentality, for as Sandra Harding has pointed out, since the nineteenth century, science itself has "increasingly been organized along industrial lines."<sup>34</sup>

If we tease out the implications of auto-experimentation and ectogenesis—the scientific procedures that first drew Charlotte to J.B.S. Haldane and with which her character Bruce Wayland is associated—we discover that both activities express an ideology privileging scientific instrumentality or, as Bruce puts it, viewing "all living and striving . . . [as] amenable to experiment" (62). Both procedures embody notions characteristic of Western post-Enlightenment rationality and shared by both industrial and reproductive technology: a notion of a mind/body split, which valorizes mental experience and denigrates physical experience; and a notion of the autonomous individual, which, coupled with the notion of the body as property, has been marshalled to support acts of bodily objectification as diverse as prostitution, organ selling, surrogate motherhood, and transsexual mutilation.

Charlotte Haldane's pseudoscientific utopian novel falls short of the critique of instrumental reason that I have sketched out above, in part because it relies on scientific discourse to advance the cause of female agency and autonomy. But there is another reason why Haldane's novel eludes the clear-cut criticism of the scientific project, a criticism that

contemporary feminist readers might desire: her position as a woman writer working in a literary field that was all too often constructed as a "man's world" as well.

The ambivalence toward science betrayed by Haldane's novel is rooted not only in Haldane's personal experience but also in her position as a woman writer in relation to literary modernism, as a brief comparison of *Man's World* and *Brave New World* will demonstrate. Although both works offer representations of reproductive technology, in particular of J.B.S. Haldane's notion of ectogenesis, they articulate distinctly different critiques of the modern scientific project. Gender, the crucial analytic category for Charlotte Haldane's novel, figures little in Huxley's dystopia; instead, *Brave New World* focuses on class. Thus Huxley excoriates science as the handmaiden of a feminized mass culture, whereas Haldane warns of its potential for a restrictive and oppressive control of women.

In *Brave New World*, Huxley articulates the high modernist criticism of mass culture as debased and feminized, a theme shared by such diverse male modernist works as E. M. Forster's *Howards End* and D. H. Lawrence's *Women in Love*. From the novel's opening scene—when the director of the Central London Hatchery and Conditioning Centre jokingly remarks, "Embryos are like photograph film . . . they can only stand red light"—Huxley portrays the ultimate result of industrial rationality: the standardization of the human product.<sup>35</sup> In their passive uniformity, Huxley's ectogenetic embryos reflect the techniques of mechanical reproduction (the cinema, the camera) that have produced modern mass culture.<sup>36</sup> Reprints of one another, they produce and consume in a world devoid of high art or pure science, activities Huxley constructs and valorizes as subversively masculine.

Huxley's novel, despite its horror at the feminized modern industrial world, never problematizes gender as a category of experience or analysis. Thus he portrays ectogenesis as affecting women no differently than men. Both sexes donate gametes (women, eggs; men, sperm), which the factory combines and modifies and from which it produces babies to standardized and factory-generated specifications. "Standard Gammas, unvarying Deltas, uniform Epsilons. Millions of identical twins. The principle of mass production applied to biology."<sup>37</sup> Huxley's vision is gender-uniform and uniformly dismal: women and men alike are debased by the factory method, since biological mass production serves mass culture.

Although *Man's World* betrays none of the fear of a feminized mass culture that is characteristic of male modernism, Haldane's work does

embody the characteristic traits of female modernist writing: *attention to the experience of marginality*, in its consideration of the problem of the intersex; *concern with gender politics*, in its portrayal (in contrast to *Brave New World*) of the gendered implications of such reproductive technologies as ectogenesis and prenatal sex selection; *strategic use of a decentered perspective*, in its use of two protagonists of opposite sex (Christopher and Nicolette), one of whom resists while the other capitulates; and *the split focus or doubled gaze resulting from conflicting identification*, in its ambivalent representation of scientific instrumentality as a force both sexually appealing (to Nicolette) and life-threatening (to Christopher).<sup>38</sup>

To those structural and thematic traits of female modernist writing, we can add a fifth trait shared by late-Victorian and modernist woman writers: *the use of scientific language to advance the feminist cause of female agency and autonomy*. As Jane Lewis has observed: "By the late nineteenth century it was already necessary to demonstrate a scientific approach in order to gain full recognition. . . . The use of biological analogy, in particular, proved very popular in explaining all kinds of social problems."<sup>39</sup> Haldane's novel reflects this trait as it negotiates the conditions for expression with the hegemonic discourse of science.

Tracing the development of the scientific state from control over reproduction (via birth control, then sex predetermination) to control over women, *Man's World* ends with a chilling assertion by Bruce the scientist: "There will always be Christophers, and they will always suffer. But it's the experiment that counts for us, not the result" (299). Poised between celebration and critique of the scientific control project, *Man's World* is—to contemporary feminist readers who respond to its prescient political analysis—a profoundly troubling dys/utopia.

Discursive regimes, like flesh-and-blood ones, eventually come to an end. Charlotte Haldane gradually became disillusioned with the analytic power of science.<sup>40</sup> But before she abandoned the scientific worldview, she experimented once again with mobilizing scientific discourse for her own political purposes. This time, however, her goals were a potent and conflicting mix of socialism, antifascism, and feminism.<sup>41</sup>

In 1939, Haldane took on the editorship of *Woman Today*, a paper published by the Women's Committee for Peace and Democracy. *Woman Today* had a monthly circulation of more than twenty-five hundred, mostly sold through Left Bookshops, and boasted the support, among others, of M.P. Ellen Wilkinson and the novelists Rosamund Lehmann

and Rebecca West.<sup>42</sup> Using the domestic discourse of the woman's magazine to advance the causes of antifascism and socialism, *Woman Today* printed a steady stream of leftist fiction and features, including Sylvia Townsend Warner's series "Women of Yesterday" (Harriet Beecher Stowe, Rosa Luxemburg, Countess Markievicz, and Josephine Butler), short stories by Naomi Mitchison, and monthly editorial essays discussing topics ranging from women's role in the Spanish Civil War to the Chinese women's movement. Reflecting Haldane's long-standing interest in the area, the magazine also published essays on scientific topics, such as Dr. Barbara Holmes's discussion of the early forays into estrogen-replacement therapy, "The Gland That Controls Your Sex."<sup>43</sup>

An article by Haldane herself perhaps best illustrates how the magazine used the discourse of science for left-wing political purposes, often muting its feminism in the process. Entitled "'They Were Two Hours from Death, but I Was Not Afraid': The Inside Story of My Husband's Experiment," the piece records how J.B.S. Haldane and four other members of the International Brigade experimented on themselves to determine why British submariners died in an accident on the submarine *Thetis*.

The essay recycles themes familiar from *Man's World*—the bravery of auto-experimentation, the social centrality of science—but with a crucial difference. Haldane begins by promising to reveal "what it feels like to be married to a scientist who occasionally experiments on his own body to find out things for the benefit of humanity," and the narrative strategies of the woman's magazine sugarcoat her subject, producing an idealized portrait of the scientist.<sup>44</sup> If the feminist critique has dropped out, however, the leftist critique has replaced it. In an ironic return to—and deconstruction of—the notion of enlightened government by scientists, a notion central to *Man's World*, Haldane praises the "scientific tradition" as "one of the noblest conventions of mankind" while she denies that a link exists between science and the post-Enlightenment state. Instead, Haldane constructs science not as gendered oppressor but as ungendered site of resistance, and she shows scientists working not to consolidate (masculinist) state power but to reduce the human abuses (industrial and military accidents, illnesses) produced by capitalism. She rejects the glorification of auto-experimentation as the pinnacle of human self-sacrifice and bravery, exalting instead the greater bravery of ordinary citizens. Implicitly rejecting the notion of a scientific elite controlling a debased and passive citizenry, she puts aside the specifically feminist analysis of her earlier critiques of science, instead urging

“the common men and women of this country” to work together with scientists “to overthrow this system and to bring in Socialism, Peace, True Democracy, and a really Brave New World” (3).

From *Man's World* to “a really Brave New World,” Haldane’s writings in the years leading up to fascism embody a variety of complex, even frustratingly inconsistent, ways of defining and responding to social injustice. In *Man's World*, she articulated a vigorous feminist critique of the scientific control of woman’s reproductive power, whereas in *Motherhood and Its Enemies*, she collaborated with the scientific construction of woman-as-mother in order to combat the greater eugenic threat to woman’s maternal agency. Finally, as editor of *Woman Today*, Haldane mobilized the rhetoric of conventional wife- and motherhood to leftist, anti-Fascist ends. Often contradictory, always engaged, Charlotte Haldane’s writings stand as a fascinating record of one radical woman’s changing responses to the sexual biopolitics of a turbulent era.

### Notes

I am grateful to the editors for their helpful comments on an earlier version of this essay.

1. Charlotte Haldane, *Truth Will Out* (London: George Weidenfeld and Nicolson, 1949), 15.

2. Feminist and leftist critique of the uses of amniocentesis to identify and abort female fetuses is extensive. See, for example, Les Levidow, “Sex Selection in India: Girls as a Bad Investment,” *Science as Culture*, pilot issue, 141–52, and Michelle Stanworth, ed., *Reproductive Technologies: Gender, Motherhood, and Medicine* (Minneapolis: University of Minnesota Press, 1987). For another discussion of “feticide,” see Gena Corea, *The Mother Machine: Reproductive Technologies from Artificial Insemination to Artificial Wombs* (New York: Harper and Row, 1985).

3. Peter Firchow mentions Haldane’s novel in his essay “Science and Conscience in Huxley’s *Brave New World*,” *Contemporary Literature* 14 (Summer 1975): 301–16, but the fullest treatment appears in Elizabeth Russell, “The Loss of the Feminine Principle in Charlotte Haldane’s *Man's World* and Katharine Burdekin’s *Swastika Night*,” in *Where No Man Has Gone Before: Women and Science Fiction*, edited by Lucie Armitt (London: Routledge, 1991), 15–18. See also Nan Bowman Albinski, *Women's Utopias in British and American Fiction* (London: Routledge, 1988). Charlotte Haldane, *Man's World* (London: Chatto and Windus, 1926).

4. Charlotte Haldane uses the romance genre to tell the story of her marriage to J.B.S. Haldane in *Truth Will Out*, 14–24. J.B.S. Haldane’s biographer also

uses the romance genre to describe their courtship. See Ronald Clark, *J.B.S.: The Life and Work of J.B.S. Haldane* (London: Hodder and Stoughton, 1968), 73–77.

5. Sheila Jeffreys has described Haldane's *Motherhood and Its Enemies* (London: Chatto and Windus, 1927) as an "anti-feminist classic." See Jeffreys, *The Spinster and Her Enemies: Feminism and Sexuality, 1880–1930* (London: Pandora Press, 1985), 174.

6. The term *biology* was coined at the beginning of the nineteenth century by Gottfried Reinhold to refer to the study of human existence and was later extended to mean "the scientific study of living things." See Peter Morton, *The Vital Science: Biology and the Literary Imagination, 1860–1900* (London: George Allen and Unwin, 1984), 11, and M. Abercrombie, C. J. Hickman, and M. L. Johnson, eds., *The Penguin Dictionary of Biology* (London: Penguin Books, 1951, 1980), 41.

7. For a discussion of the way literature dealt with the Darwinian notions of evolutionism, degeneration, eugenics, and heredity, see Morton, *Vital Science*; for a discussion of the contradictory impact of the work of sexologists in the last decades of the nineteenth century and the first three decades of the twentieth century, see Jeffrey Weeks, *Sexuality and Its Discontents* (London: Routledge, 1985).

8. In 1926, the year Charlotte Haldane published *Man's World*, the Eugenics Education Society changed its name to the Eugenics Society (Sir Francis Galton, cited in Lesley A. Hall, "Illustrations from the Wellcome Institute Library: The Eugenics Society Archive in the Contemporary Medical Archives Centre," *Medical History* 34 [1990]: 327).

9. Daniel Kevles, *In the Name of Eugenics: Genetics and the Uses of Human Heredity* (Berkeley: University of California Press, 1985), 85; Jane Lewis, *The Politics of Motherhood: Child and Maternal Welfare in England, 1900–1939* (London: Croom Helm, 1980), 16.

10. Magnus Hirschfeld spoke of Galton as one of sexology's "great pioneers"; see Hirschfeld, "Presidential Address: The Development and Scope of Sexology," in *Sexual Reform Congress*, edited by Norman Haire (London: Kegan Paul, Trench, Trubner and Co., 1930), xiv. Weeks, *Sexuality*, 64.

11. Jeffreys identifies this conference as the "high point" of the field of sexology, which after 1930 came under attack by the rising Nazi movement in Europe and suffered from the combined effects of the rise of fascism, the economic depression, and the drift to war in England (*The Spinster*, 186–87). Corroborating Weeks's observation that "sexology is . . . an heir to the post-enlightenment faith in scientific progress," Hirschfeld closed his presidential address by claiming, "Francis Bacon's famous saying, 'Knowledge is power,' is also true in this field" (*Sexuality*, 70; "Presidential Address," xv).

12. Weeks, *Sexuality*, 67–69; Jeffrey Weeks, *Sex, Politics, and Society: The Regulation of Sexuality since 1800* (London: Longman, 1989), 104–17.

13. Weeks, *Sexuality*, 87–88. The tendency to extrapolate from animal to human sexual characteristics produced an entertaining confusion even in the contemporary biological literature, as in the following passage from a classic text on reproductive physiology: "There exist [among men and women] all transi-



tional forms from the most masculine male to the most effeminate male, and, on the other side, from the sapphist and the virago to the most feminine female; but in man the characters of one sex are always dominant, though the degree of dominance varies through considerable limits" (Francis H. A. Marshall, *The Physiology of Reproduction*, 2d ed. [London: Longmans, Green, and Co., 1922], 690–91).

14. Jeffreys, *The Spinster*, 128–46.

15. Weeks, *Sex*, 128–31; Jeffreys, *The Spinster*, 134–36. Angela Ingram examines the dangerous political consequences of the notion of vocational motherhood in "Un/Reproductions: Estates of Banishment in English Fiction after the Great War," in *Women's Writing in Exile*, edited by Mary Lynn Broe and Angela Ingram (Chapel Hill: University of North Carolina Press, 1989), 326–48.

16. Morton, *Vital Science*, 97, and Darko Suvin, *Metamorphoses of Science Fiction: On the Poetics and History of a Literary Genre* (New Haven: Yale University Press, 1979), 103.

17. H. G. Wells, *The Time Machine: An Invention* (London: Heinemann, 1985), *The War of the Worlds* (London: Heinemann, 1906), *The First Men in the Moon* (London: Newnes, 1901); Clark, J.B.S., 70; J.B.S. Haldane, *Daedalus; or, Science and the Future* (London: Kegan Paul, Trench, Trubner and Co., 1923). I discuss the debate over ectogenesis in my book, in progress, on the representational origins of reproductive technology, "Babies in Bottles."

18. Among the important research being done by early-twentieth-century biologists and embryologists was Jacques Loeb's discovery of the technique for mechanically induced parthenogenesis in sea urchins (1899), Alexis Carrel's development of a technique for keeping frog embryo nerve tissues alive outside the body (1907), W. E. Castle and John C. Phillips's work transplanting the ovaries of guinea pigs (1909), and Hans Spemann's discovery of techniques for embryonic grafting (1918). See Gordon Rattray Taylor, *The Science of Life* (London: Thames and Hudson, 1963), 255–62; see also Mordecai L. Gabriel and Seymour Fogel, eds., *Great Experiments in Biology* (Englewood Cliffs, N.J.: Prentice-Hall, 1955), 204–8.

19. Charlotte Burghes [Haldane], "The Sex of Your Child," *Daily Express*, 2 July 1924, 6–7. For clarity and convenience, I refer to the author as Haldane rather than Burghes, her name by her first marriage. Haldane predicted: "The question of colonisation will be reviewed in a new light. Colonial nations that cannot at present produce sufficient males to populate their vast territories may then be able to do so" (6).

20. Jeffreys, *The Spinster*, 174–75. In *Motherhood*, Haldane defines the "intersexual woman" as one who "[deviates] more or less markedly from the feminine form towards the anatomical and physiological characteristics of the masculine sex" (158). Despite this biologicistic construction, Haldane focuses on "intersexual" women's *behavior*, which she blames for reducing the social standing of mothers: "In the past few years, particularly since the war, when their [intersexuals'] advertised activities threw into the background the less spectacular exertions of mothers . . . their influence has grown alarmingly" (156).

21. Lewis, *The Politics of Motherhood*, 221.

22. Haldane continues: "Let the class-conscious or race-proud individual . . . attain any influence in this matter, and those whom he fears or hates (the same

thing) will fare hardly. One would require a certificate of psychological purity even in the case of certain scientists before one would entrust them with so dangerous a profession as that of human geneticist" (*Motherhood*, 238).

23. Haldane, *Truth Will Out*, 15; Burghes [Haldane], "The Sex of Your Child," 6.

24. Michel Foucault has defined "four great lines of attack along which the politics of sex advanced . . . combining disciplinary techniques with regulative methods": the sexualization of children, the hysterization of women, the control of birth, and the psychiatrization of perversions. *Man's World* anticipates the latter two control strategies. Michel Foucault, *The History of Sexuality*, translated by Robert Hurley (New York: Vintage Books, 1980), vol. 1, *An Introduction*, 145–47. See also Michel Foucault, *Discipline and Punish: The Birth of the Prison*, translated by Alan Sheridan (New York: Vintage, 1979), and Hubert L. Dreyfus and Paul Rabinow, *Michel Foucault: Beyond Structuralism and Hermeneutics* (Brighton: Harvester Press, 1982).

25. M. Abercrombie, C. J. Hickman, and M. L. Johnson, *The Penguin Dictionary of Biology*, 7th ed. (London: Penguin Books, 1980), 129–30.

26. Kevles, *In the Name of Eugenics*, 70–71.

27. Julian Huxley's representation of the germ-line theory in *The Science of Life* offers an instance of such unconscious gendering. According to Weismann's theory, the germ plasm would be perpetuated in, and through, the bodies of women as well as men. Yet in Huxley's coauthored textbook, the line drawing illustrating the way "the germ-plasm in each generation produces bodies (soma)" unmistakably represents three white men. See H. G. Wells, Julian Huxley, and G. P. Wells, *The Science of Life* (London: Cassell and Co., 1931, 1938), 441.

28. Quoted in Kevles, *In the Name of Eugenics*, 116–17, 195–96.

29. There is a burgeoning body of feminist scholarship on this issue. Among the best recent works are Evelyn Fox Keller, *Reflections on Gender and Science* (New Haven, Conn.: Yale University Press, 1985), Sandra Harding, *The Science Question in Feminism* (Milton Keynes: Open University Press, 1986), Mary Jacobus, Evelyn Fox Keller, and Sally Shuttleworth, eds., *Body/Politics: Women and the Discourses of Science* (New York: Routledge, 1990), and Ludmilla Jordanova, *Sexual Visions* (Brighton: Harvester Wheatsheaf, 1990).

30. Like the early-twentieth-century hygienists, Haldane's hypothetical state has reconstructed "the sexual" as "the racial," by conflating reproductivity with sexuality. See Frank Mort, *Dangerous Sexualities: Medico-Moral Politics in England since 1830* (London: Routledge and Kegan Paul, 1987), 186.

31. Here I extend Carole Pateman's analysis of male sex-right as integral to post-Enlightenment liberal society. In Haldane's novel, collaboration with the scientific control of reproduction has reduced woman to experimental subject, thus robbing her of agency, whether biological or social. See Pateman, *The Sexual Contract* (London: Polity Press, 1988).

32. *Berliner Tageblatt* and *Labour Magazine*, reprinted as part of the advertising matter for *Man's World*, in Haldane, *Motherhood*.

33. In 1937, Katharine Burdekin memorably fictionalized the Nazi reproductive reduction in *Swastika Night* (New York: Feminist Press, 1985), edited by Daphne Patai. Russell, "Loss of the Feminine Principle," discusses the parallels

between Haldane's and Burdekin's dystopian visions of societies in which men have ultimate control over women's (reproductive) bodies.

34. Harding, *The Science Question*, 70.

35. Aldous Huxley, *Brave New World* (New York: Harper and Row, 1932, 1946), 6; Andreas Huyssen, *After the Great Divide: Modernism, Mass Culture, Postmodernism* (Bloomington: Indiana University Press, 1986).

36. "During the 1920s and '30s, rather than approaching film as an art, Huxley saw film primarily as another product of technology, mass-produced and mass-oriented; as entertainment, a passive leisure-time activity which, instead of stimulating creativity, induced mindless quiescence" (Virginia M. Clark, *Aldous Huxley and Film* [Metuchen, N.J.: Scarecrow Press, 1987], 7). For a good study of Huxley's critique of Taylorism and Fordism, see Peter Edgerly Firchow, *The End of Utopia: A Study of Aldous Huxley's Brave New World* (Lewisburg, Pa.: Bucknell University Press, 1984).

37. Huxley, *Brave New World*, 4.

38. See Susan M. Squier, "Virginia Woolf's London and the Feminist Revision of Modernism," in *City Images: Perspectives from Literature, Philosophy, and Film*, edited by Mary Ann Caws (New York: Gordon and Breach, 1991), 99-119.

39. Lewis continues, "The ideas formulated by scientists and mediated by the medical profession formed the framework within which all women, including active feminists . . . had to work" (Jane Lewis, *Women in England, 1870-1950* [Bloomington: Indiana University Press, 1984], 82).

40. This happened at roughly the same time that she fell out of love with J.B.S. As she recalled in her autobiography: "Having absorbed as much as my untrained mind could master of the scientific outlook on life, I began, at first slowly, with emotional resistance to admitting my disillusionment, but gradually more rapidly, to lose my interest in science. This coincided with my realisation that my second marriage was not going to give me the satisfactions, especially the children, which I had hoped for from it. So I began to look for intellectual and emotional compensation in other directions" (*Truth*, 33).

41. Between 1934 and 1944, Haldane worked as an undercover agent for the Communist International Brigade (in the Spanish Civil War) and, during World War II, as a journalist in the Soviet Union. See Haldane, *Truth*, especially chap. 7, "Communist International."

42. Like Haldane's writings before it, *Woman Today* is (as its title indicates) a battleground for different constructions of woman. The inaugural issue of the journal under Charlotte Haldane's editorship carries congratulatory messages from a number of women who would have been anathema to the Charlotte Haldane of *Motherhood and Its Enemies*, in particular Florence White, of the National Spinster's Pensions Association, and Rebecca West, whose endorsement lauds Haldane herself "as one of the finest figures that the woman's movement has brought forward" (March 1939). Later, the distinct feminist emphasis in the fiction and many of the features (such as Sylvia Townsend Warner's series on women in history) would war with the complacent construction of women as proud wives of brave men. My discussion of *Woman Today* is based on research in the Haldane archives of the D.M.S. Watson Library, University College, London, and on the microfilm copies of *Woman Today* held at the British Library (Colindale).

43. *Woman Today*, October 1936, 4, 10, 12; March 1937, 6, 14; April 1937, 5, 12; June 1937, 6, 12; September 1937, 5, 8, 9-10, 13-14; January 1939, 1-5, 16-17; February 1939, 3, 9-10, 11, 16-17; July 1939, 2-3, 8-9.

44. Charlotte Haldane, "'They Were Two Hours from Death, but I Was Not Afraid': The Inside Story of My Husband's Experiment," *Woman Today*, August 1939, 2.