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From False Teeth to Exoskeletons: The Body and Materiality in William Gibson's *Burning Chrome*

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Considering texts from William Gibson's short story collection, Burning Chrome, this essay seeks to establish that the material ontology of the body cannot be discounted in current ontological and existential debates, but rather, we might re-conceptualise pre-existing notions of human selfhood under the conditions of a technologically enhanced social aesthetic.

If, as Veronica Hollinger argues, contemporary Science Fiction often problematises the nature-artifice dichotomy whilst keeping the human “ensconced in its privileged place at the centre of things”, then cyberpunk fiction “is about the breakdown of these oppositions” (204-5). The cyberpunk genre belongs to “implosive Sf” which, according to Istvan Csicsery-Ronay Jr., finds its defining motif in its interrogation of “the body-physical/body-social and drastic ambivalence about the body's traditional - and terrifyingly uncertain - integrity” (188). As such, William Gibson's fiction frequently portrays the “theme of body invasion” through the use of “prosthetic limbs, implanted circuitry, cosmetic surgery, [and] genetic alteration” (Hollinger 209-10). Gibson, often upheld as the ‘father’ of cyberpunk, explores the interaction between humanity and technology throughout his work, and considers the various kinds of relationships which result from this intimacy. His seminal novel *Neuromancer* (originally published in 1984) examines the human-technology relationship as the protagonist, Case, encounters artificial intelligence constructs that he comes into contact with by accessing cyberspace, termed by Gibson as “the matrix” (*Neuromancer* 12). Throughout the novel Case's attitude towards his body seems to be characterised by contempt, as the narrator describes him as living in “the prison of his own flesh” (*Neuromancer* 12). This portrayal of the body appears to support claims made by critics such as Kevin McCarron that, for cyberpunk writers, “[t]he body [...] is an ‘accident’ [...] Running through all cyberpunk texts is a fascination with the ways in which the flesh is inessential, irrelevant” (262-7). Similarly, Christine Boyer contends that, in altering our physical being to incorporate emerging technologies, we aim to “annihilate the material body” (74). These critical perspectives are somewhat reductive, however, as they tend to overlook, perhaps even ignore, a human-technology relation wherein the body is not replaced but enhanced by technological constructs. With this in mind, it might be more productive to consider the ways in which, as David Tomas posits, “technology becomes the determining factor in the definition of the body's physical re-articulation”; that is, as a hybridised material ontology (38). The following discussion will examine texts taken from Gibson's collection of short fiction, *Burning Chrome*, to contest the perspective that cyberpunk literature favours disembodiment and virtuality. Instead, it will be shown that Gibson portrays the material body as valuable despite the abundance of technologies with which it interacts. Furthermore, we will see that, whilst the material bodies which feature in Gibson's texts are often

augmented by artificial prostheses, these extensions are themselves material forms or, in the case of virtual technologies, remain grounded in material processes. This signifies, therefore, that the body-technology relation does not necessarily lead to an abandonment of the flesh and an absorption into disembodied cyberspace.

Sapiens and Cyborgs: Theorising the Material Body

N. Katherine Hayles writes that “the body [is] the original prosthesis we all learn to manipulate” (3). By identifying the body as a ‘prosthesis’, Hayles implies that it is a technological construction and is, therefore, artificial. This resonates with Michel Foucault’s depiction of the body as a product of cultural conditioning and, furthermore, Susan Bordo’s claim that there has never been anything inherently ‘natural’ about the body (Bordo 139-164; Foucault 135-169). For Bordo, “there is no ‘natural body’ [...] Our bodies, no less than anything else that is human, are constituted by culture” (142). It seems, therefore, reductive to conceptualise the body-technology relationship within the context of a nature/artifice dichotomy, as this binary opposition intimates an essential ‘natural purity’ within the body that is displaced by a technological substitute. Both Foucault and Bordo theorise the cultural construction of the body in terms of discourse(s): it is a ‘cultural text’ impressed with the marks of current socio-political ideologies. It follows then, that the body gives expression to the prevailing cultural discourses by which we define ourselves and our ontology. If we are to read the body in terms of the human-technology interface, this can shed light on how the cultural construction of material bodies is made literal as we optimise our material ontology with the aid of artificial constructs. This kind of prosthetic enhancement does not displace our materiality, rather, it adds to our physical beings which consequently become the manifestation(s) of posthuman discourse. For instance, we may read a person’s prosthetic limb as an expression of hybridity, and view this technology as a material extension which sustains the user’s bodily capabilities rather than reducing them. The technological device does not replace the material body, rather, the damaged body is enhanced by it.

It is fair to claim that a central image of posthuman discourse is the cyborg which, according to Donna Haraway, is defined as “a cybernetic organism, a hybrid of machine and organism” (149). The cyborg, posits Haraway, can be used as a metaphor which describes a postmodern reconceptualisation of selfhood that is based on hybridity. For Haraway, the cyborg represents the notion of a discursive social politics wherein traditional boundary concepts (such as nature and artifice) are problematised. The figure of the cyborg presents the image of a literal, embodied posthumanism wherein traditional boundaries become extinct and the concept of a ‘pure’ human essence is refuted. This does not, however, banish humans from postmodern ontological modes, rather, as above, the cyborg invites a revision of notions of selfhood and subjectivity under the conditions of a hybridised social aesthetic. The physical cyborg is a particularly useful image to consider when examining Gibson’s fiction as, according to David Bell, “the cyborg keeps the body in view, while also raising questions about the boundaries of the body, about nature, culture and technology” (149-50). This discussion will, therefore, refer to this application of the cyborg at certain points to substantiate the analysis of Gibson’s textual body. Further to this, Bordo asserts that, “our

bodies are trained, shaped, and impressed with the stamp of prevailing historical forms of selfhood” which, at least for Gibson, are grounded in notions of human-technology hybridity (165-66). With this in mind, we may read Gibson’s portrayal of the material body as a significant “medium of culture” which not only articulates a character’s social identity but also gives expression to key concepts of posthuman discourse, such as hybridity and cyborgisation (Bordo 165).

Technobodies: The Material Body and Prosthetic Enhancement

In “Johnny Mnemonic” (originally published in 1981) and “The Winter Market” (originally published in 1985), Gibson presents the reader with characters who have undergone surgery to enhance their physical being(s): Molly Millions, Johnny, Dog, and Lise are all typical images of the physical cyborg who, despite their various artificial enhancements, maintain a material ontology. Molly Millions (a character who also features in Gibson’s other texts) is described as having “mirrored lenses” over her eyes, “surgical inlays [...] sealing her eyes in their sockets” (“Johnny Mnemonic” 19). She has also undergone surgery to have weaponry fused into her body: “[t]en blades snicker straight out from their recesses beneath her nails, each one a narrow, double-edged scalpel in pale blue steel” (“JM” 21). Molly presents a particularly compelling image of the physical cyborg figure as the impact of her surgical enhancements are somatic; that is, they do not affect her cognitive capabilities, only her physicality. In reading Molly’s body as a ‘cultural text’ that showcases the physical manifestation of posthuman discourse, we are presented with the apparent impossibility of the concept of (organic) purity as we see in her character a merger between flesh and technology. In this way, Molly’s augmented body expresses the ‘breakdown’ between nature and artifice, which Hollinger argues is a central distinction of the cyberpunk genre, whilst simultaneously remaining steadfastly material (204-5). Molly’s physical augmentation contrasts with that of the story’s protagonist, Johnny, who has an extended memory capacity as a result of a computer chip being implanted into his brain. Johnny’s surgical augmentation is psychosomatic: the physical structure of his brain has been ‘re-wired’ using an artificial device which, in turn, affects his mental abilities. This seems to suggest the significance of the relationship between mind and body as the technologically-enhanced capabilities of the mind are contingent upon the presence of a physical prosthesis that functions by fusing with Johnny’s physical brain. Furthermore, despite having superior cognitive capabilities which are induced by a technological prosthesis, Johnny still seems to consider himself as ‘meat’. He describes himself to Ralfi, a gangster, as “a nice meatball chock-full of implants where you can store your dirty laundry” (“JM” 16). In Johnny’s referral to himself as ‘meat’, Gibson bestows a sense of value upon the material body as it seems that, despite his cyborgisation, Johnny remains acutely aware of his flesh. In this way, Gibson establishes a mind-body connection that does not privilege one over the other and, moreover, demonstrates the ways in which technology is also dependent upon materiality. It seems, rather, that technology and the body are mutually reliant upon one another as Johnny’s brain provides a kind of ‘power source’ which, in turn, enables the microchip to enhance his cognitive capabilities. In this way, Johnny’s body seems to represent the “redefinition of the subject through the multiple superimposition of bio-technological apparatuses” as he is at once defined as ‘meat’ as well as a

cybernetic storage device (Bukatman 98). His body is the physical site of a cyborg politics that posits the “prospect of technological symbiosis” (Bukatman 103).

Though it is tempting to think of Gibson as a writer for whom technological enhancements are always portrayed as ‘hi-tech’ futuristic constructs (as with Johnny’s surgically implanted computer chip), other prosthetic devices feature within his fiction that constitute perhaps a more ‘primitive’ image of the physical cyborg. The character of Dog serves as an example of such “Lo Tek [...] [l]ow technique, low technology” surgical enhancement which further problematises the notion that cyberpunk literature disregards material ontological forms (“JM” 28). Upon meeting Dog for the first time Johnny seems somewhat shocked by his augmented physical appearance, remarking:

Dental augmentation impeded his speech [...] He might have been fifteen, but the fangs and a bright mosaic of scars combined with the gaping socket to present a mask of total bestiality. It had taken time and a certain kind of creativity to assemble that face, and his posture told me he enjoyed living behind it [...] He did something with his mouth that approximated a grin. (“JM” 28)

As with Molly, Dog’s prosthetic enhancements are purely somatic as the impact of his “[d]ental augmentation” is designed to be solely physical (“JM” 28). The purpose of Dog’s material augmentation, however, differs from that of Johnny and Molly in terms of how the technology modifies his body as a ‘cultural text’. For Dog, as well as many other “Lo Tek[s]”, the incorporation of technology onto his material body is designed to give expression to his social identity as an inhabitant of “The Killing Floor”, a part of “Nighttown” that is made up of discarded scrap materials collected from the surrounding areas (“JM” 34). Johnny also remarks that “Lo Tek fashion ran to scars and tattoos”, as well as teeth, which resonates with claims posited by both Foucault and Bordo that culture is inscribed upon the body (“JM” 32). Through his portrayal of the characters’ use of technology, however ‘primitive’, Gibson seems to intimate the ways in which we already incorporate artificial constructs onto our bodies so as to establish social identity. The “Lo Tek[s]” use of physical augmentation, therefore, demonstrates the significance of materiality as being a key component in the articulation of identity.

Gibson further interrogates the body-technology relationship in “The Winter Market”. Here the character of Lise uses an exoskeleton to aid her quotidian routine and becomes increasingly dependent on technology as the narrative progresses. The narrator details Lise’s physical appearance in a passage that is at once captivating and horrifying:

The exoskeleton carried her across the dusty broadloom with that same walk, like a model down a runway. Away from the crash of the party, I could hear it click softly as it moved her. [...] I could see the thing’s ribs when she stood like that, make them out across her back through the scuffed black leather of her jacket. One of those diseases. Either one of the old ones they’ve never quite figured out or one of the new ones - the all too obviously environmental kind - that they’ve barely even named yet. She couldn’t move, not without that extra skeleton, and it was jacked straight into her brain, myoelectric interface. The fragile-looking polycarbon braces moved her arms and legs, but a more subtle system handled her thin hands, galvanic inlays. (“TWM” 145)

Rather than simply championing the amalgamation of flesh and technology, in his depiction of the exoskeleton Gibson encapsulates a complex web of attitudes towards the prospect of a technologically-enhanced posthumanism which range from fascination to anxiety and disgust (Heise 138-40). At first Lise seems sexualised as her movements are compared to a “model”, and the reader is made aware of the (male) narrator’s gaze upon her body (“TWM” 145). Any instance of sexual desire, however, quickly turns into a discourse of medicalised horror as the narrator draws our attention to the cause of Lise’s dependence upon the exoskeleton: she has a debilitating disease. Finally, the narrator implements a rhetoric of artifice and cybernetics as he turns to the technical aspects of the device and the ways in which it interacts with Lise’s physical body. In reading Lise’s augmented body as a ‘cultural text’, there appears to be a sense of anxiety regarding the incorporation of technologies into/onto the material body. In response to her personal experience with prosthetics, Vivian Sobchack expresses a deep uncertainty as to whether the material body is being forced to give way to technologies that become ever more ubiquitous as our physical beings become increasingly transparent (209-11). Sobchack writes that the sense of “euphoria” surrounding the “visibility of new technologies” is a kind of “‘false consciousness’ - for it has ‘lost touch’ with the very material and mortal body” (211). The sense of apprehension expressed here over the emergence of new technologies, particularly in terms of their impact upon the human condition, may at first glance seem irrelevant to cyberpunk texts as they are often seen to glamourise the demise of the flesh. Gibson’s portrayal of the body-technology interface, however, presents a much more complex relationship between humans and technology that actually perpetuates the significance of materiality.

Lise allows her body to merge with technology as an act of self-preservation, as opposed to a gratuitous use of prosthetics for the sake of becoming artificially enhanced. Note that Gibson shows Lise to add to her physical being, rather than choosing to actually replace her ‘original’ body parts. In fact, everything that is done to Lise’s body is meant to aid her continued survival in that material form. The narrator remarks that:

[Lise’s] agents brought in medics, who padded the polycarbon with foam and sealed the sores over with micropore dressings. They pumped her up with vitamins and tried to work on her diet. (“TWM” 155)

It is only as a last resort that Lise “[merges] with the net, [crosses] over for good” into “cybernetic immortality” (“TWM” 140, 164). Though this departure into cyberspace may seem to fulfil the cyberpunk ‘prophecy’ that the material body is inessential, Lise’s determination to sustain her material existence for as long as possible seems to contest this view. One might also contend that the very presence of a prosthetic device implies a sense of ‘failure’ on the part of the body, as Robert Rawdon Wilson writes, “[a]n appended body part not only recalls the previous, now missing, organic part, but actively calls into question the body’s integrity” (251). However, as we have seen, this notion of an “organic part” or, indeed, an ‘organic’ whole is severely problematic as we must acknowledge that the body is constructed and conditioned by culture (Bordo 165-84; Rawdon Wilson 251). Moreover, it seems that, particularly for Lise, her body has not ‘failed’ but, to use Haraway’s terminology, it has been ‘optimised’ by the technology which acts upon it; the purpose of Lise’s prosthetics is not to replace but to enhance her body (161-62). In this way, through his portrayal of

Lise, as with his construction of Johnny, Gibson seems to intimate the sense that the body-technology interface does not necessarily render the material body obsolete. Moreover, for Lise, the exoskeleton not only becomes a part of her physical being but it is also recognised as constituent of her social identity as a celebrity:

It was like she was born to the form [...] You see something like that and you wonder how many thousands, maybe millions, of phenomenal artists have died mute, down the centuries, people who could never have been poets or painters or saxophone players, but who had this stuff inside, these psychic waveforms waiting for the circuitry required to tap in...

("TWM" 154)

Lise is revered for her ability to interact with cyber constructs, and her use of an exoskeleton acts as a physical representation of her close interactive relationship with technology; she literally wears her talent during her everyday life. Consequently, we may interpret Lise's material body as a 'cultural text' that gives literal expression to her passion: pushing the boundaries of her artistic capability through incorporation of technology into/onto her material being.

Virtual Matter(s): The Body and Virtual Technologies

Though the texts we have seen so far lend themselves to the argument that Gibson does not discount material ontology in his fiction, it is yet possible to identify instances wherein the physical body is presented as being, perhaps, subsidiary. In both "Dogfight" (originally published in 1985) and the collection's title piece, "Burning Chrome" (originally published in 1982), Gibson seems to relinquish his emphasis on the significance of the material body. Instead, these texts appear to explore the ways in which humans might engage with technological constructs that enable the user to interact with digital, or virtual, reality and escape the physical confines of their body.

In "Dogfight", Gibson and Swanwick showcase a body-technology interface which enables the user to interact with a virtual environment. The protagonist, Deke, participates in an aerial assault game, "Spads&Fokkers", in which the components are virtually generated ("Df" 171). To play the game, Deke uses a device that interfaces with his brain in order for him to control the movements of his pieces within the game's program: "[h]e fitted the Batang behind his ear [...] the base of [Deke's] skull buzzed uncomfortably as the program ran" ("Df" 117). Deke's preoccupation with virtuality is mirrored by another character, Nance's, penchant for designing and building computer-generated image projections. The two characters soon become so immersed in their respective engagement with technology that their lives seem to centre around it. Deke becomes obsessed with refining his combat skills and so spends an increasing amount of time engaged with the gaming program. The narrator describes Deke's intimate interaction with the game software, commenting that, "[c]omputerised hypos fed a slow trickle of high-performance enhancement mélange into his bloodstream [...] Sensors were wired directly into his skull" ("Df" 181). Nance, on the other hand, is determined to perfect her ability to build realistic projection programs. She remarks to Deke: "[n]ext month I'm going to splice two hundred separate flame programs together [...] Then I'll tap the mind's body image to make [the projection] self-orientating" ("Df" 182). "Burning Chrome", on the other hand, imagines a society wherein people have access to virtual reality constructs termed by Gibson as "simstim" and "the

Matrix" ("BC" 195, 211).² The characters' apparent desire to engage with these kinds of technologies, Automatic Jack describes Rikki Wildside's life ambition as "to be in simstim" ("BC" 211), seems to supersede their concern with the material world. This is further suggested by the piece's title which alludes to Automatic Jack and his partner, Bobby Quine's, objective to hack the computer of another notorious hacker-gangster known as Chrome. The act of 'burning' refers to digital theft wherein Jack and Bobby use software to 'break into' Chrome's network and transfer Mafia funds into to their possession. It would seem, then, that the characters of "Dogfight" and "Burning Chrome" are more invested in their prowess in connection to technological constructs than they are concerned with the material world.

With further consideration, however, we see that Gibson yet grounds his characters' ontology in materiality in these respective texts. In "Dogfight", the characters' abilities - Deke's gaming skills and Nance's expertise with projection programs - remain dependent upon their respective material beings. During one of Deke's games the narrator remarks that, "[t]he onboard computers monitored biochemistry and decided when to open the sluice gates and give the human component a killer jolt of combat edge" ("Df" 181). This passage demonstrates that a player's ability to perform during the game remains contingent upon their physical being as, despite engaging with VR, factors such as 'biochemistry' are registered as significant. The physical brain is constantly monitored and the computer program responds to the body's activity accordingly. Moreover, both Deke and Nance resort to using a drug, known as "hype", in order to excel at their respective endeavours ("Df" 182). The drug grants its user "perfect visualisation", a useful advantage to have when working with virtual projections ("Df" 183). Though the effects of the drug are psychosomatic - it affects both the body and the mind - the act of taking drugs is material; it requires an interaction between the body and a physical substance. Further to this, in "Burning Chrome", Rikki's ambition to be 'in simstim' is dependent upon her material body and its interaction with physical technological prostheses. "Zeiss Ikon" is the most sought-after brand of 'simstim' technology that works by being implanted into an individual's eyes, allowing others to access that person's 'simstim' environment. The fact that this technology must be surgically inserted into the body establishes the significance of materiality, as it retains a role in relation to virtual reality constructs. Referring to Gibson's presentation of the body-technology relationship, Dani Cavallaro postulates that having a presence in a virtual environment does not necessarily render the material body obsolete as "it is grounded in ritual/ceremonial experiences of an eminently material nature" (78-79). Gibson seems to suggest this kind of 'material grounding' in "Dogfight" through Deke and Nance's drug use as, despite their interactions with virtual constructs, their ability to perform or excel within this space remains dependent upon their respective material bodies. This sense of a 'material grounding' is further reinforced in "Burning Chrome" in Gibson's portrayal of surgical enhancement. In this way, writes Cavallaro, Gibson demonstrates that, "the body is undoubtedly altered by technology but not transcended [...] [t]he material plays a crucial role" (75). It seems that, though at first glance both "Dogfight" and "Burning Chrome" appear to disregard the material body, it remains integral to the characters' experience of, and engagement with, technology.

Conclusion

In a way typical of his fiction, it seems that throughout this selection from *Burning Chrome* Gibson figures the material body as an object that is constantly being augmented and altered by technology, be it in the form of VR constructs or surgically implanted prostheses. In his portrayal of Johnny Mnemonic, Molly Millions, and Lise, Gibson posits that, in its prosthetic extension, the body is not necessarily replaced but enhanced by technology. Moreover, these particular technologies - Molly's scalpel blades, Johnny's memory chip, and Lise's exoskeleton - are themselves material constructs. Gibson's depiction of his characters' preference for material technological enhancement would seem to reinforce the central thesis of this discussion that cyberpunk texts such as Gibson's do not always seek to annihilate the body. Rather, they draw on the image of the physical cyborg in order to present a literal manifestation of posthumanism and its proposed hybridised politics. Chris Hables Gray writes that, in this way, Gibson's conception of the physical cyborg "reminds us that we are always embodied, but that the ways we are embodied are not simple" (7). This suggests that Gibson's portrayal of the body-technology relationship is more complex than a mere assertion of one ontological mode (material/virtual) over the other. It seems that we must consider the possible outcomes of a cyborgised conception of the self, rather than hastily concluding that we have departed from a material existence altogether. Furthermore, when Gibson does consider the body's significance in relation to VR constructs, as in "Dogfight" and "Burning Chrome" it appears that this engagement with advanced technologies is yet rooted in material rituals, such as drug use, therefore preventing the body from being eviscerated. Far from an abandonment of the flesh, it appears that, at least for Gibson, the material body continues to be upheld by cyberpunk fiction as a current and valued ontological mode. Further still, this mode of being is crucial to our on-going conceptualisation of the human self as we become increasingly acquainted with technological prostheses.

Notes

¹ Henceforth 'Science Fiction' will be referred to as 'Sf'.

² The phrase 'virtual reality' will hereafter be shortened to 'VR'.

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