Human(oid) Ontologies: Race, Gender, and Kinship in *I, Robot*

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Prelude

"The human body is a machine which winds its own springs."
Julien Offray de La Mettrie, *L'Homme machine* (1747)

"Are we more than machine, or can all of our mental abilities, perceptions, intuition, emotions, and even spirituality be emulated, equaled, or even surpassed, by machines?"
Rodney Brooks, *Flesh and Machines: How Robots Will Change Us* (2002)

If the body is a collection of highly ordered biomolecules that act according to specifiable rules (the model upon which contemporary molecular biology proceeds), then, according to roboticists like MIT's Rodney Brooks, we are nothing more than machines and can be imitated by other machines. The body and its subsystems, Brooks argues, can be described in mechanical terms: the liver, for instance, takes in certain products, breaks them down, and recycles them. We are a collection of components that obey laws of interaction, and no component is beyond explanation via mathematics, physics, and chemistry.[1]

Brooks mobilizes the human-is-machine metaphor in *Flesh and Machines* (2002), cognizant of the discomfort it generates and committed to disrupting our deeply felt attachments to human uniqueness and singularity. It is a non-innocent move: like many other twenty-first century robotics researchers, Brooks, Director of MIT's Artificial Intelligence Laboratory, is ideologically and professionally invested in a research paradigm structured by the practices and possibilities of building humanoid and other biomimetic robots. Projects like Brooks' "Cog"—a humanoid head, torso, and arms which approximate the sensory and motor dynamics of the human body[2]—are proliferating in research labs around the world and represent an extensive effort to develop robots that are "minimally distinguishable from biological systems."[3] Biomimetic systems are engineered systems that attempt to simulate the form or the behavior of biological structures in an effort to build robots that can carry out more sophisticated tasks in more complex environments. Living creatures exhibit an agility, robustness, and adaptability that motivate and guide an increasing number of researchers in Artificial Intelligence and robotics. Contemporary autonomous robots—inspired by creatures ranging from insects and fish, to reptiles, birds, and humans—are becoming more lifelike in their materials, their morphology, and their movement. Biomimetic mechanisms can recognize facial expressions, understand speech, and move in sturdy, bipedal, human-like gaits. "Even their software is beginning to resemble the organization and functionality of central nervous systems as these robots must perceive, interpret, respond, and adapt to their environment."[4]

Peter Menzel and Faith D"Aluisio, in their year-long investigation of robotics laboratories in Europe, Asia, and the U.S., found that the ultimate quest, "the Grail of many roboticists today," is to build a humanoid robot.[5] This research is guided by the belief that human physical capacities, mental abilities, and perceptions can be emulated by and embodied in machines. Indeed, if we are machines, as Brooks asserts, and we have emotions, it is in principle possible for machines to have emotions and, by extension, consciousness itself.[6] These projects constitute an assault on what Brooks calls the "specialness" of humans and on what Bruce Mazlish terms the "fourth discontinuity": the relationship between humans and machines, which he suggests is shifting from a state of discontinuity to continuity, i.e., becoming a continuum. Mazlish writes in *The Fourth Discontinuity: The Co-evolution of Humans and Machines* (1993) that contemporary scientific projects, such as efforts to construct computational models of mind and computers modeled on human modes of intelligence, suggest that the conceptual schemes that help explain the workings of the brain also explain the workings of a "thinking machine"; we are beginning to realize that humans and the machines we create are coextensive or "continuous."[7] The end of the "fourth discontinuity" comes after three earlier profound shifts from discontinuity to continuity, all of which involved displacing humanity from its vaunted position of uniqueness and superiority: 1) the Copernican revolution of the sixteenth century, which revealed that the earth was not the center of the universe but only a tiny fragment of a vast cosmic system; 2) Darwin"s theory of evolution and natural selection, which removed humanity from its privileged place in creation and established our relation to and descent from the animal kingdom (the discovery of DNA further clarified our relationship to all other living things); and 3) Freud"s theory of the unconscious, which posits that the ego does not control the show, and indeed has very little information about what"s really going on in the mind. With the collapse of the distinction between humans and machines in 21st century robotics research and related fields, humans must give up their privileged position with regard to machines, and are confronted a fourth time with a loss of human "specialness."

I, Robot—a 2004 film by Alex Proyas based loosely on Isaac Asimov"s 1950 volume of the same title—is certainly not the first popular narrative to explore the ramifications of collapsing distinctions between human and machine, but it is among the more interesting. Set in Chicago in the near future, the film portrays a world in which humanoid robots perform all menial labor, including domestic service. Each robot is programmed with Isaac Asimov"s "Three Laws": 1) a robot must never harm a human being; 2) a robot must obey human orders, except when doing so conflicts with the first law; and 3) a robot must protect its own existence, as long as it does not violate laws one and two. These laws effectively domesticate robots, making them safe for everyday human use and interaction.

The story pivots on the murder of Dr. Lanning (James Cromwell), a prominent robotics researcher and co-founder of U.S. Robotics (USR), the world‟s largest producer of robots. On the verge of releasing a new, more sophisticated class of robots, the NS 5 series, USR is anxious to solve the mystery of Dr. Lanning‟s death. Enter Dale Spooner, homicide detective, played by African American actor Will Smith. For reasons which become clear later in the film, Spooner deeply distrusts robots, an attitude other characters construe as unfounded since robots are "chained," if you will, by the Three Laws. Spooner‟s distrust, in conjunction with some good evidence, leads him to suspect "Sonny," one of the new class of robots who has been programmed by Dr. Lanning with an emerging sense of self. Sonny is very blue-eyed, and is figured largely as a white male adolescent, complete with identity quest.

The human/machine opposition, dramatized initially by the familiar detective/suspect conflict between Spooner and Sonny, magnifies when we discover that the new robots, released by USR in vast numbers, are not "Three Laws Safe" and are being controlled by USR‟s Artificial Intelligence, the feminized "VIKI," or Virtual Interactive Kinetic Intelligence. We learn that VIKI engineered Dr. Lanning‟s death because he had learned that she plans to use the NS 5 robots to assert dominance over humanity. VIKI instigates a robot rebellion, having quite sensibly determined that the human propensity for war and environmental destruction means that we can‟t be trusted with our own future. Dismissing this provocative argument as "logical, but heartless," the now-innocent Sonny joins forces with Spooner and together they destroy VIKI and the robot uprising.

I. Human vs. Machine: Anxiety and Kinship

Science fiction film engages and contributes to the field of meanings generated by new technologies: we know our technologies in part by the stories we tell ourselves about them. More particularly, science fiction film repeatedly enacts anxieties about losing control of our technologies (e.g., *2001*, *Blade Runner*, *Eve of Destruction*, the Terminator films). And, as feminist film scholar Mary Ann Doane writes, in the realm of representation, a "certain anxiety concerning the technological" is continually displaced onto the figure of the woman or the idea of the feminine, often embodied in a mechanical or machinic female.[8]

The vampish robot Maria, in Fritz Lang‟s 1926 film *Metropolis*, provides an early instance of this tendency. Andreas Huyssen argues that the anxieties circulating in Lang‟s film originated in the vivid and terrifying experiences of the mechanized battlefields of World War I.[9] As a figure for those fears, the seductive, subversive machine-vamp recycled a long-standing tradition of linking technology to female sexuality.[10] He writes that as the machine came to be perceived as a demonic threat and as a harbinger of chaos and destruction—a view that characterized many nineteenth century reactions to the railroad, for

example—writers in the West began to imagine the machine as Woman. In a complex process of projection and displacement, the apprehensions generated by increasingly powerful machines were recast as the male fear of an engulfing, castrating female sexuality. Huyssen writes that since the Enlightenment, when nature itself had come to be interpreted as a gigantic machine, Woman, nature, and machine had become enmeshed in a web of signification which rendered all three as Other: "by their very existence they raised fears and threatened male authority and control."[11] He suggests that, on one level, the machine-vamp represented the imaginative resolution of these deep anxieties in the masculine Western psyche. By creating a female machine (in the ultimate male technological fantasy: creation without a mother), Man deprives the feminine—and by extension, nature—of its otherness. The nature/culture split seems healed: "The most complete technologization of nature appears as re-naturalization, as a progress back to nature. Man is at long last alone and at one with himself."[12] Lang‟s she-robot refuses to submit to domination, however, and ultimately she is destroyed. Technology, by implication, is purged of its threatening aspects.[13]

I, Robot re-enacts this dynamic: VIKI, the demonic, feminized Artificial Intelligence, exceeds human control and threatens to reverse the human-machine axis of domination, suggesting that our current anxieties about robotics research inhabit their own complex place on the continuum of fears generated by technology‟s threat to humanity. Like the robot Maria and a host of other cinematic female machinic figures, VIKI is destroyed at the film‟s end, ostensibly reinstalling both the patriarchal order and humanity‟s control over its technology. Reading certain elements of *I, Robot* through other lenses however, produces a narrative that refigures this traditional opposition between human and machine and its associated conventional representation of the feminine.

This essay reconceives *I, Robot* as a film not just about technological anxiety and the human/machine duality, but also about humanity‟s *kinship* with its machines, a kinship inscribed through race and gender. It constructs three overlapping trajectories of analysis. The first engages Judith Butler‟s renditions of performativity and recent feminist work in masculinity and black masculinity studies to discuss the ways in which the film represents a "failure to repeat" normative ontological categories (human being-ness and masculinity, in particular). Black maleness is a central concern in this first section; blackness is taken up again slightly differently in the second trajectory, which mobilizes Afrofuturist discourse to suggest that the theory of double consciousness articulated by W.E.B DuBois in 1903 provides an historical precedent for *I, Robot*‟s doubled or hybrid identities. The third trajectory reads the film‟s hybridities and refigurations through Donna Haraway‟s OncoMouse, a later version of the figure of the cyborg. In OncoMouse, the boundary-making and -breaking practices which lay at the heart of the "Cyborg Manifesto" (1985, 1991) evolve into a concept of kinship, a co-constitutive relationship inflected with a

familial sense of accountability. In pursuing these trajectories, this essay participates in Haraway"s project of "swerving to tell the truth": it refigures—or perhaps more accurately, causes a host of mutations in—what is finally a relatively traditional Hollywood narrative, in order to foreground the ways in which race and gender, filtered through a non-normative "human-ness," are fundamentally constitutive of twenty-first century technological culture.

II. Performing the "Human"

Articulated initially in Butler"s *Gender Trouble* (1990) and *Bodies That Matter* (1993), performativity is the reiterative and citational practice by which the power regimes of heterosexism and phallocentrism produce and stabilize the effects of gender and the materiality of sex. While Butler argues that performativity cannot be theorized apart from the forcible and repeated practice of these regulatory norms, the norms can be resignified and rearticulated by virtue of their reiterability. Repetition happens in a multiplicity of contexts; productions swerve from their original purposes. Gender as performativity is an ongoing discursive practice, and as such is open to intervention and resignification. Further, when there is a "failure to repeat"—a disruption, a deformity, or a parodic repetition—the regulatory ideal is exposed as a norm and as a fiction. Performativity thus carries with it the notion that there is no preexisting identity, no abiding self who is the bearer of various essential attributes. For the purposes of this essay, I suggest that the notion of performativity can be legitimately extricated from the specific contexts laid out in *Gender Trouble* and *Bodies That Matter*; Butler herself borrowed the term from speech act theory and Derrida and reformulated it for use in her critique of the heterosexual matrix. Since then, in *Excitable Speech* (1997), for example, Butler has returned performativity to the terrain of speech act theory, where it is loosened from its analysis of gender ontology but still retains its association with reiteration and the related possibility of disruption and resignification.

In this framework, *I, Robot*"s traditional repetition of the opposition between human and machine can be thought of as a regulatory practice that produces a culturally intelligible notion of the specifically "human." The human/machine dichotomy in Western culture is one of the regulatory fictions that define and defend the boundaries of the uniquely human subject, an historically specific construction emerging from the Enlightenment tradition of liberal humanism. As N. Katherine Hayles notes, owning oneself is a constitutive premise for liberal humanism, as are rationality, individual agency, and choice; this version of the "human" is also always already white and male.[14] The machine, on the other hand, is figured as without will or soul, without emotion, passion, or desire, and without the flesh that imparts to humans a precious vulnerability. Machines are associated with the inhuman ravages of industrialization, with routinization, with disorienting speed and unnatural power.

Detective Dale Spooner (Will Smith), *I, Robot*‟s sympathetic protagonist, is positioned as the film‟s primary signifier of humanity, a position consolidated and naturalized by the human/machine dichotomy. In one of the film‟s earliest scenes, for example, Spooner glimpses what he perceives to be a robot running with a stolen purse. The ensuing chase—a classic cinematic reiteration resonant with good guy/bad guy, self/other tones—emphasizes Spooner‟s specifically human physicality: he is flexible, athletic, and adaptable, shown jumping over barriers and cutting fluidly across the city‟s linear structures. Robot embodiment, by contrast, appears stiff, and perhaps too obviously, "mechanical." When Spooner inevitably catches the robot, however (with a full-fledged, human-on-machine body tackle), he is berated by the robot‟s owner; the robot, programmed like all other robots with Asimov‟s Three Laws and thus incapable of theft, was merely following orders to pick up her forgotten purse and rush her asthma medication to her. Spooner‟s apparently very human heroism—inspired by an instinctive mistrust of robots arising from an initially unspecified trauma—is quickly construed as pathological. This "pathology" marks him from the beginning with a seemingly over-determined, anachronistic human-ness, and serves to separate him not just from robots but from other humans accustomed to and dependent upon robotic service and subservience. The film repeatedly cites this logic, actively producing Spooner‟s human-ness in opposition to machine ontology. In perhaps the most graphic of these encounters, Spooner becomes the object of the chase in a scene which reiterates the clash of human ingenuity vs. brute mechanical force. Hundreds of NS5s, controlled by VIKI, attempt to kill him as he drives at high speed through a long tunnel. That he survives against a uniform mass of powerful, unthinking, unemotional machines testifies to his creative, quick-thinking, physically adept human individuality.

As in the "ritual social drama" of gender, *I, Robot* suggests that the action of consolidating the "human" requires a performance that is repeated. Following Butler, this repetition is at once a reenactment and re-experiencing of a set of meanings already socially established; the performance is effected with the strategic aim of maintaining the "human" within a binary frame.[15] However, if the various ways in which a body shows or produces its cultural significations are performative, as *I, Robot* indicates, then there is no preexisting, normative *human* identity by which an act or attribute might be measured. In anxiously reiterating Spooner‟s human-ness, the film proposes that authentic human identity is a regulatory fiction; as I‟ll show, in the logic of the performative, Spooner comes to represent a possible "failure to repeat" the normative ideal of "human"-ness. Most obviously, where that ideal indicates or requires whiteness, Spooner‟s blackness—cited or performed unabashedly by Will Smith—produces a gap or fissure in the citational chain. Within the milieu of the film itself, blackness is normalized: there are a variety of black characters in addition to Spooner who mobilize black idiom and other black cultural signifiers. Outside the mise-en-scène of the film, however, Spooner‟s blackness—which is central, not

incidental, to his character—cannot help but mark him as "other" in the still-dominant white cultural imagination.

The break in the chain of signifiers represented by Spooner‟s black "otherness" is complicated somewhat when we consider Smith‟s expertise in citing or reiterating masculinity. As a discursive concept and practice, masculinity absorbs most of what Western culture associates with humanness—it is conflated with the universal, active, reasoning, individual subject. Butler writes in *Bodies That Matter* that the repeated inculcation of gender norms contribute to the field of discourse and power which orchestrates, delimits, and sustains that which qualifies as "the human." Further, she argues that it is not enough to claim that human subjects are constructed, for the construction of the human is a differential operation that produces the more and the less "human," where the less human are those abjected beings who do not appear properly gendered.[16] Spooner certainly appears to be properly gendered, and he thus lays at least partial claim to the realm of normative humanity.

However, his very masculinity—which is a specifically *black* masculinity—also becomes an occasion for sexualized spectacle. The film‟s opening scene gives us Smith‟s black, muscular, nearly nude body, and features a scopophilic (and thus potentially homoerotic) shot of the character in his underwear, lifting weights, followed by an unobscured medium-close take of Spooner in the shower. This may in part be a function of star power and the gratuitous satisfaction of the American urge to consume its celebrities, but we cannot ignore the history of the sexualized black body as spectacle, a tradition that goes back to slavery and thus reverberates with objectification. George P. Cunningham argues in "Body Politics: Race, Gender, and the Captive Body" (1996) that for African Americans, the historical moment of captivity recurs in "material displacements and deferrals that recreate themselves as discursive [sites] of captivity. The African American as captive body, materially and metaphorically, is public and on the block; to be bid upon in a circuit of linguistic, discursive, and axiological exchange outside the control of its own agency."[17] Moreover, as both black feminist critics and recent feminist theories of masculinity have suggested, inequalities among men—produced by race, class, sexual orientation and other differences—unveil masculinity as a particularized ontology linked with greater or lesser success to a normative rendering of the male body.[18] More specifically, since the 1970s black feminists have identified the ways in which racism problematizes the monolithic category of men.[19] Michael Awkward, citing Hortense Spillers, notes that the specific familial patterns that functioned during American slavery and beyond "„removed the African-American male not so much from sight as from *mimetic* view as a partner in the prevailing social fiction of the Father‟s name, the Father‟s law.‟"[20] Further, Spillers suggests that this separation from or inability to fully access the material and discursive signifiers of American patriarchy produces an African American male who has been ""touched by the *mother*, *handed* by her in ways that he

cannot escape . . . the black American male embodies the only American community of males which has had the specific occasion to learn *who* the female is within itself . . . „[21]

I, Robot implies that Spooner has been raised by his grandmother and thus without a father; non-oedipalized, Spooner assumes an arguably feminized position in certain respects, particularly in relation to the film‟s only female character, the highly rational and coldly unemotional roboticist, Dr. Susan Calvin (Bridget Moynihan). Like many women who find their feelings devalued and disbelieved in a patriarchal culture, Spooner struggles throughout the film to convince Dr. Calvin that his seemingly irrational mistrust of robots deserves validation. Indeed, in contrast to Dr. Calvin‟s un-feminine, almost machinic scientist persona, Spooner‟s rendition of maleness is distinctly invested with emotion, and, by extension, the "female within." When Dr. Calvin is finally convinced that the NS5s are untrustworthy—when Spooner‟s irrational "feminine" instincts are legitimized—*I, Robot*, by implication, authorizes Spillers‟ thesis.

Spooner‟s performance of a normative human-ness is thus undermined from the beginning by the gaps and fissures instigated by his specifically black masculinity. His already-tenuous claim to ideal humanity is fatally undermined about halfway through the film when we learn that Spooner is a cyborg. His left arm and shoulder are an electro-mechanical prosthetic grafted onto his organic body after he lost the limb in a severe accident. This accident, which takes place several months before the story begins, is the origin of his anti-robot sentiment. His vehicle and another, containing an 11 year-old girl, were pushed into a river by an out-of-control semi. A lone robot witnessed the collision and, calculating that Spooner‟s chances of survival were better than the girl‟s (45% to 11%), broke into Spooner‟s submerged car and pulled him to safety, irreparably damaging his arm and shoulder and leaving the girl to die. Paradoxically, then, Spooner‟s identity as cyborg is founded in the same moment as his deeply technophobic stance toward robots: as he asserts to Dr. Calvin, "a human being would have known better" than to rescue a grown man over a little girl. Spooner‟s status as cyborg makes him a hybrid being: cyborgs are *made*—not born—out of organic and machine parts. Cyborgs embody the dissolution of boundaries between human and machine. With the revelation of his cyborg identity, together with his deviant citations of race and gender, one can argue that Spooner‟s "failure to repeat" a normative human ontology represents, in Butler‟s terms, a resignification of the symbolic matrix out of which the opposition between human and machine arises.

III. Double(d) Consciousness

. . . the Negro is a sort of seventh son, born with a veil, and gifted with second-sight in this American world,—a world which yields him no true self-consciousness, but only lets him see himself through the revelation of the other world. It is a peculiar sensation, this double-consciousness, this sense of always looking at one‟s self through the eyes of others . . .

W.E.B. DuBois, *The Souls of Black Folk* (1903)

In unsettling human ontology—by exposing the "human" as performative—*I, Robot* produces a fissure in the chain of signifiers that constitute the human/machine binary and thus reveals the instability of such constructions. In that instability *both* terms of the binary escape or exceed the norm: neither human nor machine can be wholly defined or fixed by the repetitive labor of the norm[22] and thus become available for resignification. Unchained (or at least loosened), signifiers in *I, Robot* begin to proliferate, producing a new, arguably subversive "reiteration": the mirroring or doubling of Spooner and Sonny, which I propose to read through DuBois‟ notion of "double consciousness." Kali Tal points to African American theories which provide long-standing paradigms for thinking about the multiple identities, fragmented personae, and liminality associated in cyberculture discourse with the emergence of late twentieth-century information technologies.[23] In particular, Tal argues, W.E.B. DuBois‟ concept of double consciousness indicates that the absence of a unitary self is nothing new; that the flux of identity has, as Alondra Nelson suggests, "long been the experience of African diasporic people."[24]

The film signals the doubling of Spooner and Sonny when Spooner, displaying his "prejudice" against robots, uses the derogatory term "Canner" to refer to Sonny (implying Sonny is nothing more than a can opener). The similarity or resonance between the names "Spooner" and "Canner" is unmistakable, both aurally—as a kind of slant rhyme—and in terms of the low-tech domestic technologies the terms designate or describe. Indeed, the film explicitly links Spooner and his namesake utensil when he eats his grandmother‟s unsliced sweet potato pie right out of the pie dish, with a spoon. In an oddly appropriate sense, then, Spooner calling Sonny "Canner" is akin to the kettle calling the pot black, particularly when we consider Spooner‟s status as cyborg. Spooner‟s attempt to interpellate Sonny as a mindless, machinic "other" to humanity backfires: instead of hardening the distinctions between them it calls attention to their similarities, to the ways they begin to mirror each other.

Both Spooner and Sonny experience recurring dreams, epitomizing the process of mirroring. Spooner‟s dream recalls his accident, the traumatic founding moment of his hybrid, cyborg identity and the concomitant loss of a pure, organic human-ness. Sonny dreams of a scene in the future when robots, described by Sonny as "slaves to logic," (i.e., programming) have massed together to follow a man who has come to free them. The dreams connect Sonny and Spooner through the unconscious, a realm where the repressed inadvertently reemerges to disrupt coherent identity, revealing, as Butler writes, not only that "identity" is constructed, but that the prohibition that constructs identity is ineffective.[25] As I have argued, the prohibition that constructs identity in *I, Robot* is constituted through the opposition between human and machine. Sonny‟s dream, however, indicates a doubled reflection that renders that opposition wholly ineffective.

In describing robots to Spooner as "slaves to logic," Sonny invokes the history of slavery that he and Spooner share: like African Americans, the ontological status of robots is marked by enslavement. The term "robot" was coined by Czech writer Karel Capec his 1920 play, *R.U.R.* In Czech, "robota" signifies drudgery or servitude, and a "robotnik" is a peasant or serf. In the play, R.U.R. stands for Rossum‟s Universal Robots, a factory much like *I, Robot*‟s USR in that it populates the world with artificial slaves, meant to relieve humans of the drudgery of work. Soon, however, robots in *R.U.R.* outnumber their human masters, grow in intelligence, and eventually wipe out the human race. *I, Robot* can certainly be read as a retelling of *R.U.R*, with the difference that the joined forces of Spooner and a properly subservient Sonny destroy the robot rebellion in *I, Robot*. That destruction, however, which seems to reassert humanity‟s control over its machines and confirm Spooner‟s claim to a normative human identity, belies the film‟s doubling of Sonny and Spooner, achieved through a machinic, racialized otherness, linked and refracted through slavery.

DuBois‟ notion of double consciousness arises out of the specific historical conditions of American slavery and the institutionalized and personalized forms of racism that followed its abolition. Born in 1868, DuBois grew up in Great Barrington, a small, predominantly white New England town. His renowned metaphor of the "veil"—which shuts out blacks from the white world, obscures the humanity of blacks from whites, and prevents blacks from achieving true self-recognition or -consciousness—appears early in *Souls of Black Folk*, when DuBois recounts his first conscious experience of racism. In a scene resonant with literary antecedents in slave narratives (e.g., Douglass, Jacobs), a very young DuBois is made to recognize his difference from white children when a newcomer to the town, a tall white schoolgirl, rebuffs him seemingly without reason: "Then it dawned upon me that I was different from the others; or like, mayhap, in heart and life and longing, but shut out from their world by a vast veil."[26] The veil is both a prison, whose walls are "relentlessly narrow, tall, and unscalable to sons of night" and a perceptual distortion which only allows African Americans to see themselves "through the revelation of the other world," a white world "that looks on in amused contempt and pity."[27] The veil produces a "twoness": "an American, a Negro; two souls, two thoughts, two unreconciled strivings; two warring ideals in one dark body, whose dogged strength alone keeps it from being torn asunder."[28]

DuBois‟ model of fractured consciousness is not, as Alondra Nelson notes, an uncritical assertion of a multiplicitous identity.[29] Rather; it speaks to the psychic instabilities associated with constructing an identity in the context of a rigid, exclusionary binary structure. As I have argued, Spooner and Sonny cannot be fully contained within *I, Robot*‟s central human/machine binary; instead, each is forced to assume a "double consciousness." Like DuBois, who refused the rigidities of the white/black dichotomy—whose relationship to a normative Jim Crow blackness was complicated and problematic—Sonny and

Spooner exceed the terms of their constitution. Each is positioned as "other" to that term which is meant to identify him, yet that otherness is more complex than a mere reversal of the binary. More aptly, each dwells unsteadily in the midst of DuBois‟ primal query: "Why did God make me a stranger in mine own house?"[30] From this perspective, *I, Robot*‟s "doubling" of Spooner and Sonny symbolically resolves the painful dilemmas of double consciousness. Further, the DuBoisian model emphasizes the centrality of slavery in particular and race more generally in the film‟s doubling process, which metaphorically collapses white into black and human into machine and thus radically problematizes any notion of a unitary self.

IV. Siblings Under the Skin

Cybernetics was powerful because it *worked*. If you don‟t believe, watch William Grey Walter‟s robot tortoise returning to its cage for an electrochemical nip when its batteries are running low, or see Wiener‟s Moth turning to follow the light and his Bedbug scuttling under a chair to avoid it. These devices were simple mechanisms by contemporary standards. Nevertheless, they served an important function because they acted as material instantiations of the momentous conclusion that humans and robots were siblings under the skin.

N. Katherine Hayles, *How We Became Posthuman* (1999)

Research in cybernetics in the postwar era helped to lay the groundwork for twenty-first century robotics. In the 1940s and 50s, the cybernetics paradigm proposed that the human organism was nothing more than an organizational pattern or informational system constituted by the flow of information in feedback loops which might or might not join two or more unlike things together. This structure was analogous to other organismic patterns and machinic systems. Thus humans and machines came to be understood not as unique beings with their own essential natures, bounded by skin or other kinds of encasings. Rather, cybernetics reimagined both human and machine as informational systems defined by patterns of information circulation: in the process, the epistemological barrier between human being and machine ontology began to dissolve.

As Hayles notes, under the aegis of the cybernetics paradigm, it became possible to conclude that humans and robots were "siblings," a relationship *I, Robot* literalizes. The imploded binaries wrought by the symbolic doubling of Sonny and Spooner resettle into a new pattern, inflected by kinship, if we inspect the film through a slightly different lens. More specifically, *I, Robot* suggests Sonny and Spooner are "brothers" or, more accurately—if they indeed mirror each other—twins. Their status as siblings is produced through each character‟s relationship to Dr. Lanning, USR‟s progenitor and archetypal father figure: each is "made" by Dr. Lanning—at least in part—and positioned as his son. The film establishes Sonny‟s "lineage" when the robot asserts to Spooner under interrogation that "My name is Sonny"; when Spooner expresses incredulity that a machine could bear an individual name, Sonny mildly retorts, "My father named

me." Although Spooner quickly corrects him, saying "You mean your *designer*," Sonny's name nevertheless designates both a technological origin (he is programmed by Dr. Lanning to evince individuality) as well as a discursively constituted filial relationship. Spooner's link to Dr. Lanning is equally technological and discursive, which is not to say less consequential or significant than a biological connection—as we'll see shortly, from Donna Haraway's perspective, these un-"natural" webs of kinship produce stories about living well with all of Earth's species.[31] After Spooner's accident, Dr. Lanning personally reconstructs him, essentially "fathering" Spooner's new, cyborg self and establishing a paternal relationship the film acknowledges when Dr. Lanning's hologram addresses Spooner as "son." Further, as I noted earlier, the narrative suggests that Spooner was raised without a father; Dr. Lanning can thus symbolically assume the role without contest.

I turn now to Donna Haraway's project on kinship in technoscience to help elaborate the critical possibilities opened up by *I, Robot*'s representation of siblinghood constituted across fundamentally different ontological categories. Haraway's non-hyphenated term "technoscience" signifies the collapse, in the latter half of the twentieth century, of distinctions between science and technology as well as those between subject and object, nature and culture, heretofore separated by the Scientific Revolution into stable, opposing poles.[32] In technoscience—the realm of actual and fictionalized robotics—"[t]he technical, textual, organic, historical, formal, mythic, economic, and political dimensions of entities, actions, and worlds implode . . . [p]otent categories collapse into each other."[33] Further, empirical studies of technoscience reveal that the word *technical* does not, after all, designate a clean and orderly practical or epistemological space.[34] In this messy, heterogeneous world, where clear, discrete identities are lost,[35] kinship emerges as a distinctly non-natural connection. For Haraway, "[k]inship is a technology for producing the material and semiotic *effect* of natural relationship, of shared kind."[36] She uses it to join a host of unlike things into specifically familial relationships,[37] constructing stories and figures that she hopes will provide entry into "possible, maybe even livable, worlds" in globalized technoscience.[38] I take up one of those figures here—the OncoMouse, an artifactual rodent and transgenic cyborg positioned by Haraway as her "sister" in *Modest_Witness@Second_Millennium* (1997)—in hopes that it will provide a good tool for unwinding one or two twisted skeins of siblinghood in *I, Robot*.

Transgenic creatures contain genes transplanted from one strain or species to another: in this case, a human, tumor-producing oncogene designed to reliably produce breast cancer.[39] OncoMouse is one of a varied line of transgenic research mice, an animal model system for a disease that one in eight women in the U.S. will contract if they live long enough.[40] The technical ability to manipulate genetic information—in particular to pass it from one kind of organism to another in a regulated manner in the lab, or to synthesize and insert new

genes—has grown enormously since the first successful genetic engineering experiments of the early 1970s. In principle, Haraway suggests, there is no naturally occurring genome that cannot be experimentally redesigned.[41] In transgenic organisms, what are understood to be natural limits are extravagantly exceeded, so that "what was distant and unrelated becomes intimate": the lineage of nature itself is polluted and transformed into culture.[42] Haraway's claim that OncoMouse is her sibling, "and more properly, male or female, her sister," is obviously discursive but also material: mice and humans, she writes, "share too many genes, too many work sites, too much history, too much of the future not to be locked in familial embrace."[43] As genetically engineered mice diversify to fit research protocols and biomedical production, for example, the mouse genome became a central subject of research in the context of the Human Genome Project.[44]

Like Haraway's other cyborg figurations, OncoMouse functions in part to displace the pure Western human Self, a project *I, Robot* certainly shares. More poignantly—for OncoMouse and in the context of *I, Robot*—as a commodity OncoMouse lives out the contradictions inherent in making property of sentient beings. Haraway writes that, "[a]bove all, OncoMouse is the first patented animal in the world."[45] Debuted as Harvard-owned intellectual property in 1988, the artifactual mouse is a mass-produced research tool who circulates in the exchange networks of transnational capital.[46] Like Sonny and the other robots in *I, Robot*, s/he is an invention, and "[i]nventions do not have property rights in the self . . . "[47] The film clearly engages this dynamic when USR's CEO, Lawrence Robertson (Bruce Greenwood) goes to the police station after Sonny's capture. Robertson insists that Sonny be released to him immediately, before interrogation, because the robot is "property of USR." By implication, Sonny lacks the proper status of one who can be interrogated; as chattel, he lacks the authorization to "speak for himself" as well as all related claims to agency, individuality, and selfhood. Haraway writes that commodified transgenic mice are "sentient beings who have all the biological equipment, from neuronal organization to hormones, that suggest rodent feelings and mousy cognition, which, in scientific narratives, are kin to our own hominid versions. . . . Like other family members in Western biocultural taxonomic systems, these sister mammals are both us and not-us; *that is why we employ them.*"[48] Transgenic mice are "locked in [our] familial embrace;" they are enough like us to make good research models, but different enough to use and destroy without moral compunction. Robots in research laboratories are "employed" for similar reasons. Peter Menzel and Faith D'Aluisio found that researchers build humanoid robots because they believe robots will be more easily accepted by humans if they are built in humanity's own image.[49] Accounts like this leave to OncoMouse and *I, Robot* the task of articulating what it might mean to "accept" robots, whose bodies and beings are molded for and used to fulfill solely human purposes: it

would mean *employing* them, as menial labor, as personal servants, as personal property, as chattel, and thus potentially, as slaves.

In addition to foregrounding Sonny‟s status as an invention and the related condition of lacking property rights in the self, Haraway‟s formulation of OncoMouse insists upon the responsibilities associated with kinship. Haraway argues famously in the "Cyborg Manifesto" for taking pleasure in and responsibility for constructing and confusing boundaries.[50] While boundary-making, -breaking, and -refiguring are still important analytical practices in *Modest_Witness*, the notion of kinship—modulated with a strong sense of accountability and care—begins to take precedence. For my purposes here, that sensibility emerges most compellingly when Haraway situates OncoMouse as a bearer/sharer of her point of view. Field mice, she writes, emerge in technoscience as finely tailored laboratory rodents, "through whose eyes I write this essay": "Those mutated murine[51] eyes give me my ethnographic point of view. . . . The optical tube of technoscience transports my startled gaze from its familiar, knowing, human orbs into the less certain eye sockets of an artifactual rodent …."[52] This "transported gaze" suggests a doubled vision and perspective that collapses the human into the nonhuman, reminiscent of *I, Robot*‟s mirroring of Spooner and Sonny and resonant with a DuBoisian sense of "always looking at one‟s self through the eyes of another."[53] Haraway‟s trans-species, murine perspective is also embedded in layered cultural narratives about vision, perspective, objectivity, and selfhood, and signifies a dislocation of human as author/authority. She writes in "Situated Knowledges" (1991 [1988]) that all vision (including the organic and the technological) is particular, embodied, and agential:

> The "eyes" made available in modern technological sciences shatter any idea of passive vision; these prosthetic devices show us that all eyes, including our own organic ones, are active perceptual systems, building in translations and specific ways of seeing, that is, ways of life. There is no unmediated photography or passive camera obscura in scientific accounts of bodies and machines; there are only highly specific visual possibilities, each with a wonderfully detailed, active, partial way of organizing worlds. All these pictures of the world should not be allegories of infinite mobility and interchangeability, but of elaborate specificity and difference and the loving care people might take to learn how to see faithfully from another‟s point of view, even when the other is our own machine.[54]

Haraway indeed narrates a loving desire to see from a cyborg lab mouse‟s point of view, though her claim to inhabit an uncertain murine subjectivity is not without complexity. The habitation is a discursive move, setting

up an unsettling little feedback loop between Haraway"s assertion that discourse is simultaneously semiotic and material, and the fairly certain knowledge that, in the "real" world, Haraway cannot actually see through a rodent"s eyes. Nevertheless, adopting a mousy point of view feels like a gesture of respect, a recognition and honoring of the transgenic creature"s being. Such a reading is not particularly intuitive; Haraway writes that her "relocated gaze forces [her] to pay attention to kinship," deepening the sense of responsibility she evinces towards the rodent"s suffering:

> Whether I agree to her existence and use or not, s/he suffers, physically, repeatedly, and profoundly, that I and my sisters may live. In the experimental way of life, s/he is the experiment. S/he also suffers that we, that is, those interpellated into this ubiquitous story, might inhabit the multi-billion dollar quest narrative of the search for the "cure for cancer."[55]

Inhabiting a murine perspective indicates empathy, mutuality, suffering, even selflessness. It extends and complicates the arguments made earlier that *I, Robot*"s doubling and imploding categories do not produce an easily-assumed multiple identity or signify an "infinite mobility and interchangeability." Through the eyes of the OncoMouse, *I, Robot* can be read as an allegory of familial responsibility, of demanding relationality, and of intersubjectivity that accounts for the dynamics of privilege and power.

V. Abolitionism

In retrospect, *I, Robot* is perhaps more than just a conventional Hollywood film. In one of those unexpected turns that writing takes, I find at the end of this essay that each of the analytical trajectories pursued here points in one way or another to slavery. The film proposes that being "human" is performative and that authentic human identity is a regulatory fiction; it reveals in particular that normative human-ness is gendered and racialized, that being "human" relies on an idealized white masculinity in addition to an all-natural, non-machinic purity. Further, the narrative suggests that maintaining the "human" within the human/machine binary—and particularly in the face of humanoid sentient machines—produces what Haraway calls a "hardening of the categories," a social, epistemological disease which, in *I, Robot*, leads to slavery. The film arguably prescribes the doppelgänger effect as an antidote for hardened categories; its double(d) consciousness, produced through a shared history of slavery, collapses human/machine, black/white bifurcations. In the collapse, fragments get reshuffled into a new pattern resembling siblinghood, figured by an artifactual, transgenic lab rodent. The OncoMouse foregrounds the contradictions involved in making or inventing sentient beings who are property; s/he also insists upon a non-natural, trans-category kinship marked by a strong sense of

familial accountability. In positioning robots and humans as doubles and siblings, *I, Robot* suggests that *kinship* may be our best prophylactic against the master/slave dynamic lurking in contemporary robotics research.

End Notes

1. Rodney A Brooks, *Flesh and Machines: How Robots Will Change Us* (New York: Pantheon Books, 2002), 173.
2. Rodney A Brooks, "Overview" of Cog (Cambridge, MA: MIT Humanoid Robotics Group, 2002, accessed 6 May 2005); available from http://www.ai.mit.edu/projects/humanoid-robotics-group/cog/overview.html; Internet.
3. Yoseph Bar-Cohen and Cynthia Breazeal, eds, *Biologically Inspired Intelligent Robots* (Bellingham, WA: SPIE Press, 2003), xiii.
4. Bar-Cohen, *Biologically Inspired Intelligent Robots,* 4.
5. Peter Menzel and Faith D"Aluisio, *Robosapiens: Evolution of a New Species* (Cambridge: The MIT Press, 2000), 18.
6. Brooks, *Flesh and Machines*, 176.
7. Bruce Mazlish, *The Fourth Discontinuity: The Co-evolution of Humans and Machines*, (New Haven: Yale University Press, 1993), 4.
8. Mary Ann Doane, "Technophilia: Technology, Representation, and the Feminine," in *Body/Politics: Women and the Discourses of Science,* eds. Mary Jacobus, Evelyn Fox Keller, and Sally Shuttleworth (New York : Routledge, 1990), 163. Doane registers the persistence of the maternal as a sub-theme accompanying these fantasies of artificial femininity. Like the hideously fascinating alien mother-ship in *Alien*—which conflates fear of the technological with profligate reproduction—the hive-like VIKI is figured as a monstrous "mother" to the NS 5 robots who are linked to and controlled by her through a kind of electronic "umbilical cord."
9. Andreas Huyssen, *After the Great Divide: Modernism, Mass Culture, Postmodernism*, (Bloomington, IN: Indiana University Press, 1986), 67.
10. Huyssen, *After the Great Divide,* 69.
11. Huyssen, *After the Great Divide,* 70.
12. Huyssen, *After the Great Divide,* 71.
13. Huyssen, *After the Great Divide,* 81.
14. N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics*, (Chicago: University of Chicago Press, 1999), 2. Hayles is one of the few scholars concerned with the human/machine dynamic to articulate an historically specific notion of the "human;" I owe my understanding the contours of the liberal humanist subject to her.
15. Judith Butler, *Gender Trouble: Feminism and the Subversion of Identity*, (New York: Routledge, 1990), 140.
16. Judith Butler, *Bodies That Matter: On the Discursive Limits of "Sex",* (New York: Routledge, 1993), 8.
17. George P Cunningham, "Body Politics: Race, Gender, and the Captive Body," in *Representing Black Men*, (New York: Routledge, 1996), 136-37.
18. Robyn Wiegman, "Unmaking: Men and Masculinity in Feminist Theory," in *Masculinity Studies and Feminist Theory: New Directions*, Judith Kegan Gardiner, ed., (New York: Columbia University Press, 2002), 34.
19. Wiegman, "Unmaking," 35.
20. Hortense Spillers, "Mama"s Baby, Papa"s Maybe: An American Grammar Book," *Diacritics* (1987): 80, quoted in Michael Awkward, "A Black Man"s Place(s) in Black Feminist Criticism," *Representing Black Men*, (New York: Routledge, 1996), 14.
21. Ibid, emphases in text.
22. Butler, *Bodies That Matter*, 10.

23. Kali Tal, "The Unbearable Whiteness of Being: African American Critical Theory and Cyberculture," http://www.calital.com/Text/Writing/ Whiteness.html, quoted in Alondra Nelson, "Introduction: Future Texts," a special issue on AfroFuturism, *Social Text* 71, no. 2 (Summer 2002), 3.
24. Alondra Nelson, "Introduction: Future Texts," a special issue on AfroFuturism, *Social Text* 71, no. 2 (Summer 2002), 3.
25. . Butler, *Gender Trouble*, 28.
26. W.E.B. DuBois, *The Souls of Black Folk*, (New York: Signet, 1969 [1903]), 44.
27. DuBois, *Souls*, 45.
28. . Ibid.
29. Nelson, "Introduction," 3.
30. DuBois, *Souls*, 45.
31. Donna Haraway, *The Companion Species Manifesto: Dogs, People, and Significant Otherness*, (Chicago: Prickly Paradigm Press, 2003), 25.
32. Donna Haraway, *Modest_Witness@Second_Millennium.FemaleMan©_Meets_ OncoMouse™*, (New York: Routledge, 1997) 3, 70.
33. Haraway, *Modest_Witness*, 68.
34. . Ibid.
35. Haraway, *Modest_Witness*, 69.
36. Haraway, *Modest_Witness*, 53, emphasis added.
37. For example, in Haraway"s *Modest_Witness* (1997) and *The Companion Species Manifesto: Dogs, People, and Significant Otherness* (Chicago: Prickly Paradigm Press, 2003).
38. Haraway, *Modest_Witness*, 270.
39. Haraway, *Modest_Witness*, 79.
40. Ibid.
41. Haraway, *Modest_Witness*, 246.
42. Haraway, *Modest_Witness*, 57, 60.
43. Haraway, *Modest_Witness*, 79, 100.
44. Haraway, *Modest_Witness*, 99.
45. Haraway, *Modest_Witness*, 79.
46. Ibid.
47. Haraway, *Modest_Witness*, 80.
48. Haraway, *Modest_Witness*, 82, emphasis added.
49. Menzel, *Robosapiens*, 18. Rodney Brooks essentially agrees, asserting that if robots have humanoid form, it will be easy and natural for humans to interact with them. In addition, following Lakoff and Johnson"s argument that the form of our bodies is critical to the representations we develop and use in our language and to orient ourselves in the world, Brooks hypothesizes that building robots with human-like intelligence will require human-like bodies.
50. Donna Haraway, "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century," in *Simians, Cyborgs, and Women: The Reinvention of Nature*, (New York: Routledge, 1991, 1985), 150.
51. murine: belonging or pertaining to the Muridae, the family of rodents that includes the mice and rats; or to the Murinae, the subfamily that includes the domestic species.
52. Haraway, *Modest_Witness*, 52.
53. DuBois, *Souls*, 45.
54. Donna Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," in *Simians, Cyborgs, and Women: The Reinvention of Nature*, (New York: Routledge, 1991 [1988]) 190.
55. Haraway, *Modest_Witness*, 52, 79.

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