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Cyborgs and Virtual Bodies

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Abstract and Keywords

This chapter traces the emergence of the figure of the “cyborg” in feminist theory from the 1980s to the present, focusing specifically on how feminist engagements with this figure draw from and challenge broader discourses of the “posthuman.” The key questions that emerge from the scholarship on the intersections of the organic and the technological include the following: (1) a set of epistemological challenges to the foundational binaries of modernist thought, and thus a feminist method for examining the mutual imbrication of nature and culture, human and nonhuman, machinic and organic; (2) a set of explorations of the intersections of material and virtual manifestations of the body through the extension of communications and media technologies; and (3) the importance of the figure of the “cyborg” to feminist accounts of political agency and critical subjectivity.

Keywords: agential realism, companion species, compost, cyborg, intra-action, material-semiotic, nomadic subjects, posthumanism, situated knowledge, virtuality

Introduction

The cyborg is our ontology; it gives us our politics—Donna Haraway

The melding of flesh and machine evoked by the figure of the cyborg has demanded a proper account in theories of embodiment, subjectivity, and social life. For some in the cultural imaginary of the mid-twentieth century, the “cyborg” signalled the fulfilment of a Cartesian promise: the overcoming of the limitations of the body, the transcendence of consciousness in the machine, and the renewal of the subject through reassembly and replacement. For others, the “cyborg” ushered in a more apocalyptic posthuman future in which machines would ultimately supersede humanity, and in which the subject of humanism would lose agency, coherence, autonomy, and rationality. Neither of these positions, however, could be easily taken up by feminists, for whom the overcoming of the body has largely been of a piece with the most violent projects of modernity (including patriarchal domination, colonization, resource extraction, and exploitation) and for whom also the loss of the liberal subject of humanism (a subject from which so many bodies have been forcefully excluded) cannot so easily be mourned, even as it has been foundational to many feminist political claims.

This chapter seeks to unpack the tension between the cyborg as a figure for twentieth-century ontologies, and the cyborg as a figure for feminist liberatory politics, beginning with Donna Haraway’s potent “Manifesto for Cyborgs” and following the engagement with the cyborg within feminist theories in the fields of new media studies, science and technology studies, and cultural studies. It draws out the effects of new technologies on embodiment and subjectivity in the late twentieth century, the intersection of concerns with gender with questions of race and ethnicity, and tensions between the real and virtual, and the material and discursive. The chapter ends by examining new modes of thinking contradictions, hybrids, potent fusions, and dangerous possibilities within feminist theory beyond the figure of the cyborg.

Donna Haraway's "Cyborg Manifesto": A Figure for Doing Feminism

Researchers at the Research Unit of the Rockland State Hospital (a psychiatric facility in Orangeburg, New York) Manfred Clynes and Nathan Klein coined the term "cyborg" in the thick of mid-twentieth-century technoscientific, military-industrial, and mass media worlds. While they conjured the term from *cybernetic organism* to capture the possibility that the body might be "freed" from human constraints in space exploration, the term served also to sum up the thoughts, practices, and fantasies of mechanized bodies and lively machines circulating in the post-WWII American cultural context (Clynes and Kline 1960). Given these hegemonic origins, the cyborg stood as an unlikely figure for recuperation within feminist theory or politics. For Donna Haraway (1991, 151), however, "illegitimate offspring are often exceedingly unfaithful to their origins," and such faithlessness (combined with strategies of irony and blasphemy) characterized Haraway's retooling of the cyborg as a potent figure for thinking feminist theory and politics in the late twentieth century.

Haraway's "A Cyborg Manifesto" first appeared in English in 1985 in the journal *Socialist Review*. In it, Haraway sought to theorize the relation between feminism and technoscience, particularly in the interests of countering feminist accounts of science and technology as purely patriarchal discursive formations. Haraway's (1991, 151–153) political-fictional analysis foregrounded three crucial boundary breakdowns in the contemporary moment: between the human and the animal, the organism and the machine, and the physical and the non-physical. Her appropriation of the figure of the cyborg functioned as a description of the ontological shifts under postmodernism, as an epistemological challenge to modern taxonomies, and as a figure for a postcolonial and postmodern feminist politics.

The examples of cyborgs in Haraway's writing—women from the global south working in new micro-electronics industries, mythological figures, new gendered heads of households, and sweatshop laborers—in many respects displaced the technological and science-fiction discourses that framed the cyborg in popular imaginaries. Theorizing a new "informatics of domination," Haraway (1991, 161) characterized the late twentieth-century movement from industrial to postindustrial society as a transformation that denaturalized the categories of modernity—including those of race, class and gender. Bodies, objects, and spaces were all subject to disassembly and reassembly, to new control strategies, and to new boundary conditions and interface procedures. Sex and reproduction could no longer be naturalized, given the proliferation of forms of replication; racial categories were challenged by changing understandings of genetics and by the disintegration of cohesive social systems. The transformations wrought by globalization—the emergence of multinational corporations, export-processing zones, new service industries—contributed to the "feminization" of the workforce, —that is, to labor conditions premised on vulnerability, the exploitation of a reserve labor force, subject to more "flexible" but pervasive time arrangements, and to an "existence that always borders on being obscure, out of place, and reducible to sex" (166). The privatization of public life had transformed the patriarchal nuclear family into a modern family mediated by the welfare state (a "homework" economy, coupled with new right-wing family ideologies and intensified definitions of corporate and state property as private property; 1991, 168). There was, Haraway concluded, no *place* for women in these new social networks, only "geometries of difference and contradiction crucial to women's cyborg identities" (170).

The examples Haraway mobilized serve to displace the cyborg from the spheres of space exploration, robotics, information technologies, or the military to the everyday processes of the gendered division of labor, exacerbated by the conditions of late capitalism and globalization. Rather than situating feminist struggles outside and against cyborg life, she emphasized how gendered embodiment is always already embroiled in technologies of production, reproduction, and communication. Thus, while cyborg theory emerged within feminism to illuminate the impact of techno cultures on gendered embodiment, Haraway also considerably broadened the field of analysis for theories of the cyborg: not only the emerging encounters in Massively Multiplayer Online Games (MMOs) but also the changing experiences of maquiladora workers; not only the amplification of the body through machinic assemblages, but also the extension of labor in the double shift.

Such an account of cyborg life has two important effects for feminist politics: first, as a rhetorical strategy and political method, it proposes a nonessentialized, and necessarily hybrid and fragmented vision of social and bodily reality, both countering the romantic nostalgia within radical movements for unalienated or natural forms of embodiment, and providing a new subject of and in feminist theory. Rather than questions of representation, the cyborg presents instead what Haraway (in another chapter of *Simians, Cyborgs and Women*) calls *material-*

semiotics, “nodes in which bodies and meanings co-shape one another” (1991, 194; 2008, 4). The cyborg asserts that there is no transcendent authorization of interpretation, no *hors texte*, and no ontological grounding of Western epistemology (1991, 153). Gender, then, is both a semiotic system and flesh simultaneously, translated into a code or common language in which “heterogeneity is submitted to disassembly, reassembly, investment, exchange” (1991, 164).¹ Further, the lack of access to an originary wholeness leaves no position of innocence with respect to questions of domination, no privileged place from which to speak truth, particularly to “the other,” and thus no innocent category “woman” to organize feminism (1991, 157). Haraway named the alternative to innocence “situated knowledge” (also “feminist objectivity”), a position from which to stake a claim in a social world that acknowledges the “radical historical contingency for all knowledge claims and knowing subjects” and simultaneously commits itself to producing faithful accounts of the “real” world (1991, 187).

Second, cyborg life provides an “imaginative resource” for thinking collectivity, intimacy, and critique. Rather than identity, Haraway proposed “affinity” as the ground for thinking the dangerous possibilities and admixtures figured by cyborg politics. She took cyborg politics to be prefigured by the work of Chela Sandoval, whose notion of “oppositional consciousness” derives from occupying a contradictory position outside the stable social categories of race, sex, or class, and by Audre Lorde whose “sister outsider” grounds the political dimension of the feminist cyborg. Haraway was not calling for relativism or pluralism (not all differences are equal, and difference itself is not *necessarily* liberatory), but rather for a consciousness within feminism about the partiality and openness of personal and collective subject positions. Rather than the end of politics, the undoing of the Western subject could present possibilities for more complex alliances across differences that remain “multiple, pregnant, and complex” (1991, 160).

Beyond the figure’s capacity for critique, Haraway envisioned the feminist cyborg as a constructive force, capable of generating accounts of the world that encompass complex and contradictory positions. Haraway drew insights about cyborg writing as oppositional technique from Audre Lorde, Cherrie Moraga, Samuel Delaney, Octavia Butler, and Monique Wittig, among others. To illuminate the significance of social life in technoscientific worlds, cyborg writing must be a tool of oppositional consciousness, a mode of “seizing the tools to mark the world that marked them as other” (1991, 175). In this way, writing could become a method for contesting received meanings, accessing the power to signify, intervening in the processes of textualization under late capitalism, a form of play that is “deadly serious” (175). This play is deconstructive, certainly, but allied also to a transformative potentiality, the possibility of reimagining bodies and kinships. The position of the cyborg allows the feminist scholar and activist to “see from both perspectives at once because each reveals both dominations and possibilities unimaginable from the other vantage point” (154).

Indeed, Haraway’s observations about writing, irreverence, irony, and blasphemy provide a coda for reading “The Cyborg Manifesto” itself, and its committed critique—from within socialist feminism—of several of the idols of feminist thinking: women as the subject of feminist praxis, the valorization of women’s experience, the search for unalienated social relations, or the mapping of feminist politics onto the movement of history. Under the conditions of postmodernism and late capitalism, Haraway mobilized the figure of the cyborg to think a political standpoint for feminism—inflected by the critiques of women of color and by the potent imaginaries of science fiction—within rather than against technoscientific worlds. Her objective was not to mourn the passing of an episteme that was responsible for the violences of patriarchy, colonialism, positivism, and essentialism, but to find within the transformations of postmodernism a different political subject for feminism.

Material-Discursive Negotiations in Technoscientific Worlds

Historic shifts in information systems and virtual reality certainly influenced the emergence of the figure of the cyborg as a predicament for feminist thinking—both as an account of embodiment in the technopolitics of late twentieth-century life, and as a site for feminist accounts of subjectivity and collectivity. So, too, did the intersections of poststructuralist and feminist thought in this period. The cyborg embodied a complex intersection of the material and the discursive, an intersection not fully resolved by Haraway’s hyphenated term “material-semiotic.” On the one hand, feminist critiques in the 1990s of science theorists such as Hans Moravec, Ray Kurzweil, Marvin Minsky, and Richard Dawkins (who all focused on the enhancement, augmentation, and advances of the human in a posthuman future world), sought to emphasize the persistence of the material body despite technophilic claims to its obsolescence. On the other, poststructuralist feminist theories of the 1990s, drawing from

(among other texts) Judith Butler's publication of *Bodies That Matter: On the Discursive Limits of Sex* (1993), emphasized the power/knowledge formations that operate to shape and form what comes to be recognized as bodily "matter," sex and gender. Feminist accounts of cyborg bodies both emphasized the constructed nature of gender in relations of power, and the materiality of bodies, which persisted as limit, lived experience, or as resistance even within the processes of virtualization through various media and discursive frameworks.

Anne Balsamo's (1996, 160) work, for instance, maintained that the cyborg body's symbolic form—its discursive construction as the bearer of signs and cultural meaning—was always already constituted in relation to "real" material bodies. Bridging material and discursive domains, the cyborg demonstrated how bodies are differently articulated within specific social and historical formations. Culturally constructed as "natural," the body is more than a material entity; yet as a material entity, the body cannot be reduced to a discursive construct, since its so-called nature "is culturally determined even when this nature is said to be discursively constructed" (34). Cyborg bodies may be "unnaturally crafted"—and cyborg bodies may posit new forms of gendered embodiment by challenging the very givenness of physical gender identity—but, Balsamo argued, cyborgs cannot simply leave their "meat" behind, because they are "never outside history and concrete relations of power and domination" (40). Balsamo's cyborg, a discursively constituted *material* body, thus challenged the dematerialization of the body associated with postmodern ideology, which elided the historically situated material body in favor of questions of textuality and subject effects.

Virtual Bodies and Information Systems

Although Balsamo emphasized the importance of the body as a material-discursive hybrid, N. Katherine Hayles (1997) notes that she frequently represented practices such as body building or cosmetic surgery as discursive signifiers rather than material actions in the world. The emphasis on the body as a sign obscured the history of various technologies or their intersection with signifying systems to produce the body as a material-discursive object (755–756). Hayles views this problem as symptomatic of a disciplinary divide between scientific and technological disciplines (which rely on what Hayles calls a "naive realism") and cultural and literary studies (which focus more readily on questions of discourse). In many respects, Hayles's account of virtual bodies in cybernetics sets out to articulate a methodology for fleshing out the material-discursive intersections of the body in the "posthuman era."

Hayles's influential text *How We Became Posthuman* (1999) offers an entry point for re-examining the material-discursive effects of techno-science, and by extension the status of the body within the context of virtuality and information systems. Hayles takes up the fantasy of transcendence present in much cybernetic theory (e.g., Hans Moravec's assertion that it will one day be possible to download human consciousness into a computer). While such speculations appear more science fictional than scientific, Hayles (1999, 1) suggests that this idea reflects a defining characteristic of the present cultural moment—that is, "the belief that information can circulate unchanged among different material substrates." Such speculation reinforces the Cartesian divide between consciousness and embodiment, and accordingly has troubling implications for feminist critiques of modernist ontologies.

For Hayles (1999, 18), the idea that consciousness can be separated from the body can only exist under a condition of virtuality, which is to say the "cultural perception that information and materiality are conceptually distinct and that information is in some sense more essential, more important, and more fundamental than materiality." The condition of virtuality necessitates the abstraction of information from its material base; information can move freely between different material substrates only if it is decontextualized and reified. As a disembodied entity, then, information is perceived to be uninhibited by the limitations of time and space, remaining unaffected by changes in context. Information is assumed to be "more mobile, more important, more *essential* than material forms," and thus more able to directly connect the organic human body to the machinic and the prosthetic (19). This understanding of virtuality creates space for unlimited "play" with identity and embodiment, but only insofar as, paradoxically, virtual bodies replace material bodies, figuring as signs for *disembodied* entities.

Although the uninhibited flow of information between different material substrates may reveal the separation between human and machine as *constructed* rather than pre-given, this boundary work dismantles "the human" only to recuperate a liberal humanist understanding of the subject alongside the cybernetic posthuman (Hayles, 1999, 84). Under the condition of virtuality, human beings can be seamlessly articulated with machines precisely because the body is *the* "original prosthesis;" it is an entity "the human" learns to manipulate (3). As Hayles

writes, “extending or replacing the body with other prostheses becomes a continuation of a process that began before we were born” (3). The condition of virtuality not only privileges the separation between information and materiality, but also maintains the Cartesian dualism between mind and body; consciousness and rational thought are given primacy over questions of materiality.

Hayles argues that rather than view the figure of the cyborg as either *antihuman*, or a subject to be recuperated by liberal humanism, it may instead assist in revising our very understanding of what it means to be human by pointing to a new type of subjectivity (one that has been central to feminist accounts of cyborg bodies). For Hayles, this new subject is constituted at the intersection of the materiality of informatics and the immateriality of information: “The body’s dematerialization depends in complex and highly specific ways on the *embodied* circumstances that an ideology of dematerialization would obscure” (193). In other words, specific *embodied* histories contribute to the bifurcation of mind and body, information and materiality, under the condition of virtuality. Rather than the idealized or externalized form of “the body,” Hayles emphasizes the experiential and contextual aspects of “embodiment,” located within and between time, place, physiology, and culture.²

Part of Hayles’s task is to recover a notion of the cybernetic posthuman that recognizes the importance of embodied processes for both humans and machines. For Hayles, “virtual bodies” resist the historical separation between information and materiality, as “embodiment makes clear that thought is a much broader cognitive function depending for its specificities on the embodied form enacting it” (1999, xiv). Bodily life is subject to both the inscription of systems of power/knowledge as signs on the body, and the incorporation of signs, structures and technologies through bodily performance. Much like Butler’s understanding of the *performativity* of gendered identity, Hayles sees systems of signs encoded in the body through repeated performances, becoming both habitual and normalized, and sites of struggle against the normative dimensions of the sex/gender system.

For Hayles (1999, 200), incorporating practices *perform* bodily content, while practices of inscription modulate this very performance. The body’s competencies and skills are not necessarily conscious and are distinct from discourse. Because of this, incorporated knowledge is resistant to change, since it is habitual and deeply sedimented in a body. Moreover, since incorporating practices are necessarily performative and instantiated, there is always an element of improvisation that is context specific. Thus embodied knowledges are not entirely formalizable, as there are various permutations that cannot be accounted for completely (202). Although Hayles makes a distinction between inscribing and incorporating practices, neither is “natural” or universal. As Hayles suggests, “the body is encultured through both kinds of practices... culture not only flows from the environment into the body but also emanates from the body into the environment” (200). The body produces and is produced by culture. This view of the embodied human subject displaces the centrality of the sovereign human agent as the sole producer of meaning. Conscious agency is no longer “in control” of the embodied posthuman, but rather an epiphenomenon. This understanding of the embodied posthuman—the cyborg—offers an account of subjectivity and agency that challenges both scientific objectivism and the imperialist project of mastering and controlling nonhuman entities (Hayles 1999).

Cyborgs in Cultural Theory and Media Worlds

The intersections of the material and the semiotic in feminist cyborg theory provided an important methodology for thinking the co-constitution of social reality and virtual worlds, and for combining critiques of the representation of subjects in the late twentieth century with material critiques of the political economy of information technologies. Feminist scholars brought together accounts of the gendered effects of new technologies on embodiment, subjectivity, and collectivity—for instance in the spheres of reproductive medicine, assembly lines in Free Trade Zones—with readings of forms of self-fashioning in virtual worlds. In doing so, scholars aimed to assess the possibilities and limitations of the cyborg figure for feminist and critical race politics, given the complicity of so many cyborg figures with capitalism, colonialism and neocolonialism, and militarization and privatization.³ Feminist scholarship responded more positively to the figure of the cyborg as a site for feminist critique than to its possibilities for feminist politics, and most of the literature in the decade following the publication of “The Cyborg Manifesto” cautioned against an overly hasty celebration of the cyborg as an icon for feminism.

Critiques by feminist scholars were mobilized to account for new popular accounts of bodily transcendence in cyberspace and virtual worlds, and new exclusions of gender in emerging information technologies. Particularly,

the manner in which virtual “play” was imagined to transcend the binaries of mind and body as well as markers of gender and race, animated feminist critiques of the cyborg in the late twentieth century. Examinations of new cultural formations focused on the very real experiences of racism and sexism, both online and off, which were obscured by emphases on the virtuality of online identities. The popular turn toward the cyborg as a figure for bodily transcendence was thus “an old Cartesian trick, one that [had] unpleasant consequences for those bodies whose speech is silenced by the act of our forgetting; that is to say, those upon whose labor the act of forgetting the body is founded—usually women and minorities” (Stone 1999, 94). These concerns challenged feminist theorists to examine the ontological and political effects of cyborg bodies, particularly in light of the technological proliferations in the late twentieth century.

Technologies of Gender

Feminist scholars were not only concerned about shifting definitions of subjectivity, but also the very processes through which the body takes shape in and through new technological apparatuses. Although Haraway’s use of the genre of the manifesto exhorted feminist theorists and activists to take up and identify with the figure of the cyborg, feminist scholars in the 1990s focused more fully on the ways that new technologies and disciplinary apparatuses form and inform gender ideology, rather than the possibilities such technological shifts produced for a feminist politics. Anne Balsamo and Judy Wajcman both focused on how new gendered technological imaginaries and infrastructures mapped new sites of biopower in and through the body and across multiple spheres of activity, including medicine, popular culture, health and beauty. Balsamo’s *Technologies of the Gendered Body* used the cyborg as a framework for examining the constitutive effects of gender in relation to new technologies. While cyborg bodies offered technological possibilities for recrafting the material body (e.g., female body-building, cosmetic surgery, or in vitro pregnancy), thus challenging the “givenness” of physical gender identity, such transformative changes were not guaranteed (Balsamo 1996, 11). As Balsamo argued, “contemporary discourses of technology rely on a logic of binary gender-identity as an underlying organizational framework. This underlying structure both enables and constrains our engagement with new technologies” (9–10). In other words, gender operates as both the determining cultural condition and the social consequence of technological deployment; the engagement between bodies and technologies, and the power relations produced during such encounters, are organized through the “technologies of the gendered body” (9). New technologies (such as in vitro fertilization for instance) are therefore mapped onto and coded within existing logics of maternity, affective labor, and female sexuality.

The relation of gendered embodiment to new technologies is thus structured by ideological and cultural processes that remain profoundly patriarchal. This is true not only of the imbrication of women with new technologies but also of the uneven gendered access to technological development. Thus Judy Wajcman, in *Feminism Confronts Technology*, argued that the identification between men and machines became a sexual stereotype, one that had constitutive and asymmetrical effects on both men and women, including varying degrees of childhood exposure to technology, different role models, different forms of schooling, as well as segregated labor markets—all of which led to the construction of men as “technologically endowed,” and women as “technically incompetent” (quoted in Cockburn, 159).

This naturalization of the cultural and ideological affinity between men and machines in turn contributes to the gendering of technological use and design. Addressing the impact of technology on the sexual division of labor, Wajcman (1991, 38) argued that “skilled status... has been traditionally identified with masculinity and as work women don’t do, while women’s skills have been defined as non-technical and undervalued.” The masculinity of technology is a social product of the ideological and cultural association between men and machines—an association that is integral to the constitution of male gender identity. For Wajcman, then, technologies come to reflect a “male bias,” as “the pace and direction of technological development reflect existing gender relations as much as they affect the sexual division of labor” (52). In other words, the technological possibilities for changing sexual divisions of labor are constrained by pre-existing gendered organizations of work (28). While Wajcman’s account of the labor conditions in the late twentieth century coincide with Haraway’s account of late capitalism, Wajcman is far less confident than Haraway that such shifts hold open the possibility of denaturalizing the race, class and gender categories of modernity, seeing instead in such processes the exacerbation of exploitation through the perpetuation of disciplinary forms of power. Thus, feminist politics have been more focused on technological training for women, as well as critical accounts of and interventions in the constitutive effects of

technologies on the gendered body. According to Balsamo, “The question is how to empower technological agents so that they work on behalf of the right kind of social change” (156).

Racial Inscriptions

Hayles’s emphasis on processes of inscription and incorporation, as well as on the impossibility of separating information and materiality, emerged in the context of important scholarship on race and cyborg identity. Although Haraway’s manifesto situated the cyborg within a complex matrix of identity, many accounts of how bodies come to “matter” in cyborg worlds focused on the gendered nature of the cyborg, rather than the complex intersections of various cultural hierarchies in articulations of identity and inscriptions of the body. “Just as first- and second-wave feminists often failed to include race and the issue of third world women in their politics, so too have many cyberfeminists elided the topic of race in cyberspace... [but] the cyborg is not only a hybrid of machine and organism, it is also a racial hybrid” (Kolko, Nakamura, and Rodman 2000, 8). In *Race in Cyberspace*, Kolko, Nakamura, and Rodman theorized the intersections of race, gender and class in the new virtual bodies emerging in cyberspace. They challenged two key assumptions about virtual bodies: (i) that race (like gender) can be superseded in the virtual spaces of media culture and within technoscientific knowledge; and (ii) that race becomes “a controversial flashpoint for angry debate and overheated rhetoric” (1). Polarized into biological essentialism or social constructivism, binary racial cyber-discourses obscured the material-discursivity of racialized bodies in cyberspace.

As Nakamura (2002) argued in *Cybertypes: Race, Ethnicity, and Identity on the Internet*, the notion of a “democratic” cyberspace is founded upon disembodiment. Cyberspace is “unbounded” precisely because it is uncontaminated by the residue of difference, with its potential to disturb, disrupt, and challenge (88). Yet cyberspace continues to rely on essentialized images of the other, as the effacement of racial and ethnic boundaries is achieved through the repeated invocation of these very dividing lines (Nakamura 2002, 94). The Internet “propagates, disseminates, and commodifies images of race and racism” through the use of “cybertypes.” Embedded in “computer/human interfaces, the dynamics and economics of access, and the means by which users are able to express themselves online,” cybertypes “interact with the “cultural layer” or ideologies regarding race that [users] bring with them to cyberspace” (Nakamura 2002, 3). Online “identity tourism” provides an example of these complex interactions. Although the very possibility of identity tourism questions the essentialism of race as a category, the creation of an online identity frequently occurs through the appropriation of essentialized notions of gender and race. Moreover, identity tourism and racial cybertyping operate under the assumption that race can be easily separated from the body—a view that not only re-articulates the narrative of transcendence, but also constructs difference as a phenomenon that is only “skin deep.” As Nakamura noted, “The choice to enact oneself as a samurai warrior in Lambda MOO constitutes deity tourism without any of the risks associated with being a racial minority in real life” (40–41).

As Kolko, Nakamura, and Rodman (2000, 5) contend, “Race matters in cyberspace precisely because all of us who spend time online are already shaped by the ways in which race matters offline, and we can’t help but bring our own knowledge, experiences, and values with us when we log on.” The constitutive effects of race offline always already shape cyberspace and our interactions within it. It is in this constitutive sense that racial cybertyping reveals the effects of racism both on- and offline; cyberspace and “real life” cannot be separated into two mutually exclusive spaces. As cybertyping reveals, images of the essentialized other guarantee privilege and mobility for some at the expense of these very “others” (Nakamura 2002, 94).

In addition to questions of representation, Nakamura (2002) also analyzed how naturalization of web interface design reveals assumptions about race and ethnicity. Documenting the politics of design decisions, Nakamura notes that “websites that focus on ethnic and racial identity and community often possess interface design features that force reductive, often archaic means of defining race upon the user” (101–102). Individuals are required to select the “race” or “ethnicity” to which they belong from a set of preconstituted categories of “clickable” identities, with no means to define or modify these terms or categories. This practice produces a new kind of cybertyping, relegating racial identity to the paradigm of the singular “clickable box” (101–102).

Alongside the semiotic critique of racial signifiers in cyberspace, Nakamura has also offered a historical materialist critique of new technologies. She suggests that “rhetorics that claim to remedy and erase gender and racial injustices and imbalances through expensive and difficult-to-learn technologies such as the Internet entirely gloss

over this question of access" (Nakamura 2002, 9). Cybertyping becomes an epiphenomenon of new technologies partly because questions of access have been elided. Tara McPherson (2012, 23) has also emphasized the methodological entanglement of histories of the internet and race in the mid-century in the United States, extending questions of race beyond considerations of representation in new media to analyses of form, phenomenology, and computation. Far from being the result of scholars not talking to one another, McPherson argues that these disciplinary distinctions are "part and parcel of the organization of knowledge production that operating systems like UNIX helped to disseminate around the world" (24). From discussions of lenticular technologies to covert racism in notions of colorblindness, McPherson's analyses demonstrate how race is embedded within the material-semiotic data infrastructures of the last century.⁴

Feminist and critical race theories of cyborg embodiment have been especially important in making connections between the visual cultures of posthuman bodies and the political, economic and social effects of new technological infrastructures. The analysis of racialized and gendered virtual bodies emphasize the connections to complex histories of racial (and racist) representation, emphasizing the inscription of the surface of virtual bodies co-extensive with the historical emergence of race as a specific category of the modern episteme. At the same time, as Donna Haraway herself emphasized, by examining women workers in the "integrated circuit," questions of race in cyberspace were not exclusively visually coded in new media platforms, but also closely connected to new information infrastructures and thus to the intersection of bodies with profoundly racialized, gendered, and classed forms of labor in institutions and networks emerging under late capitalism. These analyses of complex processes of racialization challenge overly optimistic promises of mobility and exchange within cyberculture and illuminate connections and continuities between cyberspace and social reality.

An Apt Figure for Feminist Politics?

Although the cyborg has been emblematic of critical feminist work on techno cultures in the late twentieth century, its efficacy as a figure for feminist politics has also been called into question. As a figure, Haraway's cyborg aspired to promote a multiracial, coalitional practice of feminism. Jennifer A. González (2000) has argued, however, that the very notion of "hybridity," the joining of distinct and separate identities, is frequently ahistorical, assuming, by definition, a nonhybrid state—an original and essentializing "purity whether pertaining to race, gender, or even species. Such an understanding of hybridity thus "threatens to reproduce a new "transcendental" subject that floats through cyberspace, supposedly free from social constraints, while nevertheless perpetuating a familiar social hierarchy" (47). Although the cyborg may, in itself, be a disruptive presence, it can unintentionally reproduce the very racial and gender stereotypes it seeks to challenge. Mobilizations of the cyborg, in González's view, must continue to problematize the coming together of two distinct and definable entities.

For to replicate this reductionism masks questions concerning the legitimacy and patriarchal lineage of hybridity. "If any progress is to be made in a politics of human or cyborg existence, heterogeneity must be taken as a given" (González 1999, 273).

In addition, although in Haraway's text, the cyborg signified modes of alliance and affinity within feminism, certain critical race theorists have taken issue with Haraway's use of writings by women of color and her treatment of oppositional consciousness as analogous to the hybrid fusion of the cyborg. Malini Johar Schueller (2005) notes that the celebration of the cyborg erases the locatedness of specific bodies in distinct geo-political locations and, that the *analogy* between women of color and cyborgs "not only reifies the very binaries of center and margin, colonizer and colonized [...] but also homogenizes, through a colonial imperative, the margin itself" (79). Schueller calls instead for Haraway's focus on "situated knowledge" to be brought into explicit conversation with cyborg embodiment, to trace the "spatio-political differences" between, for instance, Asian women workers making microchips and antinuclear demonstrators in Santa Rita jail (81).

Cyborg discussions after Haraway have frequently overlooked the specificity of Chela Sandoval's conception of oppositional consciousness. For Haraway, the cyborg is a "technological embodiment of a particular and specific form of oppositional consciousness" which Sandoval (1995, 408) defined as "U.S. third world feminism." Within academia, appeals to the cyborg have ironically repressed Sandoval's "methodology of the oppressed" on which the metaphor of the cyborg rests. For Sandoval, the cyborg is both an oppositional and a differential position, one that does not emerge from the advent of new technologies alone. As a form of consciousness, Sandoval's cyborg

is *produced* through a series of concrete practices that cannot be reduced to a particular type of body (González 2000, 47). Cyborg consciousness thus represents a non-essentialized subject that “becomes identifiable through a map of possible *action*” (González 2000, 47). As a contradictory subject position, then, cyborg consciousness describes not a universal hybridity but an “elaborate specificity,” a *methodology* rather than a descriptive category (Sandoval 1995, 413–414).⁵ The cyborg, then, can only be liberatory insofar as it does not obscure its debt to the “methodology of the oppressed.”

Although Balsamo also remains cautious about mobilizing Haraway’s cyborg as a utopian image in the service of feminism, she notes that if Haraway’s ironic vision of the cyborg enables feminism to reflect on the ways in which women historically have not only experienced fragmented subjectivities and identities but also overcome “physical proscriptions,” then the figure may be a provocative one in the service of feminism. Balsamo (1999) suggests that, if we are able to move beyond valorizing the cyborg as a utopian figure in which technology emancipates women from their corporal bodies, we may transform the “feminine” essentialism of the female cyborg into a non-essential figure for contemporary women—a figure that embraces a diversity of women’s identities in the disruption of stable oppositions (150).

As these debates suggest, the unresolvable contradictions instantiated by the figure of the cyborg are not necessarily its undoing; they suggest generative tensions, and contribute to productive re-imaginings within the field of feminist theory. As Wolmark (1999) contends, “the cyborg’s propensity to disrupt boundaries and explore differently embodied subjectivities... [could] be regarded as its most valuable characteristic, and it is undoubtedly one of the reasons for its continued usefulness in feminist and cultural theory” (6).

New Earthly Metaphors: Feminist Accounts of the Human-Nonhuman Relation

Whatever its usefulness may be for reimagining the posthuman, the cyborg may no longer be the most apt metaphor for theorizing the conditions of subjectivity and sociality in contemporary social life. Quite simply, the metaphoric resonance of the cyborg has frequently pulled against its feminist re-imaginings, representing not the critical oppositional figure of the “sister outsider” so much as the celebratory banner for technological developments in communication and culture. Situated in a space of play or symbolizing new forms of Cartesian transcendence signaled by leaving the body behind, the cyborg morphs into what Haraway (2014) recently called a (post)feminist “blissed out techno-bunny.” With the proliferation of networked and programmable media, the cyborg is simply, in N. Katherine Hayles’s (2006, 159) view, not *networked* enough. As a singular, hybrid entity, the cyborg does not necessarily offer an account of the ways in which humans and machines (and much else in the world) exist together in co-evolving and interconnected systems (165).

Multiple feminist accounts of the posthuman resist mere celebration of the blurring effects of technoscience on twenty-first-century life. Rosi Braidotti (2013, 97) stresses that the posthuman might very well—particularly under global capitalism—exacerbate uneven power relations and “[bring] them to new necro-political heights.”. The new “control society” may lend the cyborg more readily to “techno-transcendence” or “consumer-oriented liberal individualism” than to the undoing of binaries of sexual and racial difference. “Advanced capitalism is a post-gender system capable of accommodating a high degree of androgyny and a significant blurring of the categorical divide between the sexes. It is also a post-racial system that no longer classifies people on the grounds of pigmentation [...] but remains nonetheless profoundly racist” (98).

Haraway (2008, 4) stresses that the figures that have populated her writing (cyborgs but also OncoMouse (1997), committed mutts, and others) are not in fact representations but rather “material-semiotic nodes or knots in which diverse bodies and meanings co-shape one another”. They should not be hypostatized as amplified posthuman subjects whose bodily boundaries are reaffirmed even as flesh and technology, host and parasite become entangled. The cyborg signified not a new *form* of embodiment for feminist theorists but the muddiness of form given the deep interconnection of subjects and objects in the world, in both affirmative and destructive co-constitutive relations.

It is for this reason that in later feminist writings on technoscientific and virtual bodies Haraway replaces the cyborg with more grounded feminist figures. Haraway (2008, 3) stresses in *When Species Meet* that she is “a creature of the mud, not the sky,” and elaborates throughout her introductory chapter a refrain of *ordinariness*. Her subject is “ordinary multispecies living on earth” (3). Her method is a “grappling with the ordinary” (3). Her figures are

“ordinary beings-in-encounter” (5). Intra-action is both the “dance of relating” but also “prosaic, relentlessly mundane” (26). Her metaphors are not those of networks or rhizomes, but of the *slime* that “holds things in touch” (3). Her prose resists appropriation into technophilic utopias, binding itself closely to the concerns of living and living together ethically.⁶ Attachment, accountability, and caring become the affective terms through which she envisages a feminist politics for the twenty-first century. This later work does not contradict “The Cyborg Manifesto” but rather mobilizes a different set of figures to do the work of thinking interconnection and social justice.

Central, then, to the retooling of the cyborg is a more distributed theoretical model for thinking subjectivity and embodiment. No longer bound by the outlines of the figure of the cyborg, feminist theories of embodiment—theories of the posthuman body—stress the larger environment (comprising technologies, certainly, but also multiple nonhuman actors), which profoundly alters what it means to be human. For Hayles (2002, 319), the human subject is but one small part within a larger “distributed cognitive environment”—an environment that includes other human and nonhuman entities, all of which can “think” and “act”. This constitutive relation between humans and other “cognizers” is not so much a usurpation of autonomy and self-will, as it is an acknowledgment of the ways in which the human subject influences and is influenced by a plurality of human and non-human agents within the “cognisphere” (319). Karen Barad (2007) further emphasizes the relational aspects of embodied life by replacing the term interaction with “intra-action,” signifying that there are no separate individual agencies that precede their interaction. The posthuman body is thus constituted relationally by specific material configurations of the world, and it is in and through those configurations that such things as boundaries and properties are differentially enacted (139). Bodily boundaries are not evident from the outset, but are the result of biologically, culturally and historically specific performative repetitions (155). Rather than matter, Barad proposes “mattering,” “a doing, a congealing of agency” (137, 149).

It is thus only through boundary-making and differentiating practices that something like the human may be defined. Matter is itself agentive rather than a fixed essence, and bodily boundaries have always been unclear. The effect for feminism is that gender, race or class become not attributes or properties of the subject, but (gendered and racialized) practices that build worlds and objects in some manners rather than others (Barad 2007, 159). Matter entails entanglement, and the matter at stake for feminism is extended beyond the sphere of the recognizably social or political, and beyond also more narrowly defined signifying structures. In this respect, cybertechnologies themselves must be viewed as coextensive with other social and ecological systems, and with the effects of neoliberalism on social life in the late twentieth and early twenty-first centuries. Tara McPherson (2012, 30–31), for instance, has argued that the organization of information and capital responds to struggles for racial justice and democracy, and thus computational systems must be viewed as influenced by and influencing cultural systems and social relations.

Braidotti’s notion of the posthuman similarly decenters the subject without evoking the figure of the cyborg; hybridity emerges from the outset, rather than in the blurring of boundaries that challenge the narratives of modernity. For Braidotti (2013, 35), matter (including what she calls “the specific slice of matter that is human embodiment”) is intelligent and self-organizing. Matter should not be opposed to culture or to technological mediation, but instead should be conceived as continuous with these. Within this frame, the figures that emerge are not oppositional or counter-subjectivities (the cyborg vs. the goddess, for instance), but rather a process-oriented political ontology of *auto-poeisis* or “self-styling” (35). This autopoiesis is not simply liberatory; it involves complex negotiations with dominant norms and values. Her approach counters the fantasy of a “trans-humanism” or a “techno-utopia” with a critical posthuman nomadic figure, a figure embedded in an ecology of multiple belongings, a “relational subject constituted in and by multiplicity” (49). The cyborg is thus the result of a profound already existing interrelationality. According to Braidotti (2006, 201), “In nomadic thought, a radically immanent intensive body is an assemblage of forces, or flows, intensities and passions that solidify in space, and consolidate in time, within the singular configuration commonly known as an ‘individual’ self.”

As with Haraway and Barad, this ontological fact does not necessarily produce a liberatory feminist politics. Braidotti emphasizes that in our current historical conjuncture, cyberspace is a highly contested social space. It evolves in concert with a social reality in which capital trades in bodily fluids (in the “cheap sweat and blood of a third world labor force”), and at times more literally in the capitalization of the body itself. Immersed in war and conflict, social and virtual worlds pursue what Achille Mbembe has called a “necropolitics” (quoted in Braidotti 2013, 9). The destruction of binaries in new rhizomatic structures of power may take the vitality of matter as their

main target for new processes of sexualization, racialization and naturalization (Braidotti 2013, 96). For Braidotti, a strong theory of posthuman subjectivity is required to re-appropriate these very processes as alternative grounds for the formation of the self. The intra-active nature of agency—what Braidotti calls “transversal subjectivity”—prioritizes relationships, manifested in the ties that bind us each to one another, as the *a priori*.

Donna Haraway’s theorization of “companion species” closely resembles the posthumanism of Barad’s and Braidotti’s. Although all three scholars intensely engage each other’s works, there are important differences in their views. Braidotti advances a non-dialectical understanding of materialism, indebted to a Spinozist worldview. Haraway (2008, 3) holds a series of contradictory standpoints in generative tension, in the interests of a committed ethical practice she calls “becoming worldly.” In her early work, the cyborg mobilized irony to engage contradictions without resolving them into totalizing wholes. The figures in *When Species Meet* are both material and semiotic, entangled and in alliance. Haraway retains humanist categories of accountability, responsibility and care, but detaches them from ethical abstractions of Western reason and older spectral figures such as Marxist feminism, and uses them to rethink categories such as labor, woman, and human in relation to inter-species life.

In *When Species Meet*, Haraway invokes “companion species” to foreground ties between different humans and non-humans, engaged in complex practices of “becoming with” (2008, 17). Companion resonates across multiple fields—etymologically it signals those with whom one breaks bread; politically, it envisions the comrade; in literature, it refers to a handbook or guide; in business, it suggests a company; in the domain of sexuality, companions hints at illicit and intimate consorts (17–18). Species refers variously to producing ideas or mental pictures, and to affairs of kin and kind. Haraway stresses that species “reeks of race and sex; and where and when species meet, that heritage must be untied and better knots of companion species attempted within and across differences” (18).

As with the cyborg, intra-action for Haraway is both an ontology and a politics. In contrast to the cyborg’s rootedness in the techno-utopic imaginaries of science fiction, companion species evoke “ordinary multispecies living on earth” (2013, 3). Multispecies living involves both the co-constitution of bodies through ingestive or parasitical processes, through feeding and eating, through the knowledge-based practices of the scientific laboratory, the industrial factory, the farm, ocean or forest. These intra-actions happen biologically, but also historically, in “situated naturecultures in which all of the actors become who they are *in the dance of relating*, not from scratch, *ex nihilo*, but full of the patterns of their sometimes-joined, sometimes-separate heritages both before and lateral to *this* encounter” (Haraway 2008, 25).

Companion species, intra-action, becoming with represent different models for thinking a politically committed interconnection. These involve ecological-political struggles (who should eat whom? who can cohabit in specific contact zones?), and entering into responsive relationships, without judgment. Haraway’s prosaic examples include an ethologist who always sets down twenty-three bowls for her twenty-two sheep, producing what Haraway calls an “open,” a space for something unexpected to happen, a space to be open to the question of surprise, of sociality in another form (2008, 34).

Accountability, care, affect and responsibility are grounded in *touch* that materializes and complicates the abstract ethical imperatives of the democratic tradition. These involve relations of use (animal testing in scientific laboratories, for instance), thinking the labor of inter-species encounter, rather than premising freedom on “shuffling off” necessity on other bodies who do not accede to the category human (women, colonized peoples, others; Haraway 2008, 73). Such political acts are not postfeminist or postracial, but involve committed work to account for “those who must inhabit the troubled categories of woman and human, properly pluralized, reformulated, and brought into constitutive interaction with other asymmetrical differences” (17).

In a recent lecture, Haraway proposes another figure for thinking/doing the work of politics: compost—a most apt figure for “grappling with the ordinary.” Haraway plays with the semiotic slippage from posthuman to *compost*, cognizant that compost is further from the goddess than the cyborg, and thus might introduce a new blasphemy into celebrations of the posthuman. To be compost is both to acknowledge the transformative processes in which we *become with* many over the course of our lives and deaths. It also marks an attitude of being un-self-impressed, a quality she lauds in the many female scientists that populate her last book (2008, 35).

Compost is also a potent mode of intra-action—a “cooking” process with enormous transformational potential. It operates at the intersection of the political, biological, ecological and ethical; it is committed to survival and

diversity. Compost, Haraway argues, does not so much shift the terms of the cyborg as acknowledge the limits of its resignification for a feminist politics. Becoming worldly, then, is still committed to the cyborg project of embracing “partial, contradictory, permanently unclosed constructions of personal and collective selves” (1991, 157) in the interests of the imaginative apprehension of different models of community and responsibility.

Conclusion

The cyborg elicits a tension within feminist theory as a figure, on the one hand, for the massive scientific and techno-cultural shifts in the contemporary moment, for better or for worse, and on the other, for the liberatory potential of a new feminist subject position. As the proliferation of edited anthologies and monographs in cyborg studies suggests, the cyborg served as a galvanizing metaphor for feminist accounts of technoscience and mediated worlds, which challenged the celebratory technological metaphors of the moment. The cyborg functioned for feminism as a mode of critique that drew attention to technologies’ role in the production of ecological instability, environmental precarity, and globalizing dynamics, governed by a shift from biopower to more “molecular” forms of power (Braidotti 2013, 97). Yet the playfulness with which the cyborg was taken up in feminist theory, cultural analysis, and contemporary art, also represents feminism’s engagement with the ludic potential of signification. Although the cyborg may no longer hold the blasphemous power it did in its earliest articulations, blasphemy continues to prove a useful strategy for feminist figuration.

In this respect, the tension between the repressive and liberatory aspects of the cyborg has served as an important engine for feminist thinking. Precisely because the cyborg signifies at once the technocentric visions of an invulnerable and impenetrable subject, and the feminist accounts of more permeable and mutable bodily life in alliance, it presents a compelling method (rather than a devoted icon) for feminist theorizing. The cyborg is, in Haraway’s terms “bereft of secure guarantees” (1990, 13). Feminist critiques of the cyborg have demonstrated how technoscientific and mediatized practices shaped gendered, racialized and naturalized forms of embodiment, producing new sites of disciplinary control, new surfaces for the inscriptions of unequal power relations. Wajcman, Balsamo, Nakamura, Haraway, Braidotti, and others are keenly aware that the space of the posthuman (and its alliance with some version of the postfeminist) do not signify a transcendence of racialization, sexualization, gendering, or the potent inequalities proliferating around the globe. Yet cyborg feminism acknowledged a need for a counter-politics that rejects technoscience’s and mediated worlds’ complicity in a conservative nostalgia for organic wholeness and unalienated experience. Cyborg feminism also embraced the possibility that technoscience might provide resources for contesting inequality and building new forms of alliance. Thus cyborg images provided fitting sites for contestation, rather than “giv[ing] in the game, cash[ing] in our chips and go[ing] home” (Haraway 1990, 13).

The cyborg continues to be useful as a *mode* of feminist theorizing, more than as a substantive position about the body or subjectivity. As a mode of theorizing, it takes pleasure in the confusion of boundaries, the capacity of figures to express imaginative possibilities that may unfix the contingent mechanisms of sex/gender, which have captured the body and inscribed it in ideology. Prying open other “potentialities of the body,” cyborg theorizing takes pleasure in perverting “standardized patterns of sexualized, racialized and naturalized interaction” (Braidotti 2013, 99). The laugh of the Medusa, the riddle of the Sphinx, and the irony of the Cyborg have all contributed to a vision of feminist politics capable of deterritorializing gender identity and its institutions. Although the normative pull of its patriarchal precedents continues to disrupt the cyborg’s potentiality, its tentative and contestatory method remains suggestive for feminist theory.

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Notes:

(¹) This insight becomes especially important in later feminist accounts of the materiality of the body and the specificity of performative practices in specific historical contexts, as will be discussed further below.

(²) While Hayles further problematizes the distinction between “the body” and “embodiment” in her later work, the distinction nevertheless creates the conditions of possibility for seeing “embodiment” as individually articulated and as resisting culture—in a word, performative (1999, 197).

(³) Chris Hables Gray, Heidi J. Figueroa-Sarriera and Steven Mentor’s *The Cyborg Handbook* (1995). was one important attempt to gather together key writings in the field, and to assess the proliferation of cyborgs within the fields of science and engineering, medicine, culture, literature and the arts. There were many other such compendia in the decade following the publication of Haraway’s text, including among others J. Jack Halberstam and I. Livingstone’s *Posthuman Bodies* (1995) and G. Kirkup, L. Janes, F. Hovenden and K. Woodward’s *The Gendered Cyborg* (2000)

(⁴) Anne Everett (2009) cautions against the presumption that cyberspace is largely a Western phenomenon, providing a crucial analysis of the use of the Internet to build upon and develop African diasporic consciousness, for instance.

(⁵) Sandoval’s methodology of the oppressed involves five technologies, which she names semiotics, deconstruction, meta-ideologizing, democratics, and differential movement. For a detailed account of this, see her *Methodology of the Oppressed*.

(⁶) It is specifically with respect to “ordinariness” that Haraway (2008) critiques Deleuze and Guattari’s notion of “becoming-animal.” Their scorn for domestic dogs and the old women who keep them, the opposition they posit between the domesticated dog (the object of bourgeois affectation) and the wolf, involves in Haraway’s view a lack of respect for the mundane, the ordinary, or the prosaic, as well as a lack of curiosity for actual animals (28–29).

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