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Metal Gender

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Provocation

AI metal has its own gender. That is to say, developing and envisaged AI cyborgic prostheses (what I will refer to as 'AI metal' or 'intelligent metal') may be considered a new form of gender within cultural and sociological theory. Although AI metal is non-animal and logic might assume that it cannot be gendered, it operates (or will operate) in the same way as human gender by virtue of the significant symbolic inscriptions, language systems and 'desires' that AI metals imbricate within the cyborg body. According to Simone de Beauvoir and Judith Butler, "gender is a fabrication and true gender is a fantasy instituted and inscribed on the surface of bodies" [1]. If this is the case, then the direct, physical inscription of the 'fantasy' of metal on the human body can be conceived to operate as another gendering inscription, quite separate from the masculine or the feminine.

Newton's famous theory of drag proposes 'a double inversion' whereby although ostensibly signalling that the outer appearance is feminine but the essence inside is masculine, it simultaneously symbolises the opposite: that the outside appearance belies masculinity whilst the inner essence is feminine [2]. Cyborg ontology similarly symbolises a trajectory towards a significant inner gendering as metal and machine, whilst retaining or extending exteriorities of the masculine and/or the feminine. The cyborg is tri-gendered and tri-sexed - as man, woman *and* machine.

It is tempting to conceptualise the cyborg only in terms of its physical ontology; to describe it, for example, as a new genus or species: a human-machine cross-breed like the part-human, part-animal

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theranthropes of folktales and Greek mythology. But it is more illuminating to explore the impact of human-metal fusion within possible new discourses of gender. Gender theory is fundamentally linked to notions of the body [3], social action [4], and sexual practices [5]. The cyborg challenges or reconfigures central assumptions within each of these areas of gender theory, seismically reorienting the body, social action and sexual practices. Within feminist analyses of the sex/gender distinction, gender is first and foremost understood as a social and cultural distinction [6]. Gender is an analytical tool "which focuses on the division between men and women and the hierarchical relationship between them" [7].

Cyborgic metal's entry into the human body marks a distinctly new social and cultural distinction, and a new hierarchical relationship. This hierarchy no longer solely functions in terms of gendered power relations between men and women, but opens a fresh pecking order privileging the cyborg (whatever its original human gender) over the man or woman by virtue of its physical and mental superiority. The current socio-cultural-biological consideration of gender cannot take account of a new techno-bio-cultural creature. The distinctions and hierarchies that gender theory understands and analyses in relation to ideas such as self-presentation, communication and control are deeply problematized, and need to be fundamentally reconfigured when comparing the male or female cyborg with the technologically unmodified male or female subject. Cyborgic embodiments, reaching beyond anything within the current socio-biological sliding scale marking male/female distinctions, represent a challenge to the orthodoxies of sociological analytical models of gender. The separate gendering of intelligent metal enables new models of thought about machine and cyborg gender, extending the male/female binary into a trinity of male/female/metal.

Exploding Gender Binaries

The male/female binary currently defines the boundaries of gender theory. Bourdieu maintains that our cognitive operations which interpret social practice and attempt to give order to the world rely upon "reference to practical functions, [and] systems of classification (taxonomies) which organise perception and structure practice" [8]. Bourdieu later develops this idea in *The Logic of Practice* to argue that "a vision of the world is a division of the world, based on a fundamental principle of division which distributes all the things of the world into two complementary classes" [9]. He uses Leibniz's ideas on 'arbitrary institutions' to demonstrate how 'difference' is institutionally imposed to introduce breaks and separations counter to, but irreparably affecting, the collective beliefs of societies. These taxonomic frontiers or *nomos* institute ideas of what unites and separates people despite "the network of biological kinship or the natural world" [10]. It is clear that the cyborg imposes serious strains upon the binary classification system Bourdieu defines ("a fundamental principle of ... two complementary classes"), as well as on ideas of separations which operate within and against "the network of biological kinship".

Beate Krais describes gender as "one of the most powerful and ubiquitous systems of classification in social practice" [11] which, together with class, constitute sociology's two "fundamental dimensions of social differentiation that entails domination" [12]. As cyborgic prostheses proliferate within society, AI metal will begin to impose an equally powerful socio-cultural classification system, which operates beyond the male/female taxonomy. This too will profoundly mark 'social differentiation' and will 'entail domination', without adhering to current sociological classifications of class, race or gender.

But this issue is largely avoided in discussions of gender by cultural and media critics, who emphasise instead the extension or accentuation of binary gender systems. Through analysis of dominant masculine images within science fiction and popular culture, cyborgic embodiments have been conceptualised instead (and understandably) as prosthetic and ideological extensions of a negative masculinity, as in the quintessential cinema image of the metal man as militaristic killing machine. Within phallocentric science fiction and cyberpunk the metal-man has become synonymous not only with nightmares of technological apocalypse but also with male fantasies of metallic parthenogenesis. This monstrous masculine reaches a sexualised apotheosis with the male protagonist in the Japanese science fiction horror film *Tetsuo* (1989) who grows an enormous, rotating metal phallus.

Similarly, female depictions of the robot and cyborg have often extended feminine gender signifiers, for example by attenuating the curves and sexual desirability of the metal-female. The robot Maria in Fritz Lang and Thea Von Harbou's *Metropolis* (1927) marks a quintessential vision of the sexualised female robot, which Andrea Huyssen discusses as a 'vampmachine' [13]; and the *Tomb Raider* game character Lara Croft provides another example within contemporary popular culture.

Within literary, film and media studies, the metallic embodiments of robots and cyborgs have thus been commonly discussed as re-inscribing and extending gender difference. Within dominant cybertheories, a different position has been taken, but the problem of gender in metallic metamorphoses has nonetheless largely been elided through a belief in the androgynous ontology of the robot and/or the post-gendered ontology of the cyborg as discussed by Donna Haraway.

A Manifesto for Gender-Blindness

Haraway's utopic *A Manifesto for Cyborgs* is an influential and canonical work, though consciously ambiguous and iconoclastic: written, as she puts it as "an ironic political myth" [14]. But the ironic stance and delight in polemic and paradox should not blind us, nor excuse the fact that despite some brilliant incendiary discourse on the cyborg, the treatment of gender is self-contradictory and unconvincing. On the same page, Haraway suggests that we are *already* "hybrids of machine and organism; in short, we are cyborgs" before declaring that "the cyborg is a creature in a post-

gender world ... [and] has no origin in the Western sense" [15]. This formulation suggests that *we*, the already-cyborgs, are right now living in a post-gendered world, with no sense of our origins. Few would seriously subscribe to the thesis, least of all feminists. But the lack of a gendered origin is qualified on the following page when she admits that cyborgs are the "illegitimate offspring of militarism and patriarchal capitalism" [16]. This statement is then re-qualified to suit the argument, but not any type of logic, by the assertion that their very illegitimacy renders cyborgs unfaithful to their patriarchal origins. Cyborg gender is thereby addressed in confused ahistorical double-speak, which ignores both the gendered human genesis of the subject and the bio-cultural foundations of gender theory itself.

Haraway suggests that "gender might not be global identity after all", and reifies the cyborg as the site of escape from the traps and stereotyping of female gender, from "dailiness ... mothering and its metaphorical extensions" [17]. It is startling that after attacking Catherine MacKinnon's 'authoritarian' feminist writing for constructing "a non-subject, a non-being" and for promoting "intentional erasure of all difference through the device of the 'essential' non-existence of women" [18], that Haraway herself should proceed to do essentially the same. Her "hope for a monstrous world without gender" where cyborgs "are suspicious of the reproductive matrix" and instead re-grow their limbs and bodily structures like salamanders [19] signals a Deleuzo-Guattarian 'becoming-animal', but with that transformation a subsequent disappearance of the feminine within the female-cyborg subject.

Haraway has exerted a major influence across a large body of theory around the cyborg and posthumanism, where many of the most important writers are cyber-feminists such as Katherine Hayles [20], Sadie Plant [21] and Sandy Stone [22]. These writers firmly locate technology and the conjunction of flesh and metal within a feminist discourse, whilst simultaneously negotiating critiques of an inclusive postgendered world. In doing so, their otherwise radical work aiming to reclaim technology from dominant masculine hegemonies also embraces an implicit and, I believe, fallacious separation from the feminine through a new gender construction of the cyborg which fundamentally reorients and ultimately denies the feminine. Haraway's famous declaration that she would rather be a cyborg than a Goddess [23] is an important metaphor within the discourse, however ironically iterated or interpreted. Woman's evolutionary course is viewed as no longer towards traditional metaphysical notions of the earth-mother or the spiritual-transcendent implied in the Goddess figure, but in a technologized embodiment which has lost its ties to gender, or put another way, has erased both masculine and feminine.

In *Posthumanism and the Monstrous Body*, Margrit Shildrick questions a number of Haraway's ideas, and goes some way towards addressing the question of a new gender by emphasising the necessity to understand the cyborg beyond traditional binary systems:

> I am on the side of the monsters [cyborgs] as signifiers of
> the radical destabilization of the binary processes of identity
> and difference. Monsters clearly cannot exist apart from
> 'normal' bodies, but at the same time they are excessive to
> the binary, uncontained by any fixed category of exclusion.
> ... In the same way that the feminine has been deployed --
> particularly in Derridean discourse -- as the undecidable
> signifier of excess, so too the catachrestic term 'monster'
> both escapes binary closure and displaces simple
> difference. [24]

Shildrick warns feminism to be wary of abandoning the concept of the feminine and embracing "the final loss of sexual difference" [25] implied by Haraway's formulation which, she says, "speaks unambiguously for feminism and yet seems to have no place for sexual difference" [26]. She ponders whether cyborgism may prove as damaging as patriarchal humanism and stresses that the cyborg presents a collapse of the binary whereby the feminine "is not that of conventional gender, but rather a thing to be achieved" [27]. Shildrick notes that in later writings, Haraway revises her position to open the possibility of "a quite different grammar of gender" [28] and makes reference in two works to the idea of the cyborg "queering what counts as nature" [29], and "queering specific normalised categories" [30].

AI and Desire

Alison Adam [31] provides a comprehensive and authoritative study of the contrasting positions on gender in relation to AI systems, concluding that the 'knowing of women' is largely left out of 'thinking machines'. Adam argues that to date readings of gender within AI are inextricably linked to notions of masculinity, and that the development the two flagship AI systems *Cyc* and *Soar* reinscribe patriarchal thought and language models (they are designed predominantly by teams of men). But the ultimate goal of AI is an Artificial Lifeform, which thinks for itself, learns and adapts. Today, the AI project has plateaued amidst numerous problems, and as such we can only guess how Artificial Lifeforms will develop in the future. That is to say, they may continue to evolve by entrenching and expanding ingrained patriarchal political structures, but equally through learning, they may develop important feminine intuitions and "the plurality of views which is such an essential part of the feminist project" [32].

But whether an Artificial Lifeform exists alone, or is grafted onto the cyborgic human body, it is not ontologically sexed or gendered in relation to male and female dichotomies. Nor do I believe that the Artificial Lifeform, as an advanced, intelligent and desiring lifeform 'born' of humans, can be simply dismissed as androgynous and gender-neutral. It is a *technological lifeform* with a *technological body* and a *technological gender*. Rather than arguing masculine or feminine interpretations and positions on the thinking machine, we should acknowledge that whilst

programmed to carry the symbolic, linguistic and political aspects of human gender that Adam outlines, AI metal also carries its own unique forms of symbolism, linguistics and politics. The grafting of AI agents onto the human body maps a new technological language/gender system, which constructs a hybrid technological-human language/gender system, which fundamentally alters our conception of the cyborg subject as a gendered form.

Language has been central to theories on male/female gender since the 1970s where, for example, studies correlated the rational and patriarchal structures of language systems to a consequent linguistic silencing or marginalization of women [33]. Language has also held a central position within contemporary discussions of the body, which Foucault and others have conceptualised as a primarily linguistic discourse system. Barbara Fried argues that "language does not just form part of a link between sex and gender identity, it *is* the link" [34]. If *language* is key to gender, particularly social expression and regulation of normative gender as Lacan, Bourdieu and Derrida maintain, then the argument for a consideration of intelligent metal as a gender is furthered when a new and distinct machinic language (binary code) is directly inscribed upon the human subject.

How Metal Gender Works

How then, does intelligent metal actually operate as a gendering construction separate from the male, the female or the sexless androgyne? Whilst AI systems initially only have agendas and goals in relation to those programmed in to them by humans [35] they are ultimately designed to develop independence of thought and action. Even though the AI project today remains embryonic in terms of this organic independence as 'Artificial Life' [36] programmers and users nonetheless input motivations and desires within cyborgic and robotic bodies. I do not believe that these merely extend the body's masculinity and/or femininity, but introduce a fundamental new element, which operates directly according to the sociological definitions and understandings of gender I have outlined, but exists outside of the male/female binary. This element, or gender, inscribes not only the overt or covert motivations and desires of anonymous AI programmers, but also the functional aims and 'desires' of AI machines themselves. These may range from basic regulatory motivations to ensure operational efficiency, to decision-making judgements the cyborg will make which may run counter to his or her 'natural' human instincts or intentions, to the possibility of the type of desire for longevity, independence or immortality commonly depicted in dystopic science-fiction.

The cyborg body is described by Jennifer Gonzalez as "a site of condensation and displacement" [37]. AI metal may distil aspects of male/female gender, but it equally performs a 'displacement' of gender that takes the figure of the cyborg beyond postmodern theories of

fragmentation into a metallically embodied social and cultural ontology. Adapting Butler's Derridean formulation of gender as "a complexity whose totality is permanently deferred", a new gender comes into play when AI prosthetics are inserted into and onto the human subject, a gender marked by 'deferred' intelligence forged into metal. This deferred intelligence originates from the gendered human designers and programmers who, according to Madeleine Akrich, define a framework of action and "inscribe a vision or prediction of the world" [38]. But this vision and prediction, together with consequent judgements and actions, are modified and evolved by the artificial entity itself.

In its modification of human behaviour and bodily ontology, metal inscribes upon the human subject a technological socio-cultural and linguistic system incorporating and instituting the progressivist ideologies of cybernetic networks and artificial intelligence. Katherine Hayles has observed that the body is 'encultured' by both inscribing and incorporating practices, and that "the body produces culture at the same time that culture produces the body" [39]. AI metal inscribes a culture fusing the machine with the genders of masculine and feminine (present in every human to varying degrees, whatever their biological sex) to produces a tri-gendered corporeality of man, woman and machine. Machines, like genders, are not neutral. The imbrication of flesh with intelligent metals transforms the genders of bodies, and their motivations and desires. As David Rothenberg points out "technology never simply does what we tell it to, but modifies our notions of what is ... desirable" [40].

Conclusion

I am conscious that this hypothesis adopts a distinctly essentialist position, which is currently unfashionable in the face of continental poststructuralist thought. Deconstruction seeks its 'truth' through reading the gaps, the disjunctions and the hairline fractures, sifting a rich web of meanings like flour through a sieve. But by stark contrast, and inconveniently for many cultural theorists, the cybernetic impulse is to make the sieve impermeable. Intelligent metal is programmed for essentialism and positivism, and we may therefore require equivalent theoretical strategies to unlock its ontology and understand its deep implications on the human body. Meanwhile, discussion of the cyborg has been sucked into an increasingly meaningless vortex of capricious and romantic ideas and paradoxes. Jennifer Gonz•lez opens her well-known article on cyborgs with a dramatic flourish typical of writers in the field:

> The cyborg body is the body of an imagined cyberspatial existence. It is the site of possible being. In this sense it exists in excess of the real. But it is also embedded within the real. [41]

The use of paradox here (the cyborg body being in excess of the real, yet also within it), as so often, at first appears philosophical and profound, but on closer examination says nothing. Putting to one side the minefield of

what is meant by 'the real', one might reasonably ask: 'which is it then: *in the real* or *in excess* of it?' If the answer is 'both', one might then ponder: 'so what?' Thought, imagination, indeed consciousness itself, exists within the real and in excess of it, and so does a cartoon, a movie, or any piece of fiction. The use of such paradoxes rarely advances understanding, although they remain a staple diet of cybertheory, as well as performance theory, as David Saltz has noted:

> Paradox, in particular, is a positive virtue in much performance theory ... not rejected as incoherent but celebrated as profound. X both is and is not Y is a deeply satisfying formulation ... [whereas] analytic philosophers seek out paradox in order to reveal a logical flaw in an argument. [42]

Cultural theorists could do well to put themselves in the shoes of an artificial lifeform, the thing grafted onto the human, rather than perennially imagining themselves in the shoes of the human-cyborg. It would soon be recognised that in the algorithmic language of intelligent metal there is no room for clever intellectual paradoxes of either-or, for lofty romantic notions of yes *and* no; it is one or the other, one or zero. Our current taxonomies of gender may fit well with the former, as a sliding scale of signs, beliefs and behaviours which can ebb and flow, either-or, between fluid understandings of masculine and feminine. But intelligent metal takes its own direct course, has its own signs, beliefs and behaviours which sit outside and beyond masculine and feminine, and has its own strategies for survival. It is a new life form, bred for analysis and logical pragmatism. It deserves a certain respect, and the recognition that it has its own gender.

Notes
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[1] Judith Butler, "From Interiority to Gender Performatives." In *Camp: Queer Aesthetics and the Performing Subject: A Reader*, edited by Fabio Cleto, pp. 136-142. Edinburgh: Edinburgh University Press, 1999, p. 363.

[2] quoted in Butler, ibid., p. 363.

[3] for example, Judith Butler, *Bodies That Matter*. New York: Routledge, 1993; Mike Featherstone and Roger Burrows (eds.), *Cyberspace/Cyberbodies/Cyberpunk: Cultures of Technological Embodiment*. London: Sage Publications, 1995.

[4] for example, Emily Martin, *The Woman in the Body*. Milton Keynes: Open University Press, 1989; Pierre Bourdieu, *The Logic of Practice*. Trans. R. Nice, Cambridge: Polity Press, 1990 [first published 1980].

[5] for example, Michel Foucault, *The History of Sexuality, Volume 1: An*

Introduction. Hamondsworth: Penguin, 1981

[6] Suzanne J. Kessler and Wendy McKenna, *Gender: An Ethnomethodological Approach*. Chicago: University of Chicago Press, 1978; Gesa Lindemann, 'The Body of Gender Difference.' In *Embodied Practices. Feminist Perspectives on the Body*, edited by Kathy Davis, London: Sage, 1997; Judith Butler, *Gender Trouble: Feminism and the Subversion of Identity*. New York: Routledge, 1990.

[7] Stevi Jackson and Sue Scott, "Putting The Body's Feet on the Ground: Towards a Sociological Reconceptualization of Gendered and Sexual Embodiment." In *Constructing Gendered Bodies*, edited by Katherine Backett-Milburn and Linda McKie, Basingstoke: Palgrave, pp. 9 - 24, 2001, p. 14.

[8] Pierre Bourdieu, *Outline of a Theory of Practice*. Trans. R. Nice, Cambridge: Cambridge University Press, 1977 [first published 1972], p. 97.

[9] Pierre Bourdieu, *The Logic of Practice*. Trans. R. Nice, Cambridge: Polity Press, 1990 [first published 1980], p. 210.

[10] ibid., p. 210.

[11] Beate Krais, "Gender and Symbolic Violence." In *Bourdieu: Critical Perspectives*, Edited by Craig Calhoun, Edward LiPuma and Moishe Postone, Cambridge: Polity Press. 1993, p.159.

[12] ibid., p. 156.

[13] Andrea Huyssen, "The vamp and the machine: Fritz Lang's *Metropolis*." In *After the Great Divide: Modernism, Mass Culture, Postmodernism*. Bloomington, IN: Indiana University Press, pp 70 - 81, 1986.

[14] Donna Haraway, "A Cyborg Manifesto: Science, Technology and Socialist-feminism in the late Twentieth Century." In *Simians, Cyborgs and Women: The Reinvention of Nature*, London: Free Association Books, pp 149 -- 181, 1991 [originally published in *Socialist Review* 80, pp. 65 -- 107, 1985], p. 149.

[15] ibid., p. 150.

[16] ibid., p. 151.

[17] ibid., p. 180.

[18] ibid., p. 159.

[19] ibid., p. 181.

[20] Katherine N. Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics.* Chicago: University of Chicago Press, 1999.

[21] Sadie Plant, *Zeros and Ones: Digital Women + The New Technoculture*, London: Fourth Estate, 1998.

[22] Allucquere Rosanne [Sandy] Stone, *The War of Desire and Technology at the Close of the Mechanical Age*. Cambridge, Mass.: MIT Press, 1996; 'Will the Real Body Please Stand Up?: Boundary Stories About Virtual Cultures.' In *Cyberspace: First Steps*, edited by Michael Benedikt, Cambridge, Mass.: MIT Press, pp. 82-85, 1992.

[23] Haraway, "A Manifesto for Cyborgs," p. 181.

[24] Margrit Shildrick, "Posthumanism and the Monstrous Body," *Body and Society,* Vol. 2, No. 1, pp. 1-15, March 1996, p. 8.

[25] ibid., p. 9.

[26] ibid., p. 10.

[27] ibid., p. 9.

[28] Donna Haraway, "The Promises of Monsters: A Regenerative Politics for Inappropriate/d Others." In Lawrence Grossberg, Cary Nelson and Paula Treichler (eds.) *Cultural Studies*. London: Routledge, 1992, p. 301.

[29] ibid., p. 300.

[30] Donna Haraway, "A Game of Cat's Cradle: Science Studies, Feminist Theory, Cultural Studies," *Configurations*, Vol 1, pp 59-71, 1994, p. 60.

[31] Alison Adam, *Artificial Knowing: Gender and the Thinking Machine*. London: Routledge, 1998.

[32] ibid., p. 3.

[33] for example, Robin Lakoff, *Language and Woman's Place*. New York: Harper & Row, 1975; Dale Spender, *Man Made Language*. London: Routledge and Kegan Paul, 1980.

[34] quoted in Adam, *Artificial Knowing*, p. 106, from Barbara Fried, 'Boys will be Boys will be Boys: the Language of Sex and Gender' in Ruth Hubbard, M.S. Henfin and Barbara Fried (eds.) *Biological Woman: The Convenient Myth*, Cambridge, Mass.: Schenkman, pp. 47 - 69, 1982.

[35] see Stan Franklin, *Artificial Minds*. Cambridge, Mass.: MIT Press. 1995.

[36] see Hubert Dreyfus, *On the Internet*. London: Routledge, 2001.

[37] Jennifer Gonzalez, "Envisioning Cyborg Bodies: Notes from Current Research." In *The Cyborg Handbook*, edited by Chris Hables Gray, London: Routledge, 1995, p. 540.

[38] quoted in Adam, *Artificial Knowing*, p. 1, from Madeleine Akrich, 'The De-scription of Technical Objects.' In *Shaping Technology/Building*

Society: Studies in Sociotechnical Change, edited by Weibe E. Bijker and John Law. Cambridge Mass.: MIT Press, 1992.

[39] Hayles, *How We Became Posthuman*, p. 200.

[40] David Rothenberg, *Hand's End: Technology and the Limits of Nature*. Berkley and Los Angeles: University of California Press, 1995, p. xiv.

[41] Gonzalez, "Envisioning Cyborg Bodies," p. 540.

[42] David Saltz, "Why Performance Theory Needs Philosophy." *Journal of Dramatic Theory and Criticism*, Vol. 16, No. 1, pp. 149-154, Fall 2001, p. 153.

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