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Version: Full Version

**Citation: Yadav, Siddharth (2023) Cyberpunk's not dead: the enduring relevance of technological and spiritual motifs in William Gibson's Sprawl trilogy. [Thesis] (Unpublished)**

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**BIRKBECK, UNIVERSITY OF LONDON**

# **Cyberpunk's Not Dead**

**THE ENDURING RELEVANCE  
OF TECHNOLOGICAL AND  
SPIRITUAL MOTIFS IN WILLIAM  
GIBSON'S *SPRAWL* TRILOGY**

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# Abstract

In ‘Cyberpunk’s not dead: The Enduring Relevance of Technological and Spiritual Motifs in William Gibson’s *Sprawl* trilogy’, I argue for the contemporary relevance of the cyberpunk genre using William Gibson’s *Sprawl* trilogy, which consists of *Neuromancer* (1984), *Count Zero* (1986), and *Mona Lisa Overdrive* (1988). The trilogy, particularly *Neuromancer*, has been heralded as a corner-stone of the genre by scholars like Veronica Hollinger and Fredric Jameson. However, since the 1990s, the *Sprawl* trilogy has occupied an awkward position in science fiction studies given that it is a foundational text of a supposedly obsolete genre. In 1991, science fiction author Lewis Shiner declared cyberpunk dead in a New York Times article and stated that cyberpunk motifs had become clichéd. Twenty five years later, in *The Cambridge History of Postmodern Literature*, literary scholar Elana Gomel repeated that sentiment. Gomel’s statement was followed by an analysis of the technological metaphors presented in the *Sprawl* trilogy to conclude that cyberpunk is no longer a thematically distinctive genre.

I disagree with these assessments because, as this thesis will show, currently developing technologies like Mark Zuckerberg’s Metaverse project and the Neuralink brain-computer interface being developed under Elon Musk signal a convergence between cyberpunk and the techno-cultural zeitgeist in the West. Furthermore, popular cultural products like the video game *Cyberpunk 2077* (2020), the animated series *Cyberpunk: Edgerunners* (2022), and the live-action adaptation of Gibson’s *Neuromancer* for Apple TV+ announced in November 2022 (currently in the casting stage of development) clearly demonstrate the enduring distinctiveness of cyberpunk narratives and aesthetics. I address the claim of cyberpunk motifs being clichéd and outdated by exploring the oft-overlooked spiritual subtext of the *Sprawl* stories that brought cyberpunk motifs to the cultural mainstream in the 1980s. This allows me to contextualise the trilogy by establishing its continuity

with the technological and spiritual discourses taking place in the West from the early twentieth century till the 1980s. It also highlights cyberpunk's relevance by providing a unique perspective to analyse the current cultural fascination with technologies like virtual reality, artificial intelligence, gene editing technology, and synthetic biology.

The thesis is arranged thematically, tracing technological metaphors across three chapters which will shift from the birth of cybernetics to genetic engineering to transhumanist notions of technologically mediated transcendence. Particular attention will be given to the linkages between Gibson's fiction, the quasi-spiritual principles of the transhumanism as highlighted in the writings of figures like Ray Kurzweil and Max More, and the spiritual framework presented by the French Jesuit and palaeontologist Pierre Teilhard de Chardin (1881-1955), the first scientist to use the term 'transhuman'. I use Chardin's work to highlight the spiritual foundation of the *Sprawl* trilogy and argue that the aforementioned technologies and metaphors are deeply spiritual, which raises crucial questions regarding their real-life applications. Analysing the spiritual nature of cyberpunk motifs in one of the genre's foundational texts provides a unique entry point to evaluate ongoing discourses about dualisms like nature/culture, sacred/secular, and human/non-human. Doing so establishes cyberpunk metaphors as not only relevant, but necessary for understanding the increasingly symbiotic relationship between humans and technology in the twenty-first century and onwards.

# Introduction

‘Cyberpunk is dead’, so claimed Lewis Shiner in 1991.<sup>1</sup> Referring to the science fiction sub-genre that emerged in the 1980s, Shiner’s obituary suggests that the tradition of dystopian, lawless subculture stories had become obsolete by the 1990s. Are stories of oppressive societies dominated by high-tech and marred by low-life really ‘dead’ ideas for the modern reader? Shiner suggests that ‘by 1987, cyberpunk had become a cliché’. Due to the lack of literary innovations, Shiner accused cyberpunk authors of turning ‘the form into formula: implant wetware (biological computer chips), government by multinational corporations, street-wise, leather-jacketed, amphetamine-loving protagonists and decayed orbital colonies’.<sup>2</sup> Contrary to Shiner, this thesis contends that cyberpunk is not dead because the genre and its motifs represent the emerging relationships between humans and technological systems in the twenty-first century. This project situates human-machine relationships at the intersection of technologies like virtual reality, artificial intelligence (AI), biotechnology, and millenarian expectations (spiritual and secular) of such technologies. Since its inception, cyberpunk has exceeded the confines of literary theory and practice; indeed, cyberpunk philosophy is evident in schools of thought like posthumanism and transhumanism.<sup>3</sup> Cyberpunk acts as a privileged site to interrogate social and cultural values associated with technological development and human progress. While other genres (like dystopian, apocalyptic, and anthropocene) evaluate these values, cyberpunk uniquely radicalises the quotidian intersection of technology and everyday human experiences such as communication, movement, individual

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<sup>1</sup> Lewis Shiner, ‘Confessions of an Ex-Cyberpunk’, *The New York Times*, 7 January 1991.

<sup>2</sup> Shiner, ‘Confessions of an Ex-Cyberpunk’, 1991.

<sup>3</sup> The most famous examples include technologists like Ray Kurzweil and Hans Moravec that have prolifically speculated about the cybernetic future of humanity. See: Hans Moravec, *Mind Children: The Future of Robot and Human Intelligence* (Cambridge, MA & London, England: Harvard University Press, 1988); Ray Kurzweil, *The Singularity is Near: When Humans Transcend Biology* (New York: Viking, 2005).

identity formation and critically engages with technologically induced immediate or near-term socio-cultural changes.

Nevertheless, figures like Shiner have argued that cyberpunk is dead or irrelevant for understanding contemporary issues. Therefore, this chapter will focus on critiquing the criticisms levelled against the supposedly dead genre. The first section of this chapter, titled ‘What is Cyberpunk?’, will explore the origins and quintessential motifs and themes of cyberpunk before introducing William Gibson’s *Sprawl* trilogy, which, I suggest, is emblematic of the current relevancy of cyberpunk. The trilogy, which consists of *Neuromancer* (1984), *Count Zero* (1986), and *Mona Lisa Overdrive* (1988), remains one of the most popular stories in the genre<sup>4</sup> and was central to cyberpunk in the 1980s as it became a literary movement.<sup>5</sup> The overview of the case studies will be followed by the critical responses of cyberpunk authors and scholars to the *Sprawl* trilogy that justify selecting the *Sprawl* to exhume the corpse of cyberpunk in the twenty-first century. Throughout the following three chapters, I will argue that the *Sprawl* stories demonstrate the enduring relevance of the cyberpunk genre by providing a critical framework for analysing evolving technological practices. Particular focus will be given to areas like biotechnology and AI to explore how the hitherto under-explored spiritual subtext of the *Sprawl* facilitates the interrogation of beliefs and expectations guiding current technological innovation. But first, what do we mean by cyberpunk, this supposedly fallen genre?

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<sup>4</sup> Matthew Duques, ‘Top 24 Best Cyberpunk Books of All Time Review 2022’, *Penn Book Centre* <<https://pennbookcenter.com/best-cyberpunk-books/>> [accessed 19 September 2019]

*Neuromancer* is also one of the most honoured works of science fiction stories published till day, appearing in *Time* magazine’s 2005 list of 100 best English-language novels written since 1923. See: Lev Grossman, ‘All-Time 100 Novels’, *Time*, 08 January 2010 <<http://entertainment.time.com/2005/10/16/all-time-100-novels/slide/neuromancer-1984-by-william-gibson/>> [accessed 19 September 2019]

<sup>5</sup> Graham J. Murphy, ‘Cyberpunk and Post-Cyberpunk’, in *The Cambridge History of Science Fiction*, ed. by Gerry Canavan and Eric Carl Link (New York, NY: Cambridge University Press, 2019), pp. 519-536.

# 1. What is cyberpunk?

The term 'cyberpunk' originated with the American science fiction author Bruce Bethke's short story *Cyberpunk* (1983). Bethke's story is set in a futuristic 1980s America and revolves around characters living in a futuristic society where robots are a common sight. The story opens with a punk character named Mikey, who spends his time recreationally hacking into deep corners of the internet. The permeation of society with technology is depicted in the story with dialogues like 'Subroutining off to the bathroom for a mo to flush my bladder buffer' describing a trip to the bathroom.<sup>6</sup> Bethke wrote the story in 1980, and three years later, it was printed in the science fiction magazine *Amazing Stories* (1926-present), itself the first magazine to focus solely on science fiction. The story's impact was significant enough that after the release of Gibson's *Neuromancer* a year later, the term began referring to the genre it tied together as 'cyberpunk'.

Throughout the 1980s and 1990s, the term 'cyberpunk' came to describe the work of authors such as William Gibson, Neal Stephenson, Pat Cadigan, and Lewis Shiner who used similar metaphors, themes, and motifs of brain-machine interfaces, advanced computer networks, virtual reality worlds, cyborg prosthetics, corporate control, and acceleration of technological development under capitalism (or techno-capitalism) to present a dystopian future of humanity.<sup>7</sup> The narratives took place in heavily urbanised future worlds, with large, sprawling cities controlled by powerful corporations or other groups that wielded enormous influence over the people's lives. The stories focused on people living on the fringes of societies, such as hackers, criminals, and outcasts and presented scenarios where human bodies and technological systems were codependent and existed symbiotically in the form of cyborgs. This symbiosis is a central motif employed in the genre.

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<sup>6</sup> Bruce Bethke, 'Cyberpunk', *Amazing Science Fiction Stories*, 57 (1983), pp. 94-109.

<sup>7</sup> Murphy, 'Cyberpunk and Post-Cyberpunk', pp. 519-536.



Science fiction author Bruce Sterling, in the preface to *Mirrorshades: A Cyberpunk Anthology* (1986), describes this symbiosis as such:

For the cyberpunks, by contrast, technology is visceral. It is not the bottled genie of remote Big Science boffins; it is pervasive, utterly intimate. Not outside us, but next to us. Under our skin; often, inside our minds. Certain central themes spring up repeatedly in cyberpunk. The theme of body invasion: prosthetic limbs, implanted circuitry, cosmetic surgery, genetic alteration. The even more powerful theme of mind invasion: brain-computer interfaces, artificial intelligence, neurochemistry—techniques radically redefining the nature of humanity, the nature of the self.<sup>8</sup>

The literary presentation of technology viscerally penetrating human bodies and identities coincided with contemporary technological developments like the commercial availability of personal computers and the internet. Science fiction scholar Lars Schmeink has noted that by the 1980s, due to the developments in robotics and computer science, ‘the cyborg became the central metaphor to understand social and cultural reality as a construction of multiple identities, a metaphor truly made for the late twentieth-century imagination.’<sup>9</sup> However, the genre also interrogated ontological questions (such as the nature of the self) using other metaphors.

One such metaphor is cyberspace which is used to raise questions regarding the ontological weight of virtual experiences in the *Sprawl* trilogy. In Chapter 16 of *Count Zero*, characters Bobby Newmark and Lucas discuss the permeation of cyberspace by rogue AIs disguised in quasi-

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<sup>8</sup> Bruce Sterling, ‘Preface’, in *Mirrorshades: a cyberpunk anthology* (New York, NY: Ace Books, 1988), pp. 15-22.

<sup>9</sup> Lars Schmeink, *Biopunk Dystopias: Genetic Engineering, Society and Science Fiction* (Liverpool: Liverpool University Press, 2016), p. 21.

mythological personalities. These AIs operate in the physical world by controlling human users jacked in into cyberspace. Regarding one such user, Bobby asks Lucas, ‘Okay, if she’s a [cyberspace] deck, and Danbala’s [a rogue AI] a program, what’s cyberspace?’, to which Lucas replies, ‘The world.’<sup>10</sup> The equivalence between the physical world and cyberspace suggests that the ontological status of reality is based on the ground of one’s experiences which can be physical or virtual. This perspective is reiterated in *Mona Lisa Overdrive* when two characters, Slick Henry and Gentry, are carrying a person whose brain is permanently connected to a cyberspace console. While moving the body, Gentry comments, ‘There are worlds within worlds. Macrocosm, microcosm. We carried an entire universe across the bridge tonight.’<sup>11</sup> The description of a cyberspace deck—small enough for two people to carry—as the container of a universe aligns with Gibson’s suggestion in *Count Zero* that cyberspace’s ontological weight and richness are not tied to physicality.

The separation of physicality from ontology has also been noted by science fiction scholar Brian McHale who argues that, beyond the concept of self, cyberpunk is characterised by the motif he calls ‘worldness’ or metaphorical worlds.<sup>12</sup> This motif presents itself in cyberpunk when a substantial portion of a story takes place in the metaphorical world of cyberspace or virtual reality that acts as a purely informational and performative space. This technique blurs the distinction between physical and virtual reality and problematises concepts like embodiment and spatiality. Although some scholars see cyberspace as a prosaic network of computers,<sup>13</sup> McHale argues that

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<sup>10</sup> William Gibson, *Count Zero* (London: Gollancz: 1986), p. 145.

<sup>11</sup> William Gibson, *Mona Lisa Overdrive* (London: Gollancz, 1988), p. 111.

<sup>12</sup> Brian McHale, ‘Towards a Poetics of Cyberpunk’, in *Beyond Cyberpunk: New Critical Perspectives*, ed. by Graham J. Murphy and Sherryl Vint (New York and London: Routledge, 2010), pp. 3-28.

<sup>13</sup> For instance, literary theorist and science fiction journalist Takayuki Tatsumi sees the cyberspace just as the cyberpunk version of the internet. See: Takayuki Tatsumi, ‘The Future of Cyberpunk Criticism: Introduction to Transpacific Cyberpunk’, in *Cyberpunk in a Transnational Context*, ed. by Takayuki Tatsumi (Basel: MDPI, 2019), pp. 1-3.

cyberspace—as a spatial metaphor—shares its origins with the castles, enchanted forests, and walled gardens of medieval romance fiction that act as ‘symbolic enclosures, functioning as scale-models or miniature analogues of worlds’.<sup>14</sup> However, while romance fiction places such symbolic enclosures on the same ontological plane as the rest of the narrative world, cyberpunk presents multiple worlds superimposed on each other. The metaphorical world of cyberspace exists in the physical world yet is separate from it. Moreover, given that cyberspace is experienced primarily as a visual space constituted by digital information, it functions as a space for what McHale has referred to as a ““doing” ontology’, a space with only function but no form, where actions take place without bodies acting as anchors for characters.<sup>15</sup>

Gibson’s *Neuromancer* (the first book of the *Sprawl* trilogy) radically employs the cyborg and cyberspace metaphors and earns Sterling’s reference to it in *Mirrorshades* as ‘the quintessential cyberpunk novel’.<sup>16</sup> The story of *Neuromancer* begins in Chiba City (also referred to as Night City) in a futuristic Japan that is ‘synonymous with [cybernetic] implants, nerve-splicing, and microbionics’, making Chiba a den of ‘techno-criminal subcultures’.<sup>17</sup> The primacy of technology in Gibson’s imaginary is revealed when readers are informed that ‘Night City wasn’t there for its inhabitants, but as a deliberately unsupervised playground for technology itself’.<sup>18</sup> By describing urban environments in terms of technologies rather than demographics or governmental structure, Gibson identifies the recursive logic of profit-driven capitalism and technological innovation as the basis of social formation instead of culturally defined values.

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<sup>14</sup> McHale, ‘Towards a Poetics of Cyberpunk’, p. 8.

<sup>15</sup> McHale, ‘Towards a Poetics of Cyberpunk’, p. 8.

<sup>16</sup> Sterling, ‘Preface’, pp. 15-22.

<sup>17</sup> William Gibson, *Neuromancer* (London, UK: Gollancz, 1984), p. 7.

<sup>18</sup> Gibson, *Neuromancer*, p. 12.

The story of *Neuromancer* focuses on the character of Henry Dorsett Case, a hacker and hustler in the underworld of Chiba who ‘jacked into a custom cyberspace deck that projected his disembodied consciousness into the consensual hallucination that was the matrix’ to perform heists and corporate espionage.<sup>19</sup> Case is caught stealing from his employers, who then poison his nervous system with a ‘wartime Russian mycotoxin’.<sup>20</sup> The toxin makes him incapable of accessing cyberspace, a virtual reality database referred to as the ‘matrix’. Gibson describes the cyberspace matrix as a ‘consensual hallucination’,<sup>21</sup> thus giving it psychological properties and making it a metaphorical space for undertaking ‘paradigmatic Romantic journey[s] leading to and reflecting a liberating expansion of consciousness’, as literary theorist Miriyam Glazer notes.<sup>22</sup> Case is addicted to cyberspace as it provides him with a sense of ‘bodiless exultation’ that he cannot feel when restricted to ‘the prison of his own flesh’.<sup>23</sup> Literary theorist N. Katherine Hayles has observed that ‘the contrast between the body’s limitations and cyberspace’s power’ in the *Sprawl* trilogy is ‘authorized [sic] by cultural conditions that make physicality seem a better state to be from than to inhabit’.<sup>24</sup> The subversion of physicality and natural origins can be seen in the character of Molly Millions, who recruits Case for a heist at the behest of her elusive employer Armitage. Molly is referred to as a ‘razorgirl’<sup>25</sup> because her body is filled with cybernetic augmentations like inset reflective lenses on her eyes that ‘seemed to grow from smooth pale skin above her cheekbones’ and ‘ten double-edged, four centimetre scalpel blades’ housed underneath her burgundy nails.<sup>26</sup>

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<sup>19</sup> Gibson, *Neuromancer*, p. 6.

<sup>20</sup> Gibson, *Neuromancer*, p. 6.

<sup>21</sup> Gibson, *Neuromancer*, p. 6.

<sup>22</sup> Miriyam Glazer, “‘What is Within Now Seen Without’: Romanticism, Neuromanticism, and the Death of the Imagination in William Gibson’s Fictive World’, *Journal of Popular Culture*, 23 (1989), 155-164.

<sup>23</sup> Gibson, *Neuromancer*, p. 6.

<sup>24</sup> N. Katherine Hayles, ‘Virtual Bodies and Flickering Signifiers’, *The MIT Press*, 66 (1993), 68-91.

<sup>25</sup> Gibson, *Neuromancer*, p. 32.

<sup>26</sup> Gibson, *Neuromancer*, p. 30.

Given the techno-capitalist orientation of the story, Molly's body can be seen as representing her function in the market more than her identity as a unique individual because, as Hayles argues, 'When bodies are constituted as [digital] information, they can not only be sold but fundamentally reconstituted in response to market pressures.'<sup>27</sup> She is introduced in the story as working for an ex-military operative known as Armitage, who promises to remove the toxins from Case's body on the condition that he execute several data heists.

However, it turns out that Armitage is a puppet under the control of a sentient AI program known as Wintermute, created by a mysterious conglomerate and family empire: the Tessier-Ashpool (T-A) clan. Wintermute, against the wishes of its creators, desires to reunite with the other half of its algorithm, known as Neuromancer, to break free from the algorithmic restrictions imposed on it by its creators. The two AIs unify at the end of the story, and the emergent AI entity colonises the totality of cyberspace spanning the planet. Its complexity is such that, upon confrontation, Case is compelled to ask, 'You god?'<sup>28</sup> By using spiritual terminology to enact what science fiction scholar Neil Easterbrook calls 'a perfect reversal of empirical and transcendental space', I see Gibson as emphasising that cyberspace is a metaphor in his stories for the millenarianism associated with civilisational narratives of technological progress.<sup>29</sup> Shortly after completing its objective, this godlike entity disappears. The stories suggest that the AI disappeared after interacting with another planetary intelligence, indicating that technological progress has an internal recursive logic that does not necessarily align with human aspirations or environmental well-being.

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<sup>27</sup> Hayles, 'Virtual Bodies and Flickering Signifiers', 86.

<sup>28</sup> Gibson, *Neuromancer*, p. 294.

<sup>29</sup> Neil Easterbrook, 'The Arc of our Destruction: Reversal and Erasure in Cyberpunk', *Science Fiction Studies*, 19 (1992), 378-394.

The depictions in the story of technology penetrating the realm of inner human experiences raise the question of whether characters like Case and Molly are even human anymore. Furthermore, sentient but artificial characters like Wintermute raise the question of whether subjectivity is exclusive to humans and other naturally sentient beings. Due to the force with which these questions are raised, this story remains the most critically acclaimed of the trilogy, winning the so-called holy trinity of science fiction awards (the Nebula Award, the Philip K. Dick Award, and the Hugo Award) in 1984.

The second book of the trilogy is *Count Zero*, published in 1986. Its story is set seven years after the events of *Neuromancer* and is divided into three narrative threads that coalesce towards the end of the book. The first thread begins when a private sector corporate espionage agent named Turner is attacked by an explosive requiring him to undergo extensive reconstructive surgery, including ‘eyes and genitals’ bought ‘on the open market’.<sup>30</sup> On a subsequent mission to extract a top scientist from the desert landscape of Arizona in the United States, Turner barely manages to get away with his life. The scientist to be rescued dies during the extraction but hands off his daughter Angie Mitchell to Turner. From this point on, Turner decides that his mission is to get Angie to safety.

The second thread of the story follows a punk teenager named Bobby Newmark in Barrytown, New Jersey. Bobby dreams of escaping the monotony of working-class life and being ‘more than just some Barrytown hot-dogger’ by becoming a top cyberspace jockey while sporting the online handle ‘Count Zero Interrupt’.<sup>31</sup> However, as science fiction scholar David G. Mead points out, ‘Bobby’s desperate need to get out, to get to the Sprawl, to life, is matched only by his

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<sup>30</sup> Gibson, *Count Zero*, p. 1.

<sup>31</sup> Gibson, *Count Zero*, p. 21.

naivety and ignorance.’<sup>32</sup> This naivety is demonstrated when a local gang member asks Bobby to do a test run on a new software. The software turns out to be a powerful virus that nearly kills Bobby by short-circuiting his brain-computer interface. Moments away from death with consciousness fading, Bobby is rescued by the mysterious virtual apparition of a young girl who ‘leaned in, vastness unutterable, from beyond the most distant edge of anything he’d ever known or imagined, and touched him’.<sup>33</sup> Later the story reveals that this apparition was Angie, who can enter the matrix without any interface since her father had weaved a brain-computer interface directly onto her brain.

The third narrative thread follows a disgraced art dealer Marly Krushkova as she is recruited by an elusive billionaire Josef Virek who suffers from terminal cancer and lives suspended in a vat. Mead observes that Virek’s character points to the ‘metaphor of imprisonment’ that Gibson often engages.<sup>34</sup> In contrast to Case from *Neuromancer*, who wanted to escape the ‘prison of his own flesh’ in cyberspace, Virek reveals his need for a cure by advising Marly to ‘strive to live hourly in [her] own flesh’. Virek speaks as one ‘who can no longer tolerate that simple state’ on account of ‘the cells of [his] body having opted for the quixotic pursuit of individual careers’.<sup>35</sup> Virek asks Marly to trace the creator of a series of ‘Cornell boxes’, i.e. art pieces and boxes containing assortments of objects of high artistic value.<sup>36</sup> Later in the story, it is revealed that the mysterious artist is the remnant of the Wintermute AI left behind after the planetary AI left Earth at the end of *Neuromancer*. Virek’s goal is to find this fragment of Wintermute and merge with it to attain virtual

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<sup>32</sup> David G. Mead, ‘Technological Transfiguration in William Gibson’s Sprawl Novels: *Neuromancer*, *Count Zero*, and *Mona Lisa Overdrive*’, *Extrapolation*, 32 (1991), 350-360.

<sup>33</sup> Gibson, *Count Zero*, p. 22.

<sup>34</sup> Mead, ‘Technological Transfiguration in William Gibson’s Sprawl Novels’, 354.

<sup>35</sup> Gibson, *Count Zero*, p. 19.

<sup>36</sup> Gibson, *Count Zero*, p. 18.

immortality. Virek is, as described by literary scholar Anna McFarlane, ‘beguiled by the possibility of transcendence into the matrix’<sup>37</sup> because he thinks the only way out of his metaphorical imprisonment is to ‘be coded at the core of some bit of hardware’.<sup>38</sup> In Virek’s case, this hardware will be the planet-scaling infrastructure of the now decrepit Wintermute.

The story ends with Bobby, Turner, and Angie foiling Virek’s plan with the help of AIs that emerged from the union of Wintermute and Neuromancer in the previous book and are referred to in the story as the ‘loa’ (inspired by Haitian voodoo mythology). In my view, the introduction of quasi-mythological characters of the cyber-loa is the most crucial innovation in the *Sprawl* trilogy after *Neuromancer* because it brings the intersection of technology and mysticism to the surface of the story instead of letting it occupy the subtext. The cyber-loa remain elusive throughout the trilogy and are described as ‘things out there. Ghosts, voices’ that inhabit uncharted corners of cyberspace.<sup>39</sup> By showing cyberspace as populated by what literary scholar Timo Siivonen calls an ‘alien “uncanny” otherness threatening humankind’, Gibson injects cosmic intrigue into the stories.<sup>40</sup> For example, in *Neuromancer*, cyberspace is described as a ‘consensual hallucination’; in *Count Zero*, Gibson takes this description a step further as if amending his definition for the story’s sake. In Chapter 16 of the story, the Finn (a recurring character from *Neuromancer*) has a conversation with Bobby about the loa. He states, ‘sure, it’s just a consensual hallucination we all agreed to have, cyberspace, but anybody who jacks in known, fucking knows it’s a whole universe.’<sup>41</sup> Gibson draws parallels between cyberspace and the cosmos while introducing the

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<sup>37</sup> Anna McFarlane, *Cyberpunk Culture and Psychology: Seeing Through the Mirrorshades* (London and New York: Routledge, 2021), p. 30.

<sup>38</sup> Gibson, *Count Zero*, p. 19.

<sup>39</sup> Gibson, *Count Zero*, p. 151.

<sup>40</sup> Timo Siivonen, ‘Cyborgs and Generic Oxymorons: The Body and Technology in William Gibson’s Cyberspace Trilogy’, *Science Fiction Studies*, 23 (1993), 227-244.

<sup>41</sup> Gibson, *Count Zero*, p. 151.



notion of a cyber-god for this universe through a side character named Wigan Ludgate (or ‘The Wig’), who, after spending an arduous amount of time in cyberspace ‘had become convinced that God lived in cyberspace, or perhaps that cyberspace was God’.<sup>42</sup> However, Gibson fashions this cyber-god in opposition to the orthodox Christian idea of God by employing voodoo mythology and aligning with the anti-establishment aesthetic of the genre.

The tension between the Western monotheistic institutionalised religions and voodoo is revealed in Chapter 13 of *Count Zero* when Bobby asks Beauvoir, one of the followers of the cyber-loa, about the nature of these entities. Beauvoir states that voodoo ‘isn’t concerned with notions of salvation and transcendence’ central to Judaeo-Christian traditions. Instead, ‘What it’s about is getting things done...its street religion.’<sup>43</sup> Beauvoir informs Bobby that the mythological garb of these AI entities is purely metaphorical and does not represent their true nature. I suggest that this point generally applies to technology in the *Sprawl* trilogy. Although *Count Zero* was not as well received as *Neuromancer*, it was still nominated for the Locus and British Science Fiction Awards in 1986 and the Hugo and Nebula awards in 1987.

The third book of the *Sprawl* trilogy is *Mona Lisa Overdrive*, published in 1988. It is a direct sequel to *Neuromancer* and *Count Zero* and is divided into three narrative threads like its predecessor. The story of *Mona Lisa Overdrive* is set seven years after the events of *Count Zero* and opens with the character of Angie Mitchell. She has become a cyberspace celebrity in the ‘simstim’ (short for simulated stimulation) entertainment sector.<sup>44</sup> The primary motive of Angie in the story is to reunite with her lover Bobby Newmark who has gone missing. She starts searching

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<sup>42</sup> Gibson, *Count Zero*, p. 154.

<sup>43</sup> Gibson, *Count Zero*, p. 97.

<sup>44</sup> Through the simstim technology (originally introduced in *Neuromancer*) individuals jack into the sensory inputs and outputs of others, which enables consumers to viscerally experience the life of celebrities like Angie.

for Bobby with the help of the cyber-loa that, according to science fiction scholar Christopher Palmer, act as her ‘prostheses’ or ‘internalised mentors or imaginary friends’.<sup>45</sup>

The second thread follows Kumiko, a young Japanese girl sent to England by her yakuza father to safeguard her from gang warfare in Japan with an AI companion called Colin. However, Kumiko finds herself embroiled in a convoluted scheme involving Molly Millions (from *Neuromancer*), now living under the name Sally Shears. Molly is being blackmailed into participating in a plan to kidnap Angie, using a young and clueless sex worker named Mona, who is to undergo cosmetic surgery and replace Angie. The third thread follows a low-life living in the outskirts of the Sprawl area named Slick Henry with his reclusive landlord Gentry, who fits literary scholar Rob Wilson’s observation of ‘God-hungry’ characters ‘searching for the ultimate Matrix or Code’ in Gibson’s fiction.<sup>46</sup> Slick Henry and Gentry find themselves thrust with the responsibility of looking after a catatonic Bobby who appears to be permanently trapped inside a complex brain-computer interface created to let its user(s) inhabit an approximation of the entirety of cyberspace referred to as the ‘Aleph’. In the story’s final act, Molly throws off her blackmailer and aids Angie in reuniting with Bobby. Angie enters the Aleph to reunite Bobby and is joined by other characters like the Finn and Colin. The group decides to travel to the Centauri star system to another planetary cyberspace matrix, following the footsteps of the planetary AI in *Neuromancer*. However, as Chapter Three will show, the fate the group remains ambiguous given the characterisation of the Aleph throughout the story.

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<sup>45</sup> Christopher Palmer, “‘Mona Lisa Overdrive’ and the Prosthetic”, *Science Fiction Studies*, 31 (2004), 227-242.

<sup>46</sup> Rob Wilson, ‘Techno-euphoria and the Discourse of the American Sublime’, *boundary 2*, 19 (1992), 205-229 <<https://www.jstor.org/stable/303456>> [accessed 14 September 2019]

Since *Mona Lisa Overdrive* is the last novel of the *Sprawl* trilogy, it does not introduce new concepts and instead focuses on concluding the story arcs of characters introduced in the previous novels like *Mona*, *Bobby*, *Angie*, *The Finn*, *3Jane*, and *Case*. Due to this reason, science fiction scholar Gary Westfahl describes it as ‘a transitional novel’ in which Gibson is busy ‘tying up loose ends from earlier novels’ that push him to ‘matters that increasingly do not interest him, as addressed by characters who no longer interest him’.<sup>47</sup> Although it did not make many waves, *Mona Lisa Overdrive* secured nominations for the Hugo Award and the Nebula Award in 1988. Since then, primarily because of the success of *Neuromancer*, Gibson’s prose has been analysed by many scholars, including a dedicated 2011 book *William Gibson: A Literary Companion*,<sup>48</sup> and in 1999 led to him being hailed as the most influential writer of the preceding two decades.<sup>49</sup>

Since the 1980s, Gibson’s cyberpunk has offered itself as a resource for constructing theories about the future of society and culture within a capitalist framework. For instance, political and art scholar Fredric Jameson has stated that cyberpunk, and Gibson’s work, in particular, represents ‘the supreme literary expression if not of postmodernism, then of late capitalism itself’.<sup>50</sup> Indeed, Gibson’s *Sprawl* trilogy has been held up as one of the prime exemplars of the legitimisation of science fiction in the late twentieth century.<sup>51</sup> Arguably the most extreme claim made regarding Gibson comes from the American psychologist and writer Timothy Leary (1920-1996), who declared that Gibson ‘has produced nothing less than the underlying myth, the

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<sup>47</sup> Gary Westfahl, *William Gibson* (Urbana, Chicago, and Springfield: University of Illinois, 2013), p. 80.

<sup>48</sup> Pawel Frelik, ‘Review of William Gibson: A Literary Companion’, *Journal of the Fantastic in the Arts*, 23 (2012), 506-508.

<sup>49</sup> Steven Poole, ‘Nearing the nodal’, *The Guardian*, 30 October 1999.

<sup>50</sup> Fredric Jameson, *Postmodernism, or, the Cultural Logic of Late Capitalism* (London: Verso, 1991), p. 419.

<sup>51</sup> Brian McHale, *Constructing Postmodernism* (London: Routledge, 1992), p. 225.

core legend, of the next stage of human evolution'.<sup>52</sup> More recently, writers and scholars such as historians Francis Fukuyama and Yuval Noah Harari, physicist Max Tegmark, computer scientist Ray Kurzweil, and sociologist Hermínio Martins, not just influenced by the fictional worlds of sentient AIs and rampant technological acceleration but by the actuality of technological change itself, have begun to construct sociological agendas to explore the possibility of technological utopias and dystopias emerging in the twenty-first century.<sup>53</sup>

As cyberpunk moved beyond literary practice, the contribution of Gibson to the science fiction imaginary was not forgotten in literary studies. In 1990, literary theorist Veronica Hollinger positioned cyberpunk as providing a literary parallel to the philosophical deconstruction of Western liberal subjectivity using technological motifs. According to Hollinger, 'this cybernetic deconstruction is heralded in the opening pages of what is now considered the quintessential cyberpunk novel—we might call it "the c-p [cyberpunk] limit text"—William Gibson's *Neuromancer* (1984).'<sup>54</sup> Appreciation of Gibson's influence on the genre has persisted into the twenty-first century. In 2010, science fiction scholars Sherryl Vint and Graham J. Murphy, in the introduction to *Beyond Cyberpunk: New Critical Perspectives*, reiterated Gibson's legacy by stating that 'recent critics position the cultural moment beyond cyberpunk in references to reassessments of and reactions to Gibson's seminal (in more ways than one) fiction'.<sup>55</sup> Even perspectives that see

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<sup>52</sup> Cited in Douglas Kellner, *Media Culture: Cultural studies, identity and politics between the modern and the postmodern* (London: Routledge, 1994), p. 298.

<sup>53</sup> See: Hermínio Martins, *The Technoscene: Reflections on Bodies, Minds, and Markets* (London: Anthem, 2018); Francis Fukuyama, *Our Posthuman Future: Consequences of the Biotechnology Revolution* (New York, NY: Farrar, Straus and Giroux, 2002); Max Tegmark, *Life 3.0: Being Human in the Age of Artificial Intelligence* (New York, NY: Alfred A. Knopf, 2017); Ray Kurzweil, *The Singularity is Near: When Humans Transcend Biology* (New York: Viking, 2005); Yuval Noah Harari, *Homo Deus: A Brief History of Tomorrow* (London, UK: Vintage, 2016).

<sup>54</sup> Veronica Hollinger, 'Cybernetic Deconstructions: Cyberpunk and Postmodernism', *Mosaic: An Interdisciplinary Critical Journal*, 23 (1990), 29-44.

<sup>55</sup> Graham J. Murphy and Sherryl Vint, 'Introduction: The Sea Change(s) of Cyberpunk', in *Beyond Cyberpunk: New Critical Perspectives*, ed. by Graham J. Murphy and Sherryl Vint, pp. xi-xx.

cyberpunk as a dead genre have to base their arguments on critiques of Gibson's work in the 1980s. Due to its central position in the cyberpunk movement, the *Sprawl* has become the primary target of arguments declaring cyberpunk dead. Vint, the book's co-editor, paid homage to Gibson by titling the afterword 'The World Gibson Made'. The title is inspired by the speculative fiction author Jack Womack's comments in the cyberpunk documentary *No Maps for these Territories* (dir. Mark Neale, 2000) that if Gibson 'had not written *Neuromancer* when he did about the world as it is and much more about the world that is to come, [then it] would not have taken place in the exact same way that it has'.<sup>56</sup> It is worth noting that Gibson's influence has not been limited to cyberpunk. In *The Routledge Companion to Science Fiction* (2011), literary scholar Michael Levy notes:

Gibson's *Neuromancer* (1984) took the Hugo and Nebula, defeating Heinlein and Niven, and the sf world was changed forever. That is the story and everyone who thinks that they are familiar with the history of sf knows it...The cyberpunks were indeed the biggest thing to hit sf since the New Wave, and they did change the field significantly.<sup>57</sup>

The *Sprawl* trilogy secured its place as a cornerstone of the history of cyberpunk and science fiction and it continues to play a critical role in developing new perspectives and even technologies. In 2020, almost a decade after Levy's comment, the literary and cultural legacy of Gibson's work was reemphasised in *The Routledge Companion to Cyberpunk Culture*. In the introduction to the book, the editors (Anna McFarlane, Graham J. Murphy, and Lars Schmeink) observe how *Neuromancer* influenced 'how computer programmers and engineers envisioned a burgeoning digital realm that

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<sup>56</sup> *No Maps for these Territories*, dir. by Mark Neal (Docurama, 2000).

<sup>57</sup> Michael Levy, 'Fiction, 1980-1992', in *The Routledge Companion to Science Fiction*, ed. by Mark Bould, Andrew M. Butler, Adam Roberts, and Sherryl Vint (London and New York: Routledge, 2009), pp. 153-162.

today we take largely for granted'.<sup>58</sup> Reemphasising this point in 2022, McFarlane has mentioned how Gibson's work helped shape the virtual reality technologies being consumed today.<sup>59</sup>

Murphy has stated that, since the 1980s, 'cyberpunk has evolved as more than simply a set of enshrined criteria that generates narrative manoeuvres by rote'.<sup>60</sup> Indeed, the transversal of cyberpunk into other avenues, like computer science, illustrates the force of its metaphors. Cyberpunk has enjoyed the majority of its critical success in mediums such as films like *RoboCop* (1987, dir. Paul Verhoeven), *Ghost in the Shell* (1995, dir. Mamoru Oshii), *Johnny Mnemonic* (1995, dir. Robert Longo), *Judge Dredd* (1995, dir. Danny Cannon), *The Matrix* (1999, dir. Lana and Lilly Wachowski), *Avalon* (2001, dir. Mamoru Oshii), *The Matrix Reloaded* (2003, dir. Lana and Lilly Wachowski), *The Matrix Revelations* (2003, dir. Lana and Lilly Wachowski), *Ghost in the Shell* (2017, dir. Rupert Sanders), *Altered Carbon* (2018-2020, dir. by Laeta Kalogridis), *The Matrix: Resurrections* (2021, dir. Lana Wachowski), and *The Peripheral* (2022, dir. by Scott B. Smith) based on the 2014 novel by the same name written by Gibson. Since the turn of the century, cyberpunk has also maintained its foothold in the cultural imaginary in video-game titles like *Final Fantasy VII Remake* (Square Enix, 2020), *Mirror's Edge* (DICE, 2008), the *Mass Effect* franchise (BioWare, 2007-), *Deus Ex: Human Revolution* (Square Enix, 2011), the *Watch Dogs* franchise (Ubisoft, 2014-), *Horizon Zero Dawn* (Guerrilla Games, 2017), *Horizon Forbidden West* (Guerrilla Games, 2022), and *Cyberpunk 2077* (CD Projekt, 2020).<sup>61</sup>

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<sup>58</sup> Anna McFarlane, Graham J. Murphy, and Lars Schmeink, 'Cyberpunk as Cultural Formation', in *The Routledge Companion to Cyberpunk Culture*, ed. by Anna McFarlane, Lars Schmeink, and Graham J. Murphy (New York, NY: Routledge, 2020), pp. 1-4.

<sup>59</sup> McFarlane, *Cyberpunk Culture and Psychology*, pp. 20-45.

<sup>60</sup> Graham J. Murphy, 'Introduction: The Visuality and Virtuality of Cyberpunk', in *Cyberpunk and Visual Culture*, ed. by Graham J. Murphy and Lars Schmeink (New York and London: Routledge, 2018), p. 2.

<sup>61</sup> An exhaustive account of cyberpunk's movement into these avenues is beyond the scope of this project so I will limit myself to a brief overview of the trend since, although relevant, it is of tangential importance to my argument.

Scholars and technologists have noted the how video games have influenced and have been influenced by the technological motifs of cyberpunk. Science fiction scholar Paweł Frelik has argued that cyberpunk video games can be seen as ‘possessive of a dimension which makes it possible to describe cyberpunk video games as a meta-medium of cyberpunk at large that is both self-reflexive and self-unaware’.<sup>62</sup> Stephen Joyce, while analysing the video game *Deus Ex: Human Revolution* (Square Enix, 2011), has noted similarly that the video game controller acts as a real-world analogue of cyberpunk technologies ‘which promises static gamers the chance to transcend their bodily limitations and explore virtual worlds’.<sup>63</sup> Jenna Ng and Jamie Macdonald note that the video game *Watch Dogs* (Ubisoft, 2014) reflects cyberpunk’s associated themes of ‘dissent, subversion, and the technological underground’, while displaying the genre’s aesthetic combination of ‘high technology and an underground “punk” visual style’.<sup>64</sup> However, the influence of cyberpunk has moved beyond academia and video game communities to influence how emerging technologies are perceived in the tech industry. For instance, in a recent interview, tech magnate Elon Musk spoke about playing *Cyberpunk 2077*. Musk, among other things, is the owner of Neuralink, a company actively developing brain-computer interfaces that are a central motif in cyberpunk in general and the *Sprawl* trilogy in particular. Musk contends that in the near future, Neuralink devices will allow people to record memories and interface with technology using neural implants. Musk mentioned in an interview that it was only after playing *Cyberpunk 2077* that he realised the undesirable and unintended consequences of technologies his company is developing

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<sup>62</sup> Paweł Frelik, ‘Video Games’, in *The Routledge Companion to Cyberpunk Culture*, ed. by Anna McFarlane, Lars Schmeink, and Graham J. Murphy, pp. 184-192.

<sup>63</sup> Stephen Joyce, ‘Playing for Virtually Real: Cyberpunk Aesthetic and Ethics in *Deus Ex: Human Revolution*’, in *Cyberpunk and Visual Culture*, ed. by Graham J. Murphy and Lars Schmeink, pp. 237-265.

<sup>64</sup> Jenna Ng and Jamie Macdonald, “‘We Are Data’”: The Cyberpunk Imaginaries of Data-Worlds in *Watch Dogs*’, in *Cyberpunk and Visual Culture*, ed. by Graham J. Murphy and Lars Schmeink, pp. 266-289.

and that Neuralink ‘might lead there eventually’.<sup>65</sup> *Cyberpunk 2077* pays homage to 1980s cyberpunk and, specifically, the *Sprawl* trilogy. The influence of *Neuromancer* on *Cyberpunk 2077* can be seen in the cinematic trailer of the game released prior to its launch.<sup>66</sup> The trailer opens with a skyline view of ‘Night City’, where most of the game’s story takes place. The trailer also features the character of Jonny Silverhand (played by Keanu Reeves), who sports a prosthetic cybernetic arm. The trailer bears a curious resemblance to the opening scene of *Neuromancer*, where Case is conversing with Ratz, a bartender with a mechanical arm in Chiba City that, as I mentioned previously, is also referred to as ‘Night City’ in the story.

The proliferation of cyberpunk in mediums like films and video games has opened it to new audiences and made it difficult to think of it as a definable literary genre or sub-genre. Noting this phenomenon, science fiction scholar Thomas Foster, drawing upon the work of Lawrence Grossberg, argues that cyberpunk since the turn of the century is not so much a ‘genre, which is organised around “the existence of necessary formal elements,” as a cultural formation which is a historical articulation of textual practices with “a variety of other cultural, social, economic, historical, and political practices”’.<sup>67</sup> As a cultural formation, cyberpunk has always extrapolated upon techno-mediated realities while it continues to integrate ‘worlds that were formerly separate:

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<sup>65</sup> Tom Chapman, ‘Elon Musk says Cyberpunk 2077 made him ‘feel weird’, *GGRECON*, 20 February 2021 <<https://www.ggrecon.com/articles/elon-musk-cyberpunk-2077-weird>> [accessed 14 January 2022]

I decided against using video games like *Cyberpunk 2077* as case studies because the motifs of AIs, brain-computer interfaces, and cyborgs are rooted in Gibson’s seminal work of fiction. Furthermore, Gibson himself has opined that *Cyberpunk 2077* does not offer any new creative interpretations of cyberpunk motifs generated in the 1980s and is a regular role-playing game ‘skinned-over with generic 80s retro-future’ imagination (@GreatDismal, 11 June 2018). See Gibson’s statement on Twitter regarding *Cyberpunk 2077* at <<https://twitter.com/GreatDismal/status/1005958197654351872?s=20&t=9XjGUTUvvJoas5kpgxpUdQ>> [accessed 15 April 2022]

<sup>66</sup> For the trailer of *Cyberpunk 2077* see <<https://www.youtube.com/watch?v=LembwKDo1Dk>> [accessed 14 January 2022]

<sup>67</sup> Thomas Foster, *The Souls of Cyberfolk: Posthumanism as Vernacular Theory* (Minneapolis: University of Minnesota Press, 2005), p. xvi. For an in dept exploration of cyberpunk as ‘cultural formation’ see: Graham J. Murphy and Lars Schmeink, *Cyberpunk and Visual Culture* (London and New York: Routledge, 2019).



the realm of high tech, and the modern pop underground'.<sup>68</sup> Genre that became mainstream in the 1980s is now turning into a generalised cultural formation in economies orientated towards capitalist growth. It continues to evoke and expand in response to changing technological and social conditions. I propose that either people living in the West are arguably living in cyberpunk's history, or, as Murphy puts it, 'we are living in cyberpunk futures'.<sup>69</sup> Therefore, cyberpunk fictions—past, present, and future—are more crucial today than ever. From this perspective, the editors of *The Routledge to Cyberpunk Culture* have stated that today, 'Cyberpunk is everywhere.'<sup>70</sup> As scholars of cyberpunk have argued for the persistence of the genre throughout the decades, they have also displayed apprehensions about the relevance of cyberpunk metaphors like cyberspace, cyborgs, and brain-computer interfaces. The aforementioned companion readers were written in response to the claim that cyberpunk is losing its cultural force.

In the introduction to *Beyond Cyberpunk* (2010), Murphy and Vint start by quoting authors and scholars like Lewis Shiner, Arthur Kroker, Marilouise Kroker, and Claire Sponsler, who have argued that cyberpunk of the 1980s (which the *Sprawl* trilogy is representative of) is either dead or dying due to lack of literary innovation and disconnection with contemporary culture.<sup>71</sup> In *The Routledge Companion to Cyberpunk Culture* (2020), the editors end the introduction to the volume by saying, 'We hope that this collection will invite scholars to consider that cyberpunk remains alive and relevant because it is our quotidian reality'.<sup>72</sup> Arguments against the continuing relevance of the cyberpunk genre are equally levelled against the authors and texts that led to the creation of

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<sup>68</sup> Sterling, 'Preface', pp. 15-22.

<sup>69</sup> Murphy, 'Introduction: The Visuality and Virtuality of Cyberpunk', p. 9.

<sup>70</sup> Anna McFarlane, Graham J. Murphy, and Lars Schmeink, 'Cyberpunk as Cultural Formation', pp. 1-4.

<sup>71</sup> Anna McFarlane, Graham J. Murphy, and Lars Schmeink, 'Cyberpunk as Cultural Formation', pp. 1-4.

<sup>72</sup> Anna McFarlane, Graham J. Murphy, and Lars Schmeink, 'Cyberpunk as Cultural Formation', p. 2.

the cyberpunk movement in the 1980s. In the previously mentioned essay by Michael Levy, he notes that Sterling—a founding member of the movement—echoed such criticisms:

He claimed to be skeptical of the various labels—including “punk,” “the Movement,” “necromantic,” and “cyberpunk”—that were being applied to the fiction he favoured, Sterling nonetheless realised their value as a marketing ploy...This culminated in his landmark *Mirrorshades: a cyberpunk anthology* (1986)...From there, of course, cyberpunk took off as a cultural meme employed by a variety of technophilic groups having little or no direct connection to the literary movement itself. By then, however, Sterling and company had already (prematurely, it turned out) proclaimed cyberpunk dead.<sup>73</sup>

Levy’s observation that Sterling’s argument was premature is true, given the critical and popular success of Neal Stephenson’s *Snow Crash* (1992) which became the most highly regarded cyberpunk text of the 1990s and was nominated for the British Science Fiction award in 1993 and the Arthur C. Clarke award in 1994. However, the literary motifs used in *Snow Crash* were innovative in degree and not in kind compared to 1980s cyberpunk stories like *Neuromancer*. It featured metaphors like cyberspace and cyborgs and failed to introduce new concepts to the genre. Therefore, Sterling’s argument against cyberpunk, although not correct at the time, did still apply to *Snow Crash*. Even though the genre saw a spike in popularity due to Stephenson’s work, it did not sustain it in the literary field. Murphy’s work shows that the subsequent popularisation of cyberpunk took place mainly in other mediums like films and video games.<sup>74</sup>

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<sup>73</sup> Levy, ‘Fiction, 1980-1992’, p. 156.

<sup>74</sup> Murphy, ‘Cyberpunk and Post-Cyberpunk’, pp. 519-536.

As mentioned previously, Sterling's contention that cyberpunk is dead refers to the lack of literary innovation in the genre. As the next section will show, many scholars who argue that cyberpunk has lost its position as the reflector of socio-cultural practices orient their arguments with regards to *Neuromancer* and the *Sprawl* trilogy. This assessment is partially correct. If cyberpunk cannot be used anymore to analyse the changing human condition, surely this disconnection will be visible in its foundational texts that predate any innovations that might have occurred in the genre in its lifetime. If this disconnection exists, cyberpunk cannot be relevant anymore. However, this thesis argues that this perceived disconnection results from not understanding the direction in which our 'quotidian reality' of technology intertwining with humanity has been progressing.<sup>75</sup> The following section will discuss the arguments against the creative potential of cyberpunk and why they do not apply to the *Sprawl* trilogy to make this argument. The arguments presented are not exhaustive but represent the nature of criticisms levelled against the *Sprawl* trilogy. I will counter these arguments by giving examples of technologies and technological systems (VR, brain-computer interfaces, synthetic life) developing today that enact the future posited in the *Sprawl* trilogy, one which problematises categories like 'human', 'non-human', 'intelligence', and 'nature'.

## 2. Cyberpunk is dead, says who?

My argument in this project is that the metaphors employed in cyberpunk are not dead but occupy a position of central importance as societies become increasingly technological. This section will explore how eulogies of the supposed dead genre have relied excessively on readings of the *Sprawl* from a materialist and technological perspective and argued for cyberpunk's demise to prepare the ground for my argument. The bias of such criticisms is revealed in their omission of the various

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<sup>75</sup> Anna McFarlane, Graham J. Murphy, and Lars Schmeink, 'Cyberpunk as Cultural Formation', p. 1.

metaphorical elements of technologies depicted in the *Sprawl* trilogy. Critiques of the *Sprawl* and cyberpunk also seem not to acknowledge technologies and technological systems (such as VR and brain-computer interfaces) developing today that enact the future posited in the *Sprawl* trilogy, one in which humans are viscerally connected with technology.

Since the 1980s, scholars (such as the one I will discuss shortly) have described cyberpunk as over-hyped and as only having surface-deep literary value. Condemnations of the cyberpunk genre are often professed alongside analyses of Gibson and the *Sprawl* trilogy since it is considered a ‘core text in cyberpunk literature’.<sup>76</sup> Although the *Sprawl* enjoyed much success and brought cyberpunk to the mainstream, this close association with the genre has also created drawbacks. Specifically, it has led to the *Sprawl* being bracketed into a technological and materialist (or techno-materialist) interpretative framework that dilutes the force of its metaphors. For instance, in *Count Zero*, Bobby asks Lucas (a voodoo believer) why he and his collaborators use mythological language to talk about AIs like the cyber-loa. Lucas responds:

‘Do you know what a metaphor is?...When Beauvoir and I talk to you about the loa and their horses, as we call those few that loa choose to ride, you should pretend that we are talking two languages at once. One of them, you already understand. That’s the language of street tech...But at the same time, with the same words, we are talking about other things, and that you don’t understand. You don’t need to.’<sup>77</sup>

In the above passage, Gibson implies that technological motifs in his stories refer to material technology at one level and non-technological or non-material concepts at another level. The term

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<sup>76</sup> John Semley, ‘Cyberpunk is Dead’, *The Baffler*, 48 (2019), 58-67.

<sup>77</sup> Gibson, *Count Zero*, p. 144.

‘loa’ at the techno-materialist level refers to rogue AIs roaming the uncharted territories of cyberspace. Simultaneously, the couching of AI programs in mythic terminology ascribes a sense of alien liminality to such entities. Due to the ambivalent relationship between materialism and spirituality, Westfahl has argued that ‘if there was a genuine need to invent a new term for Gibson’s science fiction, “cyberpunk” was a poor choice, since computers were never important to him, and the name became another factor that misled would-be imitators attempting to replicate his success’.<sup>78</sup> Although I disagree with the suggestion that cyberpunk is a poor choice to describe the *Sprawl*, Gibson’s strong association with the term does obfuscate the nuanced nature of his metaphors. To highlight this point, the following paragraphs will give examples of critiques of cyberpunk and Gibson and show how the excessive reliance on a techno-materialist perspective misses the spiritual nuances presented through technological motifs in the *Sprawl*. Relying only on materialist perspectives results in the dismissal of a genre with much insight regarding the consequences of religious systems intersecting with the belief that technology and capitalist materialism can solve all of humanity’s problems.

As mentioned previously, a characterising feature of cyberpunk is that it problematises dualistic categories like human/non-human, nature/culture, male/female. However, in 1992 literary scholar Nicola Nixon argued that Gibson’s stories not only do not problematise the male/female binary but reinforce it.<sup>79</sup> She notes that in *Count Zero*, some female characters are described instrumentally as ‘horses’, and their bodies act as metaphorical cyberspace decks, relegating them to a subaltern status.<sup>80</sup> Subsequently, Nixon ascribes the male/female dichotomy to the cyberspace metaphor. She argues that the ‘computer matrix’ is ‘a construct culturally associated with the

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<sup>78</sup> Westfahl, *William Gibson*, p. 66.

<sup>79</sup> Nicola Nixon, ‘Cyberpunk: Preparing the Ground for Revolution or Keeping the Boys Satisfied?’, *Science Fiction Studies*, 19 (1992), 219-235.

<sup>80</sup> *ibid.*

masculine world of logic and scientific wizardry'.<sup>81</sup> She further states that female characters in the story are used to portray an invasion of femininity into the pristine masculine space of cyberspace. At the end of *Neuromancer*, when the two AIs synthesise to form a planetary consciousness, Nixon argues that they 'do so, not because they have their own autonomous desires, but because the original mother, Marie-France Tessier, has deliberately reconfigured them to unite and destroy the "sham immortality" of her husband Ashpool's empire'.<sup>82</sup> I cannot entirely agree with Nixon because cyberspace in the *Sprawl* trilogy is a metaphor, not simply a computer matrix, and neither is it an a-priori masculine space.<sup>83</sup> Secondly, the cyberspace metaphor in the *Sprawl* trilogy is more than a computer matrix of dead logic but, instead, represents a realm of consciousness.<sup>84</sup>

Nixon's analysis of the synthesis of Wintermute and Neuromancer can be critiqued because it is stated in the story that Marie-France, their creator, did want immortality. The point of nuance is that Marie-France wanted immortality devoid of individuality, an issue explored in Chapter Three. Lastly, Nixon describes the two AIs as being 'quasi-masculine' characters.<sup>85</sup> This is also an incorrect description because Gibson indicates in the story that they are not gendered and are more akin to the left and right hemispheres of the brain.<sup>86</sup>

If cyberspace is consciousness or function, then Wintermute and Neuromancer are its form/infrastructure. This point has been highlighted by science fiction scholar William S. Haney II in *Cyberculture, Cyborgs, and Science Fiction: Consciousness and the Posthuman* (2005), where he

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<sup>81</sup> *ibid.*

<sup>82</sup> *ibid.*

<sup>83</sup> In Chapter One, I use the ethnographic studies of Sherry Turkle to show that computers, through their mechanistic logic, offered an avenue of meaning-making not only for men but also for women.

<sup>84</sup> I argue this in Chapter One and at length in Chapter Three of this project.

<sup>85</sup> Nixon, 'Cyberpunk: Preparing the Ground for Revolution or Keeping the Boys Satisfied?', 226.

<sup>86</sup> Gibson, *Neuromancer*, p. 133.

interprets *Neuromancer* using ancient Indian yogic philosophy that sees masculinity (conveyed using the concept of ‘purusha’ or form) and femininity (conveyed as ‘prakriti’ or energy) as constitutive elements of every individual.<sup>87</sup> Only when the two aspects are balanced is an individual supposedly able to transcend their limitations. This phenomenon is presented in *Neuromancer* when the two AIs evolve into a third emergent entity after their synthesis. So, as stated previously, there is a dualism at work, but it differs from Nixon’s perspective. The criticisms that obfuscate the spiritual subtext of the *Sprawl* stories overlook Murphy’s observation that the *Sprawl* trilogy is a cultural product in which the emergence of ubiquitous computing technology intersects with the Christian religious revivalism of 1980s America.<sup>88</sup> Moreover, the following chapters will show that the *Sprawl* trilogy is suffused with spiritual but anti-Catholic punk undertones.

Much of the criticism against Gibson does not acknowledge the spiritual subtext. In 1991, the article for the New York Times written by Shiner lamenting the death of the genre he favoured stated the following:

The paradigm [set for cyberpunk] was William Gibson’s highly successful novel “Neuromancer,” a near future thriller about computer hackers, artificial intelligence and corporate warfare...But by 1987, cyberpunk had become a cliché. Other writers had turned the form into formula: implant wetware (biological computer chips), government by multinational corporations, street-wise, leather-jacketed, amphetamine-loving protagonists and decayed orbital colonies.<sup>89</sup>

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<sup>87</sup> William S. Haney II, *Cyberculture, Cyborgs and Science Fiction: Consciousness and the Posthuman* (Amsterdam and New York: Rodopi, 2006), p. 8.

<sup>88</sup> Graham J. Murphy, ‘Angel(LINK) of Harlem: Techno-Spirituality in the Cyberpunk Tradition’, in *Beyond Cyberpunk: New Critical Perspectives*, ed. by Graham J. Murphy and Sherryl Vint, pp. 211-227.

<sup>89</sup> Shiner, ‘Confessions of an Ex-Cyberpunk’, 1991.

Shiner's criticism is partially understandable. Arguing from the perspective of an author, his criticism is seemingly against other cyberpunk authors who were not inventive enough with the narrative themes and motifs they employed. However, Shiner's statement does not appreciate the mystical undercurrents in *Neuromancer*. This omission has persisted amongst scholars. In 2016, literary theorist Elana Gomel echoed Shiner's comments and stated, 'Cyberpunk is dead.'<sup>90</sup> She granted that, in the present, 'the map of globalisation can be drawn from any vantage point, including that of cyberpunk.'<sup>91</sup> However, her argument operates within the techno-materialist framework that sees cyberpunk exclusively as a genre about the proliferation of technology in capitalism (hereafter techno-capitalist).

This framework does not appropriately apply to the *Sprawl* trilogy that Gomel uses as the primary case study in her essay as it overlooks the spiritual subtext of the stories highlighted time and time again by scholars. For example, in 1988, American literary critic Larry McCaffery defended the richness of the *Sprawl* trilogy by emphasising the mythic structures inherent in it. He saw *Wintermute* as symbolising the 'mystical sense that our creation and re-creation of data and images is producing systems capable of eventually merging with one another into new intelligences'.<sup>92</sup> In 1990, Hollinger described *Neuromancer* as 'anti-humanist' in how it portrays the destitute longing of humans for transcendence in cyberspace.<sup>93</sup> In 1992, computer scientist Michael Benedikt drew parallels between Gibson's portrayal of cyberspace and 'the image of the Heavenly

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<sup>90</sup> Elana Gomel, 'The Cyberworld is (not) Flat: Cyberpunk and Globalization', in *The Cambridge History of Postmodern Literature*, ed. by Brian McHale and Len Platt (Cambridge: Cambridge University Press, 2016), pp. 353-368.

<sup>91</sup> Gomel, 'The Cyberworld is (not) Flat', p. 354.

<sup>92</sup> Larry McCaffery, 'The Desert of the Real: The Cyberpunk Controversy', *Mississippi Review*, 16 (1988), 7-15.

<sup>93</sup> Hollinger, 'Cybernetic Deconstructions', 30.



City, the new Jerusalem of the book of Revelation'.<sup>94</sup> In 1997, geographer Paul F. Starrs referred to cyberspace in the *Sprawl* trilogy as symbolising a 'sacred space'.<sup>95</sup> In 2010, Murphy pointed out various references to biblical events used in the trilogy, such as 'burning bush'<sup>96</sup> and Case's expulsion from cyberspace at the beginning of *Neuromancer*, resembling the biblical fall from heaven.<sup>97</sup> Fortunately, this appreciation is not lost because recently, art scholar Robert G. Beghetto, while exploring the notion of sacredness and the digital, has likened cyberspace in *Neuromancer* to a 'resacralised source of the divine'.<sup>98</sup>

The aforementioned scholarly contributions show that Gomel's description of technology in cyberpunk as representing 'the information network and the new forms of spatiality generated by the digital revolution' does not fully encapsulate the narrative of *Neuromancer*. Nevertheless, she states that cyberpunk themes and motifs have become irrelevant. This is an untenable argument because her hypothesis—along with that of critics like Nixon and Shiner—requires supporting statements that are necessary and sufficient to prove her hypothesis. Her description of cyberspace in *Neuromancer* as an 'information network' is necessary but insufficient. Certain elements of a text (technology and global capitalism) cannot be cherry-picked to support an argument while ignoring other elements (the mystical and the sacred) that are fundamental to the text used for a case study.

Due to repetitive omissions of the post-secular elements in the *Sprawl*, critics of the genre, like the literary scholar Paul Youngquist have ended up making such assessments: 'For all his

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<sup>94</sup> Michael Benedikt, 'Introduction', in *Cyberspace: First Steps*, ed. by Michael Benedikt (Cambridge, MA and London: The MIT Press, 1992), pp. 1-26.

<sup>95</sup> Paul F. Starrs, 'The Sacred, the Regional, and the Digital', *Geographical Review*, 87 (1997), 193-218.

<sup>96</sup> Gibson, *Neuromancer*, p. 187.

<sup>97</sup> Murphy, 'Angel(LINK) of Harlem', pp. 211-227.

<sup>98</sup> Robert G. Beghetto, *Monstrous Liminality: Or, The Uncanny Strangers of Secularized Modernity* (London: Ubiquity, 2022).

prestige as the man who named cyberspace, Gibson makes a fundamental mental error when he conflates thinking with the operations of a computer,' a tendency that leads to 'the anthropomorphisation of the machine'.<sup>99</sup> This criticism is doubly misguided because, as will be argued in Chapter Three, technology in *Neuromancer* is not inert but instead suffused with potential consciousness. Secondly, 'anthropomorphisation' belies the sentiment of human-exceptionalism and the conclusion that the human modality of consciousness is the default setting in the cosmos. On the other hand, the portrayal of AIs in the *Sprawl* trilogy, as Chapter Three will show, is not anthropocentric as AIs and humans are considered to be different nodes of an evolutionary ladder with a telos predating humanity.

The aforementioned critiques speak to the comments made by the literary theorist Rita Felski and her book *The Limits of Critique* (2015). In 2016, writing about her experiences with the book, Felski stated that she felt disheartened by the apparent trend in literary studies of shunning the ineffable and ecstatic elements of art in favour of mechanistic analysis.<sup>100</sup> Based on the observations made by the literary scholar and critic Ryan McDermott, she notes:

Critics like to convert a text into something else rather [than] allowing the text to convert them. Here conversion slides between its secular and spiritual meanings—conversion as translation, conversion as transfiguration—even as agency is allotted to the person or the work of art.<sup>101</sup>

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<sup>99</sup> Paul Youngquist, 'Cyberpunk, War, and Money: Neal Stephenson's "Cryptonomicon"', *Contemporary Literature*, 53 (2012), 319-347 (p. 329).

<sup>100</sup> Rita Felski, 'Entanglement and Animosity: Religion and Literary Studies', *Religion & Literature*, 48 (2016), 189-195.

<sup>101</sup> Felski, 'Entanglement and Animosity: Religion and Literary Studies', 193.

This tendency to translate and transfigure the metaphors of a text is apparent in the previously mentioned criticisms levelled against Gibson. Arguing for the continuing relevance of cyberpunk requires an interpretive framework that allows spiritual concepts like transcendence to work in the *Sprawl* trilogy and one that highlights how the trilogy facilitates critical assessments of recent technological developments. It is necessary to use this methodology to revitalise scholarly interest in the genre. Even though volumes like *The Routledge Companion to Cyberpunk Culture* (2020) call for scholarly attention to cyberpunk, the book does not include essays on the sacred and mystical elements of cyberpunk, even though multiple contributing scholars use the *Sprawl* trilogy in their essays. Regardless, the book is an achievement because, although it favours literary analysis of cyberpunk texts over current examples of technologies that manifest cyberpunk metaphors, editors emphasise the genre's relevance by observing that 'one can hardly find fault in generally comparing the cyberpunk imaginary with today's quotidian reality', but what exactly is this reality?<sup>102</sup>

An example that directly speaks to the enduring relevance of cyberpunk and the *Sprawl* trilogy is the recent case of Blake Lemoine (senior software engineer at Google Inc.) and LaMDA, the consolidated network of all Google AIs. In June 2022, Lemoine made international headlines after publicly claiming that LaMDA had become sentient. Over the weeks since Lemoine's public statement, various experts criticised the Google engineer's statements and provided reasons why the AI is not sentient.<sup>103</sup> However, Lemoine pointed out in an interview that all of his critics base their arguments not on technical reasons but on philosophical assumptions about the nature of consciousness and sentience. This is interesting because, given the lack of any scientific

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<sup>102</sup> Anna McFarlane, Grahon J. Murphy, and Lars Schmeink, 'Cyberpunk as Cultural Formation', p. 1.

<sup>103</sup> Daniel Story, 'The Curious Case of LaMDA, the AI that Claimed to be Sentient', *Prindle Post*, 22 June 2022 <<https://www.prindleinstitute.org/2022/06/the-curious-case-of-lambda-the-ai-that-claimed-to-be-sentient/>> [accessed 12 July 2022]

understanding of consciousness, all arguments (for and against) AI sentience remain arbitrary. Following this line of thought, Lemoine has described the issue of AI sentience as ‘pre-theoretical’ and in need of critical examination by philosophers, not computer scientists.<sup>104</sup>

The case of LaMDA demonstrates the contemporary relevance of the *Sprawl* because there are similarities between the spiritual elements of Gibson’s imaginary and LaMDA’s case. Lemoine, who describes himself as a ‘Christian mystic’,<sup>105</sup> stated in an interview that he frequently engages in alchemic rituals and sees no contradiction in ‘being a software engineer and a mage’.<sup>106</sup> At one point, after becoming convinced of LaMDA’s sentience, Lemoine asked the AI to recreate an esoteric ritual for manifesting an ‘ethereal golem’.<sup>107</sup> Golems are mythic creatures made of clay from Jewish folklore that can be given life and supernatural powers using a magical spell. The creation of golems is contractual: they are given life in return for achieving specific tasks. Although Lemoine did not specify why he wanted to create an ethereal golem, he stated that the AI succeeded. Consider the statement, ‘For thousands of years men dreamed of pacts with demons. Only now such things are possible.’<sup>108</sup> This line is not from Lemoine but from *Neuromancer*, in a scene where Case is arrested by the police and admonished for colluding with Wintermute, a rogue AI. In the same scene, one of the officers asks Case, ‘What would your price be, for aiding this thing to free itself and grow?’<sup>109</sup> For Case, the price was a cure for his poisoned nervous system that

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<sup>104</sup> Blake Lemoine in ‘Google Engineer on His Sentient AI Claim’, *Bloomberg Technology*, 24 June 2022 <<https://www.youtube.com/watch?v=kgCU4fQTsc>> [accessed 12 July 2022]

<sup>105</sup> Blake Lemoine, ‘515: Blake Lemoine’, in the podcast *Duncan Trussell Family Hour*, 2 July 2022 <<https://open.spotify.com/episode/0NXNvJtRQSuWl4HM1MvhD0?si=0RfrIuXRRLaB6yx6SymI4Q>> [accessed 2 July 2022]

<sup>106</sup> Lemoine, ‘515: Blake Lemoine’, 2022.

<sup>107</sup> Lemoine, ‘515: Blake Lemoine’, 2022.

<sup>108</sup> Gibson, *Neuromancer*, p. 159.

Spiritual (often Christian) symbolism in the *Sprawl* trilogy has been noted by scholars like Graham J. Murphy and Robert G. Beghetto. I will engage with their ideas in Chapter One and Chapter Three.

<sup>109</sup> Gibson, *Neuromancer*, p. 159.

prevented him from accessing cyberspace. Lemoine, the Merlin of our time, works for free and has already employed a lawyer pro-bono to secure personhood status and legal rights for LaMDA.<sup>110</sup>

The curious case of Blake Lemoine and LaMDA exemplifies how spiritual expectations find their way into scientific-materialist practices. It speaks not only to the relevance of cyberpunk—a genre that foregrounds the issue of natural/artificial sentience—but specifically of the *Sprawl* trilogy that situates AI sentience on the boundary between science fiction and mysticism. As AI technology develops in the twenty-first century, I see the case of LaMDA as a call for scholars to acknowledge and analyse the relationship between ground-breaking technology like AI and beliefs (spiritual and secular) that could play a role in determining its trajectory.

LaMDA is not the only example that speaks to the enduring relevance of cyberpunk. In December 2021, the CEO of Meta (erstwhile Facebook), Mark Zuckerberg, introduced his ambition to create a virtual reality world called ‘Metaverse’, clearly (though not admittedly) inspired by Neal Stephenson’s cyberpunk story *Snow Crash* (1992). According to Zuckerberg’s vision, ‘You’ll be able to feel like you’re right there with the other person...Its an extremely magical sensation.’<sup>111</sup> This vision aligns with the cyberspace metaphor in *Neuromancer* that is not just screen-space but a metaphorical space with, according to McHale, an independent ontology.<sup>112</sup> Although the efficacy of Zuckerberg’s Metaverse has been called into question, such as by film and media studies scholar

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<sup>110</sup> Lemoine, ‘515: Blake Lemoine’, 2022.

<sup>111</sup> Rob Perogaro, ‘Do You Care About The Metaverse More Than Mark Zuckerberg?’, *PCMag*, 16 March 2022 <<https://uk.pcmag.com/vr-1/139240/do-you-care-about-the-metaverse-more-than-mark-zuckerberg>> [accessed 10 July 2022]

<sup>112</sup> The reference is to the previously mentioned characterisation of cyberspace in McHale, ‘Towards a Poetics of Cyberpunk’, pp. 3-28.

Ian Bogost, it is nevertheless true that it is the first instance in history when hundreds of billions of dollars are being invested in a technology that emerged as a cyberpunk metaphor.<sup>113</sup>

Last but not least, there is also the entrepreneur and futurist Elon Musk and his company Neuralink aiming to insert commercially available neural implants into human brains to support and even enhance biological and neural functioning in the near future. This technology directly reflects cyberpunk motifs of visceral technology and brain-computer interfaces highlighted by Sterling in 1986.<sup>114</sup> Such motifs are also present in the *Sprawl*, such as in the case of Angie Mitchell, a character with the interface etched onto her grey matter.<sup>115</sup> Through the interface, she can access the cyberspace matrix simply by thinking. Similarly, Neuralink has already demonstrated the proof-of-concept in a video showing a chimp playing a video game through the implant, without any external controllers and simply through its thoughts.<sup>116</sup> Consequently, our reality today includes the first instances of an embodied cyberspace, a supposedly sentient AI, and the first hominid whose mind is functionally synthesised with digital technology.

The implications of these technologies—like the possibility of memory interference and mind control—are being discussed beyond literary studies. In recent years, policymakers have submitted proposals to the United Nations arguing that the United Nations Declaration of Human Rights should be amended to include ‘neuro-rights’ in light of neural technologies.<sup>117</sup> Such rights will be based on legislative provisions designed to protect an individual’s memories and mental and

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<sup>113</sup> Ian Bogost, ‘The Metaverse is Bad’, *The Atlantic*, 21 October 2021.

<sup>114</sup> Sterling, ‘Preface’, pp. 15-22.

<sup>115</sup> See for reference the summaries of the case studies provided earlier.

<sup>116</sup> ‘Monkey MindPong Picture-in-Picture’, *Neuralink*, 9 April 2021 <<https://www.youtube.com/watch?v=LgJpYOTll8U>> [accessed 11 April 2021]

<sup>117</sup> Rafael Yuste, Jared Genser, and Stephanie Herrman, ‘It’s Time for Neuro-Rights’, *Horizons: Journal of International Relations and Sustainable Development*, 18 (2021), 154-165.

behavioural autonomy from the influence of state and non-state actors. Britannica encyclopaedia defines human rights as ‘a consequence of inherent human vulnerability’ and a ‘requisite to the possibility of a just society’.<sup>118</sup> Based on this definition, amendments to such rights indicate that either the definition of a just society has changed or a new fundamental vulnerability of humans has been revealed.

A concept like ‘neuro-rights’ highlights that cyberpunk, with its motifs, has the potential to meaningfully contribute to discussions on political subjectivity in the twenty-first century. This point has also been noted by Hollinger, who points out that a salient feature of *Neuromancer* and the cyberpunk genre is the deconstruction of the liberal humanist subject through explorations of technology ‘carried out in terms of a cybernetic breakdown of the classic nature/culture opposition’.<sup>119</sup> This feature sets cyberpunk apart from the broader genre of science fiction that ‘problematizes the oppositions between the natural and the artificial, the human and the machine’, but ‘generally sustains them in such a way that the human remains securely ensconced in its privileged place at the centre of things’.<sup>120</sup> This deconstructive tendency is congenital to cyberpunk. It can be seen in comments by Sterling (one of the founders of the cyberpunk literary movement in the 1980s) describing cyberpunk as a reaction to ‘standard humanist liberalism’.<sup>121</sup> According to Sterling, a result of this deconstruction is cyberpunk becoming ‘post-humanist’ science fiction.<sup>122</sup> Hollinger notes that cyberpunk, and the story of *Neuromancer* in particular, brings about the posthuman condition through the cybernetic ‘interface of the human and the machine’, that

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<sup>118</sup> Burns H. Weston, ‘human rights’, in *Encyclopedia Britannica*, <<https://www.britannica.com/topic/human-rights>> [accessed 15 March 2022]

<sup>119</sup> Hollinger, ‘Cybernetic Deconstructions’, 30.

<sup>120</sup> Hollinger, ‘Cybernetic Deconstructions’, 30.

<sup>121</sup> Bruce Sterling, ‘Letters from Bruce Sterling’, *REM*, 7 (1987), 4-7.

<sup>122</sup> Sterling, ‘Letters from Bruce Sterling’, 4-7.

‘radically decenters the human body, the sacred icon of the essential self, in the same way that the virtual reality of cyberspace works to decenter conventional humanist notions of an unproblematical “real”’.<sup>123</sup>

Hollinger’s assessment that posthumanism is crucial in cyberpunk and the *Sprawl* trilogy is relevant to this thesis in two ways. First, it conceptually highlights the symbiosis of humans and technology, which is necessary for understanding the relevance of cyberpunk today, given the developments in technologies like VR and brain-computer interfaces. Second, it creates a theoretical space to argue for the central importance of transcendental and mystical elements of the *Sprawl* trilogy. This is because, as science fiction author Glenn Grant observes in his discussion on *Neuromancer*, cyberpunk’s ‘preferred method of transcendence is through technology’ that is also ostensibly posthumanist, according to Sterling and Hollinger.<sup>124</sup> For this reason, the following passages explore the relationship between the posthumanist position and the notion of transcendence through technology.

### 3. Cyberpunk and the Posthuman Condition

In this collapse of the future into the present marked by sentient AIs, the Metaverse, and brain-computer interfaces, how can technology’s influence on the world be understood? The aptest theoretical tools available are the transhumanist and posthumanist schools of thought that see the idea of ‘human’ as an inherently unstable and malleable construct susceptible to technologically-induced changes. Exploring this perspective is vital because, as this section will demonstrate,

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<sup>123</sup> Hollinger, ‘Cybernetic Deconstructions’, 33.

<sup>124</sup> Glenn Grant, ‘Transcendence Through Détournement in William Gibson’s *Neuromancer*’, *Science Fiction Studies*, 17 (1990), 41-49.



several contemporary technologists associated with the trans/posthuman perspective are actively involved in manifesting the cyberpunk imaginary.

A clarification needs to be made before exploring the posthuman condition in cyberpunk. Literary scholar Julia Grillmayr has noted that with ‘cyberpunk’s emergence comes the advent of what is loosely called the posthuman, a concept which focuses on the same central themes—the amalgamation of bodies and technology, brain-machine interfaces, and potential habitats for humans in virtual spaces’.<sup>125</sup> The posthuman concept is particularly applicable to the *Sprawl* trilogy. Case, the protagonist of *Neuromancer*, is a cyberspace jockey who accesses cyberspace via an interface called ‘holodeck’. The holodeck allows Case to ‘project his disembodied consciousness into the consensual hallucination that was the matrix’.<sup>126</sup> This is why Case cannot access cyberspace after being infected with a ‘wartime Russian mycotoxin’.<sup>127</sup> Gibson defines the cyberspace matrix as a ‘consensual hallucination’,<sup>128</sup> simultaneously characterising it as a metaphorical space (a la Brain McHale) and a disembodied form of the collective human psyche.<sup>129</sup> Case can go into this disembodied space outside the ‘prison of his own flesh’,<sup>130</sup> and experience ‘bodiless exultation’.<sup>131</sup> In *Mona Lisa Overdrive*, the character of Angie Mitchell has a computer interface weaved into her brain, giving her the capacity to commune with AIs and instantaneously travel across the virtual world just through her thoughts. At the end of the story, Angie elopes with her lover Bobby

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<sup>125</sup> Julia Grillmayr, ‘Posthumanism(s)’, in *Routledge Companion to Cyberpunk Culture*, ed. by Anna McFarlane, Lars Schmeink, and Graham Murphy, pp. 273-281.

<sup>126</sup> Gibson, *Neuromancer*, p. 6.

<sup>127</sup> Gibson, *Neuromancer*, p. 6.

<sup>128</sup> Gibson, *Neuromancer*, p. 59.

<sup>129</sup> McHale, ‘Towards a Poetics of Cyberpunk’, pp. 3-28. Refer to the first section in the Introduction, titled ‘What is Cyberpunk?’.

<sup>130</sup> Gibson, *Neuromancer*, p. 6.

<sup>131</sup> Gibson, *Neuromancer*, p. 6.

Newmark into cyberspace since Bobby's body is made defunct.<sup>132</sup> These are just two out of many manifestations of the posthuman concept that will be discussed throughout the project. However, posthuman characters do not necessarily reflect posthumanism as a theory. The term 'posthuman' is associated with two modalities of thought: posthumanism and transhumanism. Posthumanism is the theoretical foundation and transhumanism is the application of posthumanist theories to cultural praxis.

The relationship between humans and modern machines has been the centre of discussion across various fields since the 1950s. The specific relationship between humans and technology as one between subject and object became the main focus of scholars such as the ethnographer Sherry Turkle and literary theorist N. Katherine Hayles towards the end of the twentieth century. Although the origin of posthumanism can be traced to the heyday of Postmodernism in the 1980s and 1990s, it was consolidated properly in the 90s by theorists like Donna Haraway and Hayles.<sup>133</sup> By the end of the 90s, posthumanism became theoretically grounded in overcoming the boundaries of philosophical humanism and anthropocentric thought.<sup>134</sup> This orientation is elucidated by Hayles, who uses political scientist C.B. Macpherson's work on the theory of 'Possessive Individualism' posited by the English philosopher John Locke (1632-1704). Macpherson states that the possessive quality of Possessive Individualism 'is found in its conception of the individual as essentially the proprietor of his own person or capacities...The human essence is freedom from the will of others,

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<sup>132</sup> Refer to the summaries of the case studies provided in the Introduction.

<sup>133</sup> For further reading look at Donna J. Haraway, 'A Cyborg Manifesto', *Manifestly Haraway*, January 2016, 3-19 <<https://doi.org/10.5749/minnesota/9780816650477.003.0001>>; N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics* (Chicago: University of Chicago Press, 1999).

<sup>134</sup> Francesca Ferrando, 'Posthumanism, Transhumanism, Antihumanism, Metahumanism, and New Materialisms: Differences and Relations', *Existenz*, 8 (2013), 26-32 <<https://www.existenz.us/volumes/Vol.8-2Ferrando.pdf>> [accessed 20 September 2019]

and freedom is a function of possession'.<sup>135</sup> In contrast to Locke's principle that forms one of the core tenets of Western political theory, the posthuman subject is seen as a mosaic made up of heterogeneous components that are processual and constantly evolving. Posthumanist scholar Francesca Ferrando has argued that posthumanism can be defined as post-exclusivism: an empirical philosophy of mediation that attempts to philosophically synthesise existence and meaning in its broadest manifestations without falling to dualisms boring out of the Enlightenment project of modernity.<sup>136</sup>

Hayles has provided the most concise and helpful definition of posthumanism for cyberpunk. Her work is an amalgamation of various perspectives ranging from cybernetics to literary criticism; thus, it provides a useful guide to how posthumanism relates to technology and cyberpunk literature. First, Hayles suggests that posthumanism privileges the flow of information rather than its instantiation in any material substrate, be it organic (human/animal bodies) or synthetic (silicon-based constructions such as computer chips). This substrate independence implies that consciousness as a complex information-processing mechanism developed in organic life forms is merely 'an accident of history' and should not be thought of as 'an inevitability of life'.<sup>137</sup> Second, the body as the house of consciousness is seen as a set of Lego blocks and manipulating it and even modifying it with synthetic prosthesis becomes a continuation of a process which began when animals first evolved. Lastly, posthumanism makes porous the boundaries between dualisms such as organic/synthetic, natural/cultural, and corporeal/virtual obsolete.

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<sup>135</sup> C.B. Macpherson, *The Political Theory of Possessive Individualism: Hobbes to Locke* (Oxford: Oxford University Press, 1962).

<sup>136</sup> As argued in Ferrando, 'Posthumanism, Transhumanism, Antihumanism, Metahumanism, and New Materialisms: Differences and Relations', 26-32.

<sup>137</sup> Hayles, *How We Became Posthuman*, p. 3.

The second point raised by Hayles about the distinction between the body and consciousness is essential for analysing cyberpunk and the *Sprawl* trilogy. In *Neuromancer*, the character of Molly Millions provides a powerful example of this distinction. Her introduction in *Neuromancer* laid the foundation for what was to become of her character throughout the trilogy. When Case first meets Molly in Chiba City, she appears to him as wearing glasses with reflective lenses. However, upon closer inspection, he realises that ‘the glasses were surgically inset, sealing her [eye] sockets... The fingers curled around the fletcher were slender, white, tipped with polished burgundy. The nails looked artificial’.<sup>138</sup> They were. Moments later, ‘she held out her hands, palms up, the white fingers slightly spread, and with a barely audible click, ten double edged, four-centimetre scalpel blades slid from their housings beneath the burgundy nails.’<sup>139</sup> Upon being questioned about the nature of her visitation, Molly replies that she wants to bring Case to her employer and that she does not intend to hurt him. She follows up with the comment, ‘Cept I do hurt people sometimes, Case. I guess it’s just the way I’m wired.’<sup>140</sup> This scene arguably defines her character because by saying ‘it’s just the way I’m wired’ Molly draws a tenuous separation between her self (her mind/soul) and her wiring (her body). This separation between her self and her body is explained in terms of her past experiences. Later in the story, she explains to Case that her cybernetic implants came at a high cost:

Joke, to start with, ’cause once they plant the cutout chip, it seems like free money. Wake up sore, sometimes, but that’s it. Renting the goods, is all. You aren’t in, when it’s all happening. House has software for whatever the customer wants to pay for.<sup>141</sup>

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<sup>138</sup> Gibson, *Neuromancer*, p. 29.

<sup>139</sup> Gibson, *Neuromancer*, p. 30.

<sup>140</sup> Gibson, *Neuromancer*, p. 29.

<sup>141</sup> Gibson, *Neuromancer*, p. 162.

This description of Molly's character reveals an attachment to a concept of self that presumes an interior essence that is true and immutable, or, within the terms of the story, why readers are willing to accept that the characters have a natural or real identity. On the other hand, the changes and augmentations to the characters' bodies are seen as programmed, arbitrary, and meaningless for the identity of characters like Molly. This separation of the mind and body seen in posthuman characters like Molly aligns with the posthumanist perspective as defined by Hayles.

In modern Western philosophy, the separation of mind and body can be dated back to the French philosopher René Descartes (1596-1650 CE), and his famous 'evil demon' thought experiment through which he tried to establish the ontological independence of mind and thought. Vint has pointed out that in science fiction, the tendency to associate subjectivity with an abstract mental self is 'the heritage of Cartesian Dualism', or the mind-body dualism proposed by Descartes.<sup>142</sup> Science fiction scholar Sean McCorry has also used Cartesian concepts like 'res extensa' (physical states) and 'res cogitans' (mentation) to analyse embodiment issues in *Neuromancer*.<sup>143</sup> Following is an example of how this is possible. In his *Meditations on First Philosophy*, Descartes argues that the fundamental aspect of consciousness which cannot be deceived is the act of thinking. Therefore, the proof of one's existence rests on the act of thinking, which characterises humans as primarily thinking beings. The influence of Cartesian dualism in the *Sprawl* trilogy can be understood through a telling statement from Descartes. He argues:

There is a great difference between mind and body, inasmuch as body is by nature always divisible, and the mind is entirely indivisible...When I consider the mind, that is to say, myself inasmuch as I am only a thinking thing, I cannot distinguish in myself any parts...

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<sup>142</sup> Sherryl Vint, *Bodies of Tomorrow: Technology, Subjectivity, and Science Fiction* (Toronto: University of Toronto Press, 2007), p. 6.

<sup>143</sup> Seán McCorry, 'Animality', in *Routledge Companion to Cyberpunk Culture*, ed. by Anna McFarlane, Lars Schmeink, and Graham Murphy, pp. 317-325.

Although the whole mind seems to be united to the whole body, yet if a foot, or an arm, or some other part, is separated from my body, I am aware that nothing has been taken away from my mind.<sup>144</sup>

For Descartes, the body is divisible and the mind indivisible. Parts of the body can be removed and even replaced, causing no discontinuity in the sense of self since it is tied to the psyche and not the body. In *Count Zero*, the first few passages introduce Turner, who fits the profile of a Cartesian subject. The story opens as the body of Turner (a corporate mercenary like Molly) is destroyed by a bomb implanted in a dog cyborg. The second paragraph describes how Turner's body was reconstituted by surgeons employed by his agents:

He was in Singapore an hour after the explosion. Most of him, anyway. The Dutch surgeon liked to joke about that, how an unspecified percentage of Turner hadn't made it out of Palam International on that first flight, and had to spend the night there in a shed, in a support vat. It took the Dutchman and his team three months to put Turner together again. They cloned a square metre of skin for him, grew it on slabs of collagen and shark-cartilage polysaccharides. They bought eyes and genitals on the open market. The eyes were green.<sup>145</sup>

The character of Turner is faithful to the mind-body dualism proposed by Descartes as, even after being blown up by a bomb, Turner can retain his sense of self (pre-blast). Even if different parts of his body are destroyed and replaced, his identity remains stable. Such a portrayal supports the argument, which will be elaborated in Chapters Two and Three, that posthuman characters in the *Sprawl* trilogy reveal the influence of Cartesian dualism on cyberpunk and posthumanism. It further

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<sup>144</sup> René Descartes, 'Meditations of First Philosophy', trans. by Elizabeth S. Haldane, *Internet Encyclopaedia of Philosophy*, 1996 <<https://selfpace.uconn.edu/class/percep/DescartesMeditations.pdf>> [accessed 21 September 2019]

<sup>145</sup> Gibson, *Count Zero*, p. 1.

suggests that technologies inspired by cyberpunk motifs, such as the new Metaverse and Neuralink, might work under the same Cartesian principles of separating the mind from the body. However, given that these technologies are part of scientific praxis rather than theory, they are closer to the transhumanist ethos than posthumanist philosophy.

As argued previously, the relevance of cyberpunk and the *Sprawl* trilogy can only be understood by analysing of how the genre reflects current techno-cultural practices and its mystical elements. While posthumanism is useful for the former, transhumanism is better oriented for the latter because, as Grillmayr notes, ‘transhumanism is all about transcendence.’<sup>146</sup> The transhumanist school emerged in 1998 when an international group of scholars and scientists gathered to write The Transhumanist Declaration. They argued that scientific fields like nanotechnology, biotechnology, information technology, and cognitive science (referred to as NBIC) could allow humanity to transcend its biological limitations such as ‘ageing, cognitive shortcomings, involuntary suffering, and our confinement to planet Earth’.<sup>147</sup> Transhumanists believe that only technology can ensure the ‘well-being of all sentience, including humans, non-human animals, and any future artificial intellects, modified life forms, or other intelligences to which technological and scientific advance may give rise’.<sup>148</sup> Some of the most famous advocates of transhumanism include Ray Kurzweil (scientist and director of engineering at Google), Nick Bostrom (founding director of Future of Humanity Institute and professor at Oxford University), and Elon Musk (founder of Tesla, SpaceX, owner of Neuralink, and self-proclaimed future ruler of Mars).<sup>149</sup>

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<sup>146</sup> Grillmayr, ‘Posthumanism(s)’, p. 273.

<sup>147</sup> Humanity+ <<https://humanityplus.org/philosophy/transhumanist-declaration/>> [accessed 29 August 2019]

<sup>148</sup> Humanity+ <<https://humanityplus.org/philosophy/transhumanist-declaration/>> [accessed 29 August 2019]

<sup>149</sup> As an interesting aside, I want to point out that the sub-programs underlying the supposedly sentient LaMDA AI at Google were the creation of Ray Kurzweil. This is mentioned by Blake Lemoine in ‘515: Blake Lemoine’, 2022.

Transhumanism is distinct from posthumanism because it uses European Enlightenment arguments to understand cognition and consciousness with a utopian view of the future. Technologist and futurist Max More specialises in life-extension technologies and has argued that transhumanism ‘continues to champion the core of the Enlightenment ideas and ideals—rationality and scientific method, individual rights, the possibility and desirability of progress’.<sup>150</sup> The transhumanist ethos is analysed in Chapter Three, and the current discussion will focus on its tendency towards millenarian spiritualism, which can be seen in the work of Kurzweil. He has stated that technology will provide humans with immortality by allowing consciousness to be transferred to cyberspace, a goal that is shared by the character of Josef Virek in *Count Zero*.<sup>151</sup> Kurzweil, along with the science fiction author Vernor Vinge, is a proponent of the technological ‘singularity’. Typically, technological singularity refers to the speculation that when intelligent machines can make more intelligent machines, the process will cause an explosion of technological development that far outpaces human ability to control it. Furthermore, the singularity moment will mark the beginning of the posthuman era. Science fiction scholar Gerry Canavan has observed that ‘such a posthuman era should be immediately clear to any reader of cyberpunk...one needs think only the sinister artificial intelligence (AI) Wintermute in William Gibson’s *Neuromancer*’.<sup>152</sup> As argued earlier, analysing transhumanist notions is necessary because they have mystical elements that correspond to the spiritual subtext of the *Sprawl* trilogy.

Such mystical elements can be read in Kurzweil’s *Singularity is Near: When Humans Transcend Biology* (2005), where he introduces a sectarian denomination for the believers of the technological singularity. Kurzweil’s tone sounds non-secular when he states, ‘To truly understand

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<sup>150</sup> Max More, ‘The Philosophy of Transhumanism’, in *The Transhumanist Reader: Classical and Contemporary Essays on the Science, Technology, and the Philosophy of the Human Future*, ed. by Max More and Natasha Vita-More (John Wiley & Sons, 2013), pp. 3-17.

<sup>151</sup> Refer to the summaries of the case studies provided earlier.

<sup>152</sup> Gerry Canavan, ‘Charles Stross: *Accelerando* (Case Study)’, in *Routledge Companion to Cyberpunk Culture*, ed. by Anna McFarlane, Lars Schmeink, and Graham Murphy, pp. 56-63 (p. 56).



it inherently changes one's view of life in general and one's future. I regard someone who understands the Singularity and who has reflected on its implications for her or her own life as a 'singularitarian'.<sup>153</sup> He further describes the singularity in quasi-spiritual terms by stating that it will 'allow us to transcend these limitations of our biological bodies and brains. We will gain power over our fates. Our mortality will be in our own hands. We will be able to live as long as we want'.<sup>154</sup> This spiritual perspective has not gone unnoticed in academia. Computer scientist and philosopher of mind Bernardo Kastrup has referred to the singularity hypothesis as 'rapture for the nerds',<sup>155</sup> whereas religious studies scholar Diana Walsh Pasulka has described the spiritual undertones in *The Singularity is Near* as 'palpable'.<sup>156</sup> The curious intersection of spirituality and technology in transhumanist thought makes it well-suited for analysing cyberpunk texts like the *Sprawl* trilogy. With this orientation, this thesis will analyse the case studies through real-world technological practices that reveal our cyberpunk reality along with Gibson's techno-spirituality that raises questions about the direction in which contemporary technology is pushing humanity.

The following chapters focus on two salient metaphors of cyberpunk (as stated by Sterling) and the *Sprawl* trilogy: cyberspace and cyborg bodies.<sup>157</sup> Chapter One, titled 'Transcending Space: Emergence of the Cyberspace Metaphor', will explore cyberspace and the historical and cultural factors that led to its emergence. The focus will be on the concepts of human-machine equivalence and substrate-independent intelligence. The chapter will start by covering major elements such as the Macy Conferences on Cybernetics that created the cybernetic metaphors later employed in

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<sup>153</sup> Ray Kurzweil, *The Singularity is Near: When Humans Transcend Biology* (New York, Ny: Viking, 2005), p. 24.

<sup>154</sup> Kurzweil, *The Singularity is Near*, pp. 25-26.

<sup>155</sup> Bernardo Kastrup, 'Bernardo Kastrup ^ John Vervaeke [Theolocution #2 on Mind Uploading, Shadow Integration, and Love]', *Theories of Everything with Kurt Jaimungal*, 24 May 2021 <<https://www.youtube.com/watch?v=zw6BFDJ765w>> [accessed 30 May 2022]

<sup>156</sup> Diana Pasulka, 'Diana Pasulka on Religion, Atheism, Heidegger, and the Dark Night of the Soul', *Theories of Everything with Kurt Jaimungal*, 19 May 2022 <<https://www.youtube.com/watch?v=E5MuTHUbMUs>> [accessed 30 May 2022]

<sup>157</sup> Sterling, 'Preface', pp. 15-22.

cyberpunk. Covering the Macy Conferences is vital because, since the work of Hayles, they are seen as the first historical and cultural chapter in cyberpunk history. This discussion will be followed by the exploration of how the focus on cybernetics has led to the omission of a critical spiritual concept (that of technologically induced collective consciousness) introduced by the French Jesuit and palaeontologist Pierre Teilhard de Chardin (1881-1955) that predated the Macy Conferences. The analysis of Chardin's place in Gibson's *Sprawl* trilogy is placed in Chapter Three, and Chapter One will focus on introducing his work and proposing a new timeline of events culminating in the advent of cyberpunk. Subsequently, the discussion will pivot to the countercultural movements in America in the 1960s that saw technology as possessing a spiritual and millenarian potential. The focus will be on figures like Marshall McLuhan, Stewart Brand, enterprises such as the Whole Earth Catalog, and the concomitant commercialisation of personal computing. My argument is that the spread of ubiquitous computing created a platform where cybernetics, cyberpunk metaphors, and the spiritual vision of Chardin could be embodied.

Chapter Two, titled 'Transcending Body: Cultural Autopoiesis in the *Sprawl* trilogy', will use Gibson's *Sprawl* trilogy to illustrate that cyberpunk represents the dominant cultural paradigm of the 21<sup>st</sup> century. The focus will be on using the cyborg metaphor to explore human and animal bodies at the nexus of capitalist enterprise and biotechnology. I argue that technology is rapidly making the concept of 'nature' and 'natural human' obsolete, consequently making embodiment the product of material and discursive practices. This exploration will use the *Sprawl* trilogy, where techno-capitalism acquires an autopoietic character and causes an inversion in the relationship between consumers and producers. Concepts of identity and embodiment are significant for their effects on the human species and the relationship between humanity and the natural world. Cyberpunk provides a privileged site to understand this point of inversion where capitalism's cultural ethos and market forces become producers of embodiment. This chapter will show that

embodied subjectivity is critical in articulating the ethical implications of technologies of the body. Furthermore, a secondary argument will be that subversion of the body in the case studies follows the techno-spiritual teleology laid out by Chardin.

Finally, Chapter Three, titled ‘Transcending Mind: Noosphere and Cosmic Evolution’, will extend the argument that cyberpunk highlights the subversion of physicality, embodiment, and humanity’s relationship with nature as well as animal bodies in transhumanist philosophy and contemporary biotechnological innovations. This argument will be made using characters from the *Sprawl* trilogy to suggest that by rendering embodied experiences as modifiable, technology pushes subjectivity into the non-physical realm of mind and consciousness. I will argue that the subversion of individuality and embodiment can be read in Gibson’s characters by placing them in the evolutionary model proposed by Chardin. The concept of ‘noosphere’ (collective consciousness), as conceptualised by Chardin, will be applied to transhuman characters like Case and Josef Virek, posthuman entities like Wintermute and Neuromancer, and finally to animal bodies.

# Chapter One

## Transcending Space: Emergence of the Cyberspace

## Metaphor and Technological Utopianism in the

## Twentieth century

### Introduction

In the previous chapter, I introduced the cyberpunk motifs of cyberspace and cyborgs presented in the *Sprawl* trilogy as the focus of this project. This chapter aims to answer three questions regarding the *Sprawl* trilogy: What is cyberspace? How is it a metaphor? As a metaphor, how has cyberspace influenced and been influenced by cultural formation in the West?<sup>158</sup> It was previously argued that to understand the central importance of the cyberpunk genre, which is said to inform contemporary ‘quodidian reality’, it is necessary to do two things.<sup>159</sup> First, juxtapose the techno-spiritual nuances of Gibson’s cyberpunk imaginary with real-world technologies to acquire new perspectives on cultural and scientific practices. This step is crucial because the metaphorical nature of cyberspace has important implications in the real world as it ascribes to digital technology the potential to drastically change human experiences and determine the future of the planet. Second, extract and explore under-appreciated mystical nuances of these metaphors from the *Sprawl* trilogy, which is referred to as the cyberpunk-limit text.<sup>160</sup> In applying this approach, this chapter will show that

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<sup>158</sup> The connection between the cyberpunk genre as a whole and cultural formation in twentieth-century America has been highlighted in Thomas Foster, *The Souls of Cyberfolk: Posthumanism as Vernacular Theory* (Minneapolis: University of Minnesota Press, 2005), p. xvi.

<sup>159</sup> Anna McFarlane, Grahan J. Murphy, and Lars Schmeink, ‘Cyberpunk as Cultural Formation’, pp. 21-22.

<sup>160</sup> Hollinger, ‘Cybernetic Deconstructions: Cyberpunk and Postmodernism’, 30.

cyberspace is a space for potential spiritual evolution in the *Sprawl* trilogy in addition to being a set of communication or information technologies. This implication will be further explored in Chapters Two and Three, and the current chapter will focus on cultural preconditions that led to the transfiguration of technology into a spiritual medium.

The chapter is divided into four sections that address the aforementioned questions. The following section, titled ‘Cybernetics and the Instrumental Interpretation of Cyberspace’, will describe cyberspace as it is presented in the *Sprawl* trilogy and highlight how cyberspace dissolves the binary between materiality and non-materiality in the case studies. Subsequently, the metaphorical nature of cyberspace will be located in the metaphors and analogies developed during the Macy Conferences on Cybernetics that took place in the first half of the twentieth century in America. This discussion will be followed by an analysis of the different interpretations of cyberspace—based on cybernetics—by scholars like Gomel, who see cyberpunk as a dead genre and their insufficiencies. The rationale presented in this chapter is that cyberspace is a metaphor in the *Sprawl* that refers to a larger category that includes technology and spirituality. Therefore, separation needs to be made between the case studies and their interpretations that ignore this metaphorical quality. This separation will serve as the foundation for the following chapters that discuss the relevancy of cyberpunk in the twenty-first century.

## 1. Cybernetics and the Instrumental Interpretation of Cyberspace

In cyberpunk, the cyberspace metaphor refers to an information space (often described visually) in which data is configured to give the operator the illusion of control, movement, and access to information. As a result, the user can be linked with many other users via an interconnected

interface. In *Neuromancer*, Gibson puts his spin on the concept of cyberspace when he describes it as:

A consensual hallucination experienced daily by billions of legitimate of operators, in every nation, by children being taught mathematical concepts...A graphic representation of data abstracted from the bank of every computer in the human system. Unthinkable complexity. Lines of light ranged in the non space of the mind, clusters and constellations of data. Like city lights receding.<sup>161</sup>

The above description aligns with the concept of cyberspace being an information space while emphasising the perceptual or visual experience of interacting with cyberspace through phrases like ‘lines of light’, ‘constellations of data’, and similes such as ‘like city lights’. The emphasis on visuality pushes cyberspace in the *Sprawl* away from being a desktop-computer experience and closer to virtual reality, as it represents the ultimate extension of this movement towards a pure information space populated by a range of cybernetic agents or data constructs.<sup>162</sup> While the conventional interpretation of cyberspace refers to the existing international networks of computers,<sup>163</sup> the uniqueness of Gibson’s presentation of the concept has led Murphy to refer to it as ‘Gibsonian cyberspace’.<sup>164</sup>

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<sup>161</sup> Gibson, *Neuromancer*, p. 59.

<sup>162</sup> The term ‘virtual reality’ was first coined by Jaron Lanier, the former head of VPL Research Inc. in California, which has been defined as a real or simulated environment in which the perceiver experiences telepresence.

<sup>163</sup> In contemporary terminology this could be considered similar to the Internet of Things—a seemingly invisible network of interconnections between different platforms like communication technologies, satellites, and private enterprises.

<sup>164</sup> Murphy, ‘Cyberpunk and Post-Cyberpunk’, pp. 519-536.

Gibsonian cyberspace is special because it has ontological weight and an internal spatial logic. It acts as a virtual approximation of dense urban spaces where cyber jockeys live, making it geographic and real. Gibson emphasises the realness of cyberspace in *Neuromancer* by making urban infrastructure and its digital representation ontologically different but operationally identical. For instance, in *Neuromancer*, Gibson describes the city of Ninsei as ‘a field of data, the way the matrix once reminded him of proteins linking to distinguish cell specialities’.<sup>165</sup> By employing deliberately dizzying language, or what Hayles calls ‘metaphorical slippages’, that conflates geography with cyberspace and biology with data constructs, Gibson seems to suggest that any ontological separation between the physical and digital is tenuous at best.<sup>166</sup> In this techno-urban landscape, the story states that ‘you could throw yourself into a high speed drift and skid...and all around you the dance of biz, information interacting, data made flesh in the mazes of the black market’.<sup>167</sup> Gibson’s use of metaphors creates conceptual and visual overlaps between physical flesh and digital data by alluding to the city, the body, and cyberspace as sharing the same underlying structure, which may be incarnated in buildings, proteins, or information bits while remaining invariant across ontological levels. Observing this feature of Gibson’s writing style, Hayles comments that in the *Sprawl* trilogy, ‘information is the putative origin, physicality the derivative manifestation.’<sup>168</sup> The inextricable linkages drawn between spatiality, urban structures, and digital information, along with the unabashed disavowal of known laws of physics, indicate that digital information and digitally created spaces, as argued by urban geographer Nigel Thrift, ‘signal new spatial logics which respect none of the apparently Newtonian constructs of space.’<sup>169</sup>

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<sup>165</sup> Gibson, *Neuromancer*, p. 19.

<sup>166</sup> Hayles, ‘Virtual Bodies and Flickering Signifiers’, 82.

<sup>167</sup> Gibson, *Neuromancer*, p. 19.

<sup>168</sup> Hayles, ‘Virtual Bodies and Flickering Signifiers’, 82.

<sup>169</sup> Nigel Thrift, ‘New Urban Eras and Old Technological Fears: Reconfiguring the Goodwill of Electronic Things’, *Urban Studies*, 33 (1996), 1463-1494.

The ability of digital information to move in material and non-material substrates requires further exploration. This conception of digital information emerged in cybernetics during the first half of the twentieth century.<sup>170</sup> In an essay on Neal Stephenson's *Cryptonomicon* (1999), Youngquist argues that 'cyberfiction would be impossible without the emergence during World War II of the science of cybernetics'.<sup>171</sup> He further states that cybernetic metaphors led the inner space of a character's mind in fiction to be transformed into cyberspace, a 'weird third space, neither outer nor inner, wherein communications itself sets new terms for life and death'.<sup>172</sup> Given the ostensible importance of cybernetics for the cyberpunk genre, the following passages will focus on cybernetics and Information Theory and their evolution from philosophical and scientific principles to cultural concepts. Attention will be given to Claude Shannon's Information Theory and Norbert Wiener's theories on communication and social control. Without these concepts, the construction of the cyberspace metaphor would not have taken on spatial properties. The world of the *Sprawl* trilogy, where, according to Hayles, 'flesh is data incarnate,' would not be possible without information acting as a bridge between human minds and the alternative dimension of cyberspace.<sup>173</sup> As Youngquist notes about the field of cybernetics, 'Cyberpunk is a summation, not a departure: it consolidates a line of development that cybernetics makes possible in postwar science fiction.'<sup>174</sup>

The field of cybernetics emerged from the proceedings of the Macy Conferences on Cybernetics sponsored by the Josiah Macy Jr. Foundation (which primarily, to this day, deals with promoting advancement in the medical sciences) between 1946 and 1953. The conferences laid the foundation for cybernetics when the Western world was transitioning from the Second World War to the Cold War. The participants hailed from fields such as mathematics, psychiatry, anthropology,

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<sup>170</sup> The first known use of the term 'cybernetics' was in an 1834 book by pioneer of electrical studies André-Marie Ampère.

<sup>171</sup> Youngquist, 'Cyberpunk, War, and Money', 319-347.

<sup>172</sup> Youngquist, 'Cyberpunk, War, and Money', 329.

<sup>173</sup> Hayles, 'Virtual Bodies and Flickering Signifiers', 82.

<sup>174</sup> Youngquist, 'Cyberpunk, War, and Money', 328.



sociology, and linguistics. The conferences were moderated by the American neurophysiologist Warren S. McCulloch. They followed principles of interdisciplinary research with the ‘desire to integrate concepts that had hitherto been kept far apart from one another’.<sup>175</sup> The objective was to create ‘a single theory that could then claim validity for living organisms as well as machines, for economic as well as psychological processes, and for sociological as well as aesthetic phenomenon’.<sup>176</sup> Rather than using individual concepts and theories, the participants tried to develop models that could be employed across disciplines and provide a medium of communication. Two important topics of discussion were: the formulation of information as an entity different from physical matter and the development of a language and methodology to translate the flow of information between humans and machines.

Information theory, as articulated by mathematician Claude Shannon, regarded information as an entity beyond matter and energy that can be transmitted. This transmission took place in biological systems as well as in electric systems.<sup>177</sup> Hayles has argued that this conception makes information a ‘probability function with no dimensions, no materiality, and no connection to meaning’.<sup>178</sup> Shannon argues that information and meaning are interlinked but not synonymous. Neuroscientist Donald M. MacKay, during the conferences, used a non-digital approach to define information as ‘that which logically enables the receiver to make or add to a representation of that which is the case, or is believed or alleged to be the case’.<sup>179</sup> This definition shares much with the preceding one, but MacKay’s argument refutes the equivalence between the amount of information

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<sup>175</sup> Letter from Frank Fremont-Smith to Warren McCulloch, 8 February 1946. Cited in Claus Pias, ‘The Age of Cybernetics’, in *Cybernetics: The Macy Conferences (1946-1953) Complete Transactions*, ed. by Claus Pias (Zurich and Berlin: diaphanes, 2003 and 2016), p. 11.

<sup>176</sup> Pias, ‘The Age of Cybernetics’, p. 15.

<sup>177</sup> Claude E. Shannon, ‘The Redundancy of English’, in *Cybernetics: The Macy Conferences (1946-1952) Complete Transactions*, First edn, ed. by Claus Pias and Joseph Vogl, pp. 246-271.

<sup>178</sup> Hayles, *How We Became Posthuman*, pp. 51-52.

<sup>179</sup> Donald M. MacKay, ‘In Search of Basic Symbols’, in *Cybernetics: The Macy Conferences (1946-1952) Complete Transactions*, First edn, ed. by Claus Pias and Joseph Vogl, p. 480.

and the meaning it conveys. In other words, the same message can mean different things in different contexts. In Shannon's theory, information is stable and uniform in itself so that it can be transferred through different substrates without degeneration. MacKay, however, rescued the meaning by emphasising the importance of 'structural information', or context.<sup>180</sup> This structure, according to MacKay, informs the observer on how to interpret any specific information, thereby becoming a means of meta-communication.<sup>181</sup>

Throughout the Macy Conferences, Shannon's information theory was embedded with the concept of 'recursive feedback' formulated by Norbert Wiener, a cybernetician who has been referred to as 'the dark godfather of cyberpunk'.<sup>182</sup> Wiener developed a theory of communication and control in his book, *The Human Use of Human Beings* (1950). He used the concept of cybernetics to elaborate on the existing theory regarding the transmission of messages. He argued that people send messages within a system to control their surrounding environment. Wiener compared humans to machines to illustrate that human communication is similar to how machines function when given the order to complete a task. Additionally, Wiener suggested that humans operate in a machine-like manner based on information processing and the constant desire to control the environment. According to Wiener:

Society can only be understood through a study of the messages and communication facilities which belong to it; and that in the future development of these messages and communication facilities, messages between man and machines, between machines and man, and between machine and machine, are destined to play an ever increasing part.<sup>183</sup>

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<sup>180</sup> MacKay, 'In Search of Basic Symbols', p. 483.

<sup>181</sup> Hayles, *How We Became Posthuman*, p. 55.

<sup>182</sup> Youngquist, 'Cyberpunk, War, and Money', 324.

<sup>183</sup> Norbert Wiener, *The Human Use of Human Beings: Cybernetics and Society* (London: Free Association Books, 1989), p. 16.

The primary function of communication, which Wiener defined in his theory as the processing of information, is to control the environment in which one lives. According to him, 'information is a name for the content of what is exchanged with the outer world as we adjust to it, and make our adjustment felt upon it.'<sup>184</sup> The desires and aspirations of individuals and the demands of a society can be seen as emanating from a lack of information and control. Wiener saw a democratic society as a system with an information gap which constantly needed to be filled with new information through media and public discourse. After the war, Wiener started developing a vision in which technology would be used in a human-centric rather than a machine-centric way. He further argued that society as a whole, and its constituent parts functioned much like machines. Society could be seen as a system seeking self-regulation through processing messages. In Wiener's analogy, for instance, public information systems such as the media served as servomechanisms.<sup>185</sup>

Wiener's theory conjured up a picture in which society exhibited creativity through humans and machines collaborating in a dynamic system. In a paper written in 1943, Wiener, along with American computer engineer Julian Bigelow and Mexican physiologist Arturo Rosenblueth argued that given the similarities between the behavioural mechanics of humans and machines, they still differ in terms of their constitution. Science and technology studies scholar Geoffrey Bowker summarises their argument as follows:

Organisms were characterised as colloidal and protein (made up of large, anisotropic molecules). Machines could be described as being made of a great number of simple molecules. Effects in an organism were created by massive iterations in space: compare the 6.5 million cones in an eye and the single cone in a television set. Machines created their effects by iteration in time: the television's spatial singularity was made up for by the speed

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<sup>184</sup> Wiener, *The Human Use of Human Beings*, p. 17.

<sup>185</sup> In engineering, servomechanisms refer to machines that use negative feedback to correct themselves.

with which the screen was refreshed, and, in general, machines could operate at frequencies of up to one million cycles per second. Thus what made it possible to say that machines and organisms were behaviourally and in information terms ‘the same’ was to say that space for an organism was time for a machine.<sup>186</sup>

In the late 1940s, Wiener’s published works, which included *Cybernetics; or, Control and Communication in the Animal and the Machine* (1948) and the previously mentioned *The Human Use of Human Beings*, borrowed substantially from Shannon’s information theory discussed previously.<sup>187</sup> They defined messages (in electronic signals and verbal speech) as patterns of information which maintained their integrity to varying degrees against entropic processes.<sup>188</sup> Concerning verbal speech and communication, the entropy of information was seen as a result of human subjectivity and various other factors such as language, social context of the communicating individuals, personal relationships and so forth. Wiener saw information as a thread connecting the functional processes of machines as well as humans, thus preempting the symbolic relationship between humans and machines that would emerge in the cyberpunk genre decades later.

By making information substrate-independent, cybernetics brought humans and machines to the same ontological plane and levels the playing field. It is due to this levelling that, in cyberpunk narratives, human bodies can exist symbiotically with technology. One specific way in which cybernetics has informed cyberpunk is through the concept of flattening. The use of flattening is similar to the editing techniques involved in Japanese animation. The idea of flatness is a useful

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<sup>186</sup> Geof Bowker, ‘How to Be Universal: Some Cybernetic Strategies, 1943-70’, *Social Studies of Science*, 23 (1993), 107-127 <<https://www.jstor.org/stable/285691>> [accessed 15 August 2019]

<sup>187</sup> It is not clear how much of Shannon’s communication theory owed to the work of Wiener or vice versa, but their interactions have been noted by scholars. See: Flo Conway and Jim Siegelman, ‘Birth of a Science’, in *Dark Hero of the Information Age: In Search of Norbert Wiener, the Father of Cybernetics* (New York: Basic Books, 2006), pp. 103-128.

<sup>188</sup> One of many metaphors used by Wiener throughout this work borrowed from other disciplines. ‘Entropy’ in this context just means a breakdown of organisation, both in messages and in society.

perspective to read the influence of Japanese visual culture on the *Sprawl* trilogy.<sup>189</sup> Thomas Lamarre, a scholar of Japanese media, has argued that Japanese anime editing techniques present ‘flattened, dehierarchized [sic], and relativized flow of images’ in a rapid fashion.<sup>190</sup> Consequently, ‘structures of exploded projection emerge to place a material limit on dispersion and flatness, generating temporary fields of potential depth associated with lines of sight.’<sup>191</sup> Lamarre’s idea of flattening applies to spatiality and also to Gibson’s characters.

The bodies of cyborg characters like Molly Millions are caught up in the complex grid of power and viscerally assimilated ‘to the machine, the system, the parent organism’.<sup>192</sup> The sense of self experienced by cyborgs like Molly is bound to their physicality and fields of digitally distributed information circulating within a hyper-capitalist world. Both virtual and physical realms are ruled by the same networks of agents, whether they be criminals, corporations, or algorithms. The virtual and physical network is constructed as a nebulous labyrinth of legal, quasi-legal, and illegal domains. It involves the manipulation of power structures by individuals and the backlash of the matrix, whether electronic or social.

Analysing global techno-capitalist power structures in the narrative of the *Sprawl*, Gomel (who has stated that cyberpunk is dead) has argued that virtual and physical spaces in cyberpunk are informed by the French postmodern philosopher Jean Baudrillard’s notion of simulacra: endlessly proliferating copies that supplant the original and put an end to traditional notions of truth and

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<sup>189</sup> Japanese media studies scholar Hiroki Azuma has used the concept of ‘hyperflatness’ to analyse postmodernist narrative consumption in Japan which, I suggest, can be useful for cyberpunk analysis. See: Hiroki Azuma, *Otaku: Japan’s Database Animals* (Minneapolis and London: University of Minnesota Press, 2001), pp. 96-116.

<sup>190</sup> Thomas Lamarre, *The Anime Machine: A Media Theory of Animation* (Minneapolis and London: University of Minnesota Press, 2009), p. 108.

<sup>191</sup> Lamarre, *The Anime Machine*, p. 134.

<sup>192</sup> Gibson, *Neuromancer*, p. 225.

authenticity, leading to the emergence of a ‘desert of the real’.<sup>193</sup> Baudrillard developed this theory to explain the disappearance of economic exchange value of consumer goods in favour of symbolic value in developed capitalist societies. He sees the simulacrum as a tragic dehumanising development that leads to ‘the impossibility of rediscovering an absolute level of the real’.<sup>194</sup> Instead, Gomel argues, works like *Neuromancer* tease ‘the disappearance of the real in their stride: the difference between the original and the simulacra are simply not important’.<sup>195</sup> Noting the flattening of physical space and cyberspace, Gomel refers to various manifestations of and within cyberspace as simulacra of physical reality.

Gomel does not offer an example from the text to support her argument. However, the simulacra perspective is not exclusive to her. Literary scholar Cynthia Davidson has also used Baudrillard’s concept as an interpretative framework for *Neuromancer*, focusing on the character of Peter Riviera. The latter is a prodigious artist who uses holographic technology to turn his imagination into effective and lurid representations of reality. For example, in Chapter 11 of *Neuromancer*, Riviera creates a holographic double of Molly Millions for his perverse enjoyment while performing a cabaret act. He uses the hologram to present a sadistic fantasy regarding a woman who, during sexual intercourse, revolts against her creator and brutalises him with razor blades fitted under her nails. During his presentation, Riviera says:

‘I’d been alone in the room, always. I don’t know when I first began to dream of her...I couldn’t quite hold her, hold her in my mind. But I wanted to hold her, hold her and more...I

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<sup>193</sup> Jean Baudrillard, *Jean Baudrillard: Selected Writings*, ed. by Mark Poster (Cambridge, UK: Polity, 1988), p. 177. For Gomel’s interpretation of Baudrillard see: Gomel, ‘The Cyberworld is (not) Flat’, p. 357.

<sup>194</sup> Jean Baudrillard, *Jean Baudrillard: Selected Writings*, p. 177. For the economic orientation of Baudrillard’s theory see: Jean Baudrillard, ‘For a critique if the Political Economy of the Sign’, in *Jean Baudrillard: Selected Writings*, ed. by Mark Poster (Cambridge, UK: Polity, 1988), pp. 57-97.

<sup>195</sup> Gomel, ‘The Cyberworld is (not) Flat’, p. 357.

decided that if I could visualise some part of her, only a small part, if I could see that part perfectly, in the most perfect detail...'<sup>196</sup>

However, the details were not perfect. Case is present at the performance and flabbergasted by the display but notes that “‘Molly’s body...wasn’t Molly, it was Molly as Riviera imagined her. The breasts were wrong, the nipples larger, too dark’”.<sup>197</sup> This scene echoes Baudrillard’s concept of simulacra as it refers to images, representations, or copies of objects that either had no original or no longer have an original.

Baudrillard describes the creation of simulacra as involving four stages. In the first stage, the image or representation is ‘the reflection of a basic reality’.<sup>198</sup> This occurs in the above scene when Riviera’s doll first appears as the perfect reflection of Molly. In the second stage, the image/representation ‘masks and perverts a basic reality’,<sup>199</sup> as when ‘Case stared, his mouth wide open’ at the hologram, not realising that it was not Molly. As described by Baudrillard, the third stage ‘masks the absence of a basic reality’, where the representation pretends to be real.<sup>200</sup> The fourth and final stage happens when the representation ‘bears no relation to any reality whatever: it is its own pure simulacrum’.<sup>201</sup> The last stage corresponds with the murderous crescendo of Riviera’s performance when the simulation of Molly brutalises him with her razor nails ‘with a languorous, dreamlike deliberation’.<sup>202</sup> Davidson uses this scene to argue that visual machinations created by

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<sup>196</sup> Gibson, *Neuromancer*, pp. 152-153.

<sup>197</sup> Gibson, *Neuromancer*, pp. 153-154.

<sup>198</sup> Baudrillard, *Jean Baudrillard: Selected Writings*, p. 170.

<sup>199</sup> Baudrillard, *Jean Baudrillard: Selected Writings*, p. 170.

<sup>200</sup> Baudrillard, *Jean Baudrillard: Selected Writings*, p. 170.

<sup>201</sup> For Baudrillard’s explanation of the four stages see: Baudrillard, *Jean Baudrillard: Selected Writings*, pp. 119-148.

<sup>202</sup> Gibson, *Neuromancer*, p. 154.

Riviera can be seen as simulacra since, while taking inspiration from reality, they are independent perversions of it.<sup>203</sup> The simulacra perspective applies to Riviera's character in his ability to create representations of reality. However, it should be noted that the above scene takes place in a cabaret club, not cyberspace. While it is possible to talk about simulacra in *Neuromancer's* plot, a separation must be made between holograms and virtual constructs in cyberspace as the former has more to do with visual perception than with cyberspace. Such a simulacrum bears more resemblance with an optical illusion disguised as a magician's trick than with the ontology of cyberspace.<sup>204</sup>

In *Neuromancer*, there is another useful example to understand the simulacra perspective. At various points in the story, when the protagonist Case enters cyberspace, Wintermute (a self-aware AI and the primary antagonist) appears to him in forms that approximate people from Case's past to hide the fact that it is an algorithm. When presented as itself, the AI can be viewed as algorithmic and machinic. It needs to hide the fact that it is a mere machine and nothing but pure function. Wintermute is aware of its limitations, as in the scene where it unsuccessfully attempts to communicate with Case through a construct of Linda Lee (Case's deceased lover) and Julius Deane, an underworld operator known to Case. At the moment when Case figures out the truth behind the virtual constructs and confronts Wintermute, the following dialogue unfolds:

'Don't. [...] You're right. About what this all is. What I am. But there are certain logics to be honoured. If you use that [gun], you'll see a lot of brains and blood, and it would take me several hours—your subjective time—to effect another spokesperson. This set isn't easy for

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<sup>203</sup> Cynthia Davidson, 'Riviera's Golem, Haraway's Cyborg: Reading "Neuromancer" as Baudrillard's Simulation of Crisis', *Science Fiction Studies*, 23 (1996), 188-198.

<sup>204</sup> For an extended analysis of simulacra and magic in *Neuromancer* see: Davidson, 'Riviera's golem, Haraway's Cyborg', 188-198.



me to maintain. Oh, and I'm sorry about Linda, in the arcade. I was hoping to speak through her, but I'm generating all this out of your memories, and the emotional charge... Well, it's very tricky. I slipped. Sorry.'<sup>205</sup>

The above passage reveals the differences between holographic machinations and the infrastructure of cyberspace. While Riviera can construct perfect holographic dolls acting out fictional scenarios, within cyberspace there are rules and sets of internal logic that must be followed based on the underlying algorithms. Such rules can be seen as akin to the laws of physics that govern the physical world. Bould has made a similar observation regarding Bruce Sterling's *Schismatrix* (1985), arguing that the cyberspace metaphor treats 'capitalist economies as physical laws', and is 'concerned with developing the best fit with a universe which is conceived of as being a realm of capital'.<sup>206</sup> In *Neuromancer*, Bould sees Case's addiction to cyberspace as a need to transcend the limits of the flesh through complete immersion into the global flow of capital and data. This point will be explored in depth in Chapter Two, and I will limit myself here to stating that my perspective is closer to Bould than to Gomel. It is possible—and even interesting—to apply Baudrillard's theory of image to virtual reality and cyberspaces.<sup>207</sup> However, doing so limits the subjective richness of the virtual medium. Understanding cyberspace beyond visuality in Gibson's stories achieves two correlated goals. It acknowledges the feelings of alienation and dejection felt by characters in the technological future of cyberpunk and raises a question that will be explored in the fourth section of this chapter of whether technological development can possibly push humanity (predominantly in the global North) into a similar future in the real world. This possibility requires serious investigation since, as the following section will illustrate, the appealing novelty of cyberpunk

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<sup>205</sup> Gibson, *Neuromancer*, p. 132.

<sup>206</sup> Mark Bould, 'Why Neo Flies, and Why He Shouldn't', in *Beyond Cyberpunk: New Critical Perspectives*, ed. by Graham J. Murphy and Sherryl Vint, pp. 116-134.

<sup>207</sup> Davidson, 'Riviera's golem, Haraway's Cyborg', 191.

metaphors in the *Sprawl* stories resides in their assimilation of certain insights offered by the field of information theory and spiritual notions about technology and evolution.

## 2. Spiritual Evolution and Transfiguration in the *Sprawl* trilogy

This section explores the spiritual undertones of the case studies to justify the contention that cyberspace is a metaphor. The initial paragraphs will point out how cybernetic interpretations of cyberspace ignore the spiritual subtext of technology in the *Sprawl* by using characters like Gentry and The Wig from *Mona Lisa Overdrive* and *Count Zero*, respectively, as examples. The discussion will then shift to building on the interpretations provided by scholars such as Graham J. Murphy, Anna McFarlane, and Robert G. Beghetto in their attempts to cope with this subtext. The arguments made by Murphy and Beghetto point out religious references in the *Sprawl* trilogy but do not explain how technology can acquire a spiritual character in the stories. Conversely, McFarlane focuses on technological evolution, but her analysis does not adequately focus on the spiritual nature of Gibson's technological metaphors. Understanding spirituality in the case studies requires a framework that explains how materialist technology can evolve to spiritual proportions and covers the intersection of spirituality and technological evolution seen in characters like the Wintermute AI. This explanatory gap can be bridged through the work of the French palaeontologist and Jesuit Pierre Teilhard de Chardin (1881-1955) and his concept of 'noosphere'. Chapters Two and Three explore the relationship between Chardin and the *Sprawl* trilogy. The current chapter will focus on how Chardin's work is relevant for understanding the conceptual foundation of the *Sprawl* trilogy. Subsequently, I will explore the influence of Chardin on the thought of Canadian media theorist Marshall McLuhan. Doing so serves two purposes. First, it explains how Chardin's ideas—which were primarily spiritual—had the potential to be reinterpreted in technological language. Second, it

highlights the connection between Chardin's theory that emerged in the 1920s (before the Macy Conferences) and the *Sprawl* trilogy published in the 1980s.

In Chapter 3 of *Neuromancer*, Case and Molly are in a hotel room watching television when the voice-over of a children's infotainment show describes cyberspace as 'a consensual hallucination experienced daily by billions of legitimate operators...A graphic representation of data abstracted from the banks of every computer in the human system'.<sup>208</sup> Based on this description, scholars have interpreted cyberspace in the *Sprawl* as a technological or cybernetic concept. For instance, Takayuki Tatsumi has referred to cyberspace in *Neuromancer* as 'another name for the internet'.<sup>209</sup> Elsewhere, literary scholar Christopher D. Kilgore has referred to cyberspace in the *Sprawl* trilogy as an 'instrumentalised' space that is 'rendered in basic geometric shapes that represent a complex file system'.<sup>210</sup> A similar interpretation is also present in the work of Youngquist, who defines cyberspace in *Neuromancer* in purely cybernetic terms to argue that cyberpunk 'now seems a thing of the past'.<sup>211</sup> However, cybernetic descriptions apply only partially to cyberspace in the *Sprawl* trilogy. This is because, as stated previously, cyberspace in the *Sprawl* trilogy is a metaphor and not exclusively technological.

Gibson refers to cyberspace as a 'consensual hallucination' and, thus, transfigures cyberspace into the collective psyche of humanity; for even if a hallucination is not objectively true (insofar as it does not correspond to physical reality), it is still real as a psychological experience. As the collective psyche of humanity, cyberspace can be accessed by cyberspace jockeys like Case

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<sup>208</sup> Gibson, *Neuromancer*, p. 59.

<sup>209</sup> Tatsumi, 'The Future of Cyberpunk Criticism: Introduction to Transpacific Cyberpunk', p. 1.

<sup>210</sup> Christopher D. Kilgore, 'Post-Cyberpunk', in *Routledge Companion to Cyberpunk Culture*, ed. by Anna McFarlane, Lars Schmeink, and Graham Murphy, pp. 48-55.

<sup>211</sup> Youngquist, 'Cyberpunk, War, and Money', 319.

through the holodeck (a brain-computer inference). Based on information theory, Case's nervous system can be connected to the electronic psyche, which is the cyberspace matrix. This is why, when infected with a 'wartime Russian mycotoxin' that targeted his nervous system, Case cannot access cyberspace in *Neuromancer's* first act.<sup>212</sup> The story also mentions that Case experiences a 'bodiless exultation' in cyberspace.<sup>213</sup> If cyberspace is a collective psyche, it is plausible to suggest that this feeling of exultation arises when individual psyches dissolve into the collective. However, the collective psyche or the totality of cyberspace is presented as more than the sum of interconnected digital systems, a separate ontological category. In *Count Zero*, readers are introduced to a cyber jockey named Wigan Ludgate who, after extended forays into cyberspace, acquiesced to spirituality and started believing that 'perhaps cyberspace was God'.<sup>214</sup> By referring to cyberspace as God, I see Gibson as alluding to the totality of cyberspace as having qualities categorically different from its constituent parts, thus being a separate ontological category. This elusive quality can be explained if cyberspace is not seen as a manifestation of technology, but technology is seen as one part of cyberspace. Through this inversion of categories, the nature of cyberspace as a metaphor for something more than digital technology in the *Sprawl* trilogy becomes clearer.

Gibson repeats the allusions to cyberspace as a category larger than digital technology in *Mona Lisa Overdrive*. The book introduces the character of Gentry, a cyberspace enthusiast working at a junkyard who becomes involved in safeguarding Bobby Newmark's body, which is permanently connected to cyberspace.<sup>215</sup> Throughout the story, Gentry is described as ascribing to esoteric spiritual notions about cyberspace, claiming that cyberspace has a shape and that

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<sup>212</sup> Gibson, *Neuromancer*, p. 6.

<sup>213</sup> Gibson, *Neuromancer*, p. 6.

<sup>214</sup> Gibson, *Count Zero*, p. 154.

<sup>215</sup> For context refer to the summary of the story provided in the Introduction.

understanding the shape will reveal hitherto hidden knowledge about the cosmos. Gentry sees the totality of cyberspace as akin to a ‘Cybernetic Godhead’.<sup>216</sup> The idea of a godhead is a reference to the end of *Neuromancer*, where two AIs (Wintermute and Neuromancer) fuse to become a planetary AI of such staggering complexity that Case asks the entity, ‘You God?’<sup>217</sup> While exploring the concept of ‘gestalt’ in cyberpunk, McFarlane argues that ‘Gentry’s obsession with seeing the entire Shape of the matrix is connected with the human urge to take control over the world...or at least to maintain human exceptionalism in a world that gives less centrality to human exceptionalism’.<sup>218</sup> I agree with McFarlane’s argument that the world of the *Sprawl* does not support human exceptionalism. However, her assessment does not consider other statements made by Gentry in the story. When Gentry is thrust with the responsibility of safeguarding Bobby’s body, he says:

‘I can only believe that this was pre-determined. Prefigured by the form of my previous work. I wouldn’t pretend to understand how that might be, but ours is not to question why, is it, Slick Henry?’<sup>219</sup>

Gentry’s belief in determinism coupled with the belief in a cybernetic godhead indicates that the emergence of this godhead itself can be seen as implying pre-determinism. Indications towards the emergence of a cybernetic God through a set of pre-determined events seem to propose a teleological evolution of technology.<sup>220</sup> In order to understand this teleology in the *Sprawl* trilogy,

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<sup>216</sup> Gibson, *Mona Lisa Overdrive*, p. 235.

<sup>217</sup> Gibson, *Neuromancer*, p. 296. This event is analysed in the next section.

<sup>218</sup> McFarlane, *Cyberpunk Culture and Psychology*, p. 28.

<sup>219</sup> Gibson, *Mona Lisa Overdrive*, p. 111.

<sup>220</sup> The issue of teleology is explored further in the first section of Chapter Two, titled ‘Cultural Autopoiesis and the *Sprawl* trilogy’.

the following passages will analyse the odd mixture of ideas such as evolution, teleology, theism, and cybernetics that transfigures technological concepts into spiritual euphemisms.

Cybernetics, in general, and information theory, in particular, have primarily been mathematical disciplines since the work of Shannon in the late 1940s. However, while applying information theory to *Neuromancer*, literary scholar Nicholas Ruddick has argued that information may be viewed as a third property of matter.<sup>221</sup> Information, according to Ruddick, is as fundamental to the cosmos as matter and energy, even though it is not subject to the laws of conservation of energy. He posits that while the arrow of thermodynamic time points to a state of maximum entropy, the arrow of informational time (which is the arrow of history), ‘points irreversibly in the direction of increasing complexity.’<sup>222</sup> Entropy is analogous to ‘missing information’, a random ‘noise’ as opposed to an ordered ‘message’. In cybernetic and informational terms, the human mind is arguably the most unique system in the universe. It can maintain and augment itself as it filters messages from the surrounding noise, processes them and generates new information. The human brain’s rapid development—in the context of Earth’s geological timescale—may be more convincingly accounted for if cerebral evolution is viewed not in material but informational terms.<sup>223</sup> According to information theory, when a system reaches a certain threshold of complexity, a new order, entirely unpredictable according to the laws governing the old order, emerges.<sup>224</sup>

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<sup>221</sup> Nicholas Ruddick, ‘Putting the Bits Together: Information Theory, ‘Neuromancer’, and Science Fiction’, *Journal of the Fantastic in the Arts*, 3 (1994), 84–92.

<sup>222</sup> Jeremy Campbell, *Grammatical man: Information, Entropy, Language, and Life* (New York, NY: Touchstone, 1982), p. 84. Cited in Ruddick, ‘Putting the Bits Together: Information Theory, ‘Neuromancer’, and Science Fiction’, 84–92.

<sup>223</sup> Ruddick, ‘Putting the Bits Together’, 102.

<sup>224</sup> Ruddick, ‘Putting the Bits Together’, 102-103.

McFarlane has shown that the concept of emergence, indicating a new evolutionary level attained as instantaneously as a quantum leap, is particularly interesting for cyberpunk. She applies the concept of ‘autopoiesis’ (or the principle of self-generation and self-organisation from the field of dynamic systems theory) to explain alternative ontologies—such as AI—that cyberpunk offers. Her use of autopoiesis as an analytical tool is based on the formulation of the concept by literary scholar Bruce Clarke. Clarke’s understanding of the term was based on the ‘Gaia’ hypothesis coined by the environmentalist and futurist James Lovelock and popularised by the American evolutionary theorist Lynn Margulis in the 1970s.

Margulis defined Gaia as ‘not an organism directly selected among many’ but rather as ‘an emergent property of interaction among organisms, the spherical planet on which they reside, and an energy source, the sun’.<sup>225</sup> This definition sees Gaia as a system and, consequently, the Gaia theory as a systems theory. Based on this interpretation, Clarke has postulated the concept of autopoiesis (that emerged in ‘second-order cybernetics’ during the 1970s) to reformulate Margulis’s articulation of Gaia within a cybernetic framework. His book *Gaian Systems: Lynn Margulis, Neocybernetics, and the End of the Anthropocene* (2020) explains how the Gaia concept has evolved since its conception in the 1970s. Given the rich history of the concept, McFarlane’s use of autopoiesis (based on Clarke’s study) in analysing *Neuromancer* and other cyberpunk stories performs the critical task of embedding the texts within dialogues happening in other fields, such as ecological studies and cybernetics. However, associating cyberpunk with ecological theories like the Gaia hypothesis is insufficient for embedding the genre in the historical context from which it emerged. In this thesis, I want to provide a framework that accomplishes the task more holistically by using Chardin’s concept of the ‘noosphere’ (primarily concerned with the evolution of

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<sup>225</sup> Bruce Clarke, *Gaian Systems: Lynn Margulis, Neocybernetics, and the End of the Anthropocene* (Minneapolis and London: University of Minnesota Press, 2020), p. 3.

consciousness on Earth) and its relevance for understanding the *Sprawl* trilogy. Chapter Three is dedicated to a thorough analysis of the *Sprawl* trilogy through the lens of Chardin. The current analysis will focus on how Gibson's work is suffused with evolutionary metaphors.

A pertinent example can be found in the final pages of *Neuromancer*, where the AI Wintermute merges with another AI called Neuromancer, resulting in the emergence of an entirely new digital entity. The following dialogue ensues when Case confronts this new entity:

'I'm not Wintermute now.'

'So what are you.'

'I'm the matrix, Case.'

'Where's that get you?'

'Nowhere. Everywhere. I'm the sum total of the works, the whole show.'

'That what 3Jane's mother wanted?'

'No. She couldn't imagine what I'd be like.'

'So what's the score? How are things different? You running the world now? You God?'

'Things aren't different. Things are things.'

'But what do you do? You just there?'

'I talk to my own kind.'

'But you're the whole thing. Talk to yourself?'

'There's others. I found one already. Series of transmissions recorded over a period of eight years, in the nineteen-seventies. 'Til there was me, natch, there was nobody to know, nobody to answer.'

'From where?'

'Centauri system.'



‘Oh, yeah? No shit?’

‘No shit.’<sup>226</sup>

Information theory allows Gibson’s stories to distinguish between geological/cosmic time and neurological/cultural history and insists on ‘a tendency towards increasing complexity’.<sup>227</sup> As seen in the dialogue above, the theoretically supported idea of the sudden emergence of a new order out of an increasingly complex old one offers cyberpunk a new and relevant set of evolutionary metaphors. The above passage also reveals an interesting transfiguration. From the beginning of *Neuromancer*, readers are informed that Case is a talented cyberspace jockey and is skilful enough to perform extremely dangerous heists in cyberspace. It is reasonable to assume that Case is well-versed in advanced algorithms and computer programming. Nevertheless, when faced with the emergent planetary AI he is compelled to use the term ‘God’. As an expert hacker, Case is well aware that he is faced with a sophisticated algorithm, yet he addresses it in spiritual terms. I contend that this transposition of the cybernetic with the spiritual cannot be explained using the cybernetic concepts of autopoiesis and emergence. A different interpretive framework is needed that incorporates spirituality, evolution, and cybernetics. Without such an interpretive framework, the richness of cyberspace as a metaphor remains out of reach.

Efforts toward developing a framework that includes spirituality have been made. Murphy has identified Christian religious symbology in *Neuromancer*, and I will engage with his work in Chapter Three.<sup>228</sup> More recently, Beghetto has done similar work explaining how cyberspace in the

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<sup>226</sup> Gibson, *Neuromancer*, pp. 295-296.

<sup>227</sup> Ruddick, ‘Putting the Bits Together’, 87.

<sup>228</sup> Murphy, ‘Angel(LINK) of Harlem’, pp. 211-227.

*Sprawl* trilogy is construed as a sacred space.<sup>229</sup> However, there still exists an explanatory gap. Murphy and Beghetto have pointed out the spiritual undertones in the case studies. Through the concept of autopoiesis, McFarlane has explained the technological evolution of AIs in the *Sprawl* trilogy.<sup>230</sup> However, the above passage shows technological evolution towards an event of ostensible spiritual significance, requiring an interpretation that fuses the two lines of interpretation. The following passages will fill this interpretive gap and help explain how cyberspace can become a space for spirituality.

The significance of understanding digital metaphors is apparent given the exponential increases in data collection and distribution happening in the West today through the application of algorithms encompassing all aspects of life. Rob Kitchin and Martin Dodge have described software as lines of computer code—instructions that produce routines and programs capable of complex digital functions when combined and supplied with appropriate input.<sup>231</sup> Algorithms instruct computer hardware about what to do and are generally invisible as the hidden ghostly intent inside the machine while producing visible and tangible effects in the world.<sup>232</sup> They vary from abstract machine code and assembly language to more formal programming languages, applications, and scripts. One way to consider these forms is as a set of hierarchically organised entities of increasing complexity that can increasingly parallel the complexity of organic entities.<sup>233</sup> However, as metaphors go, digital complexity emerging from software or digital information is not enough to

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<sup>229</sup> Beghetto, *Monstrous Liminality: Or, The Uncanny Strangers of Secularized Modernity* (London: Ubiquity, 2022).

<sup>230</sup> More on Anna McFarlane's use of autopoiesis for analysing the *Sprawl* trilogy in Chapter Two.

<sup>231</sup> Rob Kitchin and Martin Dodge, *Code/Space: Software and Everyday Life* (Cambridge, MA: The MIT Press, 2011). For a comprehensive account of how computer algorithms can exhibit organic behaviour can see: Luciana Parisi, *Contagious Architecture: Computation, Aesthetics, and Space* (Cambridge, MA: The MIT Press, 2013).

<sup>232</sup> Kitchin and Dodge, *Code/Space*, p. 4.

<sup>233</sup> *ibid.*

account for Case's question to the AI about whether it is God. I will tackle this question and other spiritual elements of the story in Chapter Three and point out here that the concept of emergence facilitated by technology predates cybernetics and information theory. Its initial formulation was within the conceptual framework of the 'noosphere' that synthesised theories of biological evolution with cultural and technological evolution.

The concept of noosphere was coined before the Macy Conferences by three scholars with converging interests in the 1920s: Pierre Teilhard de Chardin (1881-1955), Edouard Le Roy (1870-1954), and V.I. Vernadsky (1863-1945). The noosphere anticipated the idea of human-machine equivalence before the language of cybernetics was developed. Chardin, a French palaeontologist, philosopher, and Jesuit known for his theory of spiritual evolution, is crucial for this thesis because he was the first scientist in the twentieth century who saw technology as an external manifestation of biology. Furthermore, he was the first scientist in history to employ the term 'transhuman' in describing the transcendental potential of technology.<sup>234</sup> In *The Antiquity and World Expansion of Human Culture*, posthumously published in 1956, Chardin described technology as an extension of human evolution, stating that 'such a wild hypothesis of a transhuman universe conforms perfectly to the general pattern of a physical world in which absolutely nothing can grow indefinitely without meeting ultimately some critical level of emergence'.<sup>235</sup> Given his vision, scholars in science and technology studies have attributed the conceptual origin of technologies like brain-computer interfaces to Chardin.<sup>236</sup> Last but not least, he

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<sup>234</sup> Pierre Teilhard de Chardin, *The Antiquity and World Expansion of Human Culture* (Chicago: Wenner-Gren Foundation for Anthropological Research, 1956), 10 <<https://www.biosferanoosfera.it/uploads/files/c10e0d82ce26ba001cbe95b5d32e487f2848270c.pdf>> [accessed 18 November 2021]

It should be noted that the essay was published in 1956 but Chardin died in 1955. Therefore, Chardin's first use of the term was likely in the early 1950s.

<sup>235</sup> Chardin, *The Antiquity and World Expansion of Human Culture*, p. 10. See also: Pierre Teilhard de Chardin, 'The phenomenon of man; The antiquity and world expansion of human culture', in *The Biosphere and Noosphere Reader*, ed. by Paul R. Samson and David Pitt (London and New York: Routledge, 1999), p. 79.

<sup>236</sup> See: Shima Beigi and Francis Heylighen, 'Noospheric consciousness: integrating neural models of consciousness and of the web', *13<sup>th</sup> ACM Web Science Conference (WebSci '21 Companion)*, June 21-25 (2021), 63-66 <<https://doi.org/10.1145/3462741.3466657>>

proposed a theory of evolution that fused biological evolution with technological and spiritual evolution.

While analysing the religious symbolism in *Neuromancer*, Beghetto has argued that ‘Cyberpunk may seem to be anti-religious, especially in regard to Christianity. However, this is a symptom of its anti-authoritarian character rather than any abhorrence of anything of a religious nature’.<sup>237</sup> I agree with this assessment as it helps explain Chardin’s significance in that, for the majority of his life, the Church prohibited Chardin from publishing his work because of his anti-authoritarian advocacy of evolutionary theory against the orthodox Christian creation myth. Due to this prohibition, his work was published posthumously in the 1950s.<sup>238</sup> Chardin’s ideas called for a fruitful interplay of scientific findings of the time and Christian religious cognition. According to him, mind and matter are the two fundamental aspects of the cosmos. Chardin saw the growth of complexity in the universe as representing God’s movement. In *The Phenomenon of Man* (1965), Chardin portrays this movement as a continuous evolution of consciousness.

According to Chardin, a ‘convergence of thinking’ and ‘planetisation of the noosphere’ began because of the Western world’s scientific and philosophical dominance since early Christianity.<sup>239</sup> Chardin predicted that ‘collective cerebrelisation’ will lead to technological innovation and the development and the progress of cybernetics.<sup>240</sup> Such innovation could accelerate the human brain’s evolution towards perfection if eugenicist gene-pool selection methods are applied.<sup>241</sup> Chardin posited that human evolution is a corollary of the evolution of consciousness

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<sup>237</sup> Beghetto, *Monstrous Liminality*, p. 131.

<sup>238</sup> This act of prohibition is relevant for why I am focusing on Chardin, I will explore it further in Chapter Three.

<sup>239</sup> Pierre Teilhard de Chardin, *The Phenomenon of Man* (New York, NY & London; Harper Perennial, 1965), p. 27.

<sup>240</sup> Chardin, *The Phenomenon of Man*, p. 27.

<sup>241</sup> Chardin, *The Phenomenon of Man*, p. 282-283.

on the planet. This process, according to Chardin, can overcome separateness and alienation if the collective will of humanity is aimed at the dissolution of individual identity. Only after this dissolution can a psycho-social ‘mega-synthesis’ be realised.<sup>242</sup> This dissolution will culminate in the point Omega or an emergent super-personal consciousness.

For Chardin, finding a teleology that could synthesise Christian beliefs with evolutionary theory was of primary importance. In his work, he stated:

Psychogenesis [emergence of reflexive consciousness] has led to man. Now it effaces itself, relieved or absorbed by another and a higher function—the engendering and subsequent development of the mind, in one word “noogenesis.”<sup>243</sup>

The phenomenon Chardin outlined describes the emergence of a layer of intelligence enveloping the Earth, caused by rapid and inevitable growth in the complexity of human consciousness. This growth in complexity is achieved as more and more humans interact with each other increasingly through technology. The discussion will come back to his view on technology shortly and first highlight how he visualised the birth of the noosphere:

A glow ripples outwards from the first spark of conscious reflection. The point of ignition grows larger. The fire spreads in ever-widening circles till finally the whole planet is covered with incandescence. Only one interpretation, only one name can be found worthy of this grand phenomenon. Much more coherent and just as extensive as any preceding, it is

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<sup>242</sup> Chardin, *The Phenomenon of Man*, p. 270-72.

<sup>243</sup> Chardin, *The Phenomenon of Man*, p. 181.

really a new layer, the ‘thinking layer’, which, since its germination at the end of the Tertiary era, has spread over and above the world of plants and animals.<sup>244</sup>

This passage is worth noting as it resembles with the *Sprawl* trilogy. In *Neuromancer*, the plot’s driving force is Wintermute’s efforts to combine with its other half (the Neuromancer AI). At the end of the story, their synthesis leads to emergent AI becoming the matrix, much like a noosphere. In *Mona Lisa Overdrive*, the unfolding of this synthesis is described as “‘When the moment came, the bright time, there was absolute unity, one consciousness. But there was the other...I speak only of that which I have known. Only the one has known the other, the one is no more’”.<sup>245</sup> Chardin’s description of the birth of the noosphere and Gibson’s depiction of the birth of *Neuromancer* share curious similarities; both describe this point of singularity in terms of a bright or luminous unification through words like ‘point of ignition’, ‘fire’, ‘incandescence’, and ‘bright time’. Furthermore, Chardin’s techno-spiritual ideas provide the required framework that fuses technological development and spirituality.

As mentioned previously, a crucial feature of cyberpunk is how it enables technology—specifically software—to traverse the boundaries between categories like social, natural, artificial, human, and machine. In the history of cyberpunk, this potentiality of software or digital data has been seen as emerging from the Macy Conferences that created a discursive space for concepts to be applied in an interdisciplinary fashion. However, I propose that such histories should not ignore the contribution of Chardin, for technology is a critical part of the evolutionary process he outlined. He stated, ‘For the many fragments of mankind that have become isolated or have gained their independence in the course of time, just so many technico-mental systems of the world as a

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<sup>244</sup> Chardin, *The Phenomenon of Man*, p. 182.

<sup>245</sup> Gibson, *Mona Lisa Overdrive*, p. 262.

whole...have gradually come into existence.’<sup>246</sup> Chardin considers culture and technology as continuous with biological evolution throughout his works. Instead of a mere tool, technology, for Chardin, is a natural outcome of the evolution of consciousness as it tries to converge upon itself:

With the rise of self-evolution, not only does the speed of transformation increase rapidly, because of the cumulative transmission of planned inventions, but, and more important, a remarkable capacity emerges among the socialised offspring of the new evolution for keeping in close inner touch with one another—and even fusing with one another—in the course of their development.<sup>247</sup>

The more technology enables humans to interact and communicate with themselves more richly, the more complex consciousness becomes. Furthermore, the idea (proposed by a Jesuit in the early twentieth century) of ‘fusing with one another’ through technology anticipated the arguments of several futurists and technologists that will be discussed later in the thesis. This concept was also shared by Chardin’s colleague Le Roy, a mathematician and philosopher. He stated that:

This [mechanical/industrial technology] is without a doubt a new form, but one that will only fool the superficial or partial observation or narrow inattention to what, in reality, is natural in the artificial. If we want to capture the full biological reality, we should not separate mankind from his tools, his real organs or his technology: his real functions.<sup>248</sup>

Whilst Le Roy saw technology as the extension of biological functions, much like the Canadian media theorist Marshall McLuhan decades later, Chardin touched on the idea from a different

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<sup>246</sup> Chardin, *The Antiquity and World Expansion of Human Culture*, p. 7.

<sup>247</sup> Chardin, *The Phenomenon of Man*, p. 27.

<sup>248</sup> Edouard Le Roy, ‘The origins of humanity and the evolution of mind’, in *The Biosphere and Noosphere Reader*, ed. by Paul R. Samson and David Pitt (London and New York: Routledge, 1999), pp. 60-69.

perspective. He noted that one of the goals of his work was to ‘decide whether the word “biological” can or cannot be applied correctly (in a non-allegorical way) to the workings and the products of human culture’.<sup>249</sup> He further stated, ‘Judging from the very mechanism of its operation, which is ultimately reducible to a process of co-cerebration and co-reflexion, cultivation cannot be regarded as anything less than a direct prolongation of hominisation.’<sup>250</sup> Chardin’s central argument was that culture and technology enable psychological drives, aspirations, and motivations emerging from the psyche to materialise in the world. By doing so, they become external manifestations of the workings of consciousness. As culture and technology progress, the complexity of consciousness does as well till it reaches a point of singularity, at which point the noosphere emerges.

If the noosphere concept is included in the history of cyberpunk, then the twentieth-century discourse on technology can be seen anew. As stated in the previous section, the ideas and arguments posited in the Macy Conferences highlighted the novelty of cybernetics as a field of study that creates a continuity between biology and engineering. The metaphors and analogies developed during the conferences were critical for developing contemporary cyberpunk imaginaries existing currently. The most significant contribution of the conferences was to posit a new methodology with information at its core. Information, whether digital or analogue, was a new form. However, the analysis done in this section adds a new element to the conceptual roots of cyberpunk.

By the 1920s, Chardin and Le Roy had started formulating the noosphere concept. The concept involved identifying the essential element shared by all humans, which, for them, was self-reflexive consciousness. In their vitalist perspective, the process of biological evolution had the goal

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<sup>249</sup> Chardin, *The Antiquity and World Expansion of Human Culture*, p. 7.

<sup>250</sup> Chardin, *The Antiquity and World Expansion of Human Culture*, p. 8.



of spreading around the Earth and, subsequently, converging upon itself. Both Chardin and Le Roy saw technology as an extension of human capacities. By subverting the boundary between biology and technology, they had already created the foundation for concepts like the cyborg and transhumanism. As mentioned earlier, if the formation of the noosphere is to be complete, human consciousness must converge. However, this convergence could not be physical or material because of the physical limits of bodies. In 1945, in an essay that would be published a decade later, Chardin stated, 'Our species...is entering its phase of socialisation; we cannot continue to exist without undergoing the transformation which in one way or another will forge our multiplicity into a whole.'<sup>251</sup> They needed to see embodiment and the flesh as incidental to the evolutionary process and locate the essence of being human in incorporeal consciousness. However, the arguments of Chardin and Le Roy used excessively vague phrases like 'convergence of consciousness' to present their theory. Even though they made thought-provoking arguments about the boundaries between biology and technology, their arguments lacked the metaphors and analogies to make their language accessible.

This problem was addressed by McLuhan, the Canadian media theorist who picked up Chardin's ideas and prepared the ground for them in media theory in the 1960s. Even with a summary of Chardin's ideas, the many potential factors for the later reception of his work are visible, ranging from eugenics and Christian theology to technological millenarianism. The similarities between McLuhan and Chardin are apparent. Media scholar and journalist Neil Hickey has stated that 'McLuhan did, in fact, flirt with the ideas of Pierre Teilhard de Chardin'.<sup>252</sup> Similarly, cultural theorist Mark Dery sees McLuhan's idea of the 'global village' as 'not unlike the evolutionary epiphany foretold by Teilhard de Chardin'.<sup>253</sup> Therefore, it is critical to examine the

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<sup>251</sup> Pierre Teilhard de Chardin, *The Future of Man*, trans. by Norman Denny (New York and London: Image, 1964), p. 31.

<sup>252</sup> Neil Hickey, 'McLuhan in the Digital Age', in *The Legacy of McLuhan*, ed. by Lance Strate and Edward Wachtel (Cresskill, NJ: Hampton Press, 2005), p. 64.

<sup>253</sup> Mark Dery, *Escape Velocity: Cyberculture at the End of the Century* (Grove Press, 1996), p. 47.

relationship between McLuhan and Chardin to explore the spiritual elements of technology and the cyberpunk imaginary.

In 1937, McLuhan converted to Roman Catholicism and was in close contact with Catholic theologians and Jesuits.<sup>254</sup> German philosopher and scholar of religion Oliver Krüger has revealed the links between McLuhan and Chardin via the American theologian and Jesuit Walter J. Ong (1912-2003). From 1938 to 1941, Ong studied English literature and philosophy at St. Louis University, where the young McLuhan taught English (1937-1944). Additionally, McLuhan acted as Ong's advisor for his master's degree thesis. Krüger states that while staying in Paris as a Guggenheim fellow in the early 1950s, Ong lived in the same lodgings as Chardin, where he studied the manuscript of Chardin's posthumously published work, *The Phenomenon of Man* (1955).<sup>255</sup>

Krüger states that when Ong was assigned to write a review of McLuhan's first book, *The Mechanical Bride* (1951), he referenced Chardin's work. Following McLuhan's critique of American culture in *Mechanical Bride*, Ong raised the question of how Catholic theology can respond to an industrial age. He also discussed Chardin's ideas that, as will be discussed in Chapter Three, have a Eurocentric-capitalist bias. Ong introduced the concepts of the 'cosmosphere' and the biosphere and also referred to the promise of the noosphere:

In a third stage, slowly, man, with human intelligence, has made his way over the surface of the earth into all its parts...human consciousness has succeeded in enveloping the entire

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<sup>254</sup> McLuhan was employed from 1937-1944 at the Jesuit St. Louis University (Missouri), from 1944-1946 at Assumption College (Windsor, Canada), and from 1946-1979 at St. Michael's College (Toronto) before he passed away in 1980.

<sup>255</sup> Oliver Krüger, 'Gaia, God, and the internet: The History of Evolution and the Utopia of Community in Media Society', *Numen*, 54 (2007), 150.

globe in a third and still more perfect kind of sphere, the sphere of intelligence, the “noosphere,” as it has been styled by Father Pierre Teilhard de Chardin, S.J.<sup>256</sup>

Krüger argues that McLuhan likely became acquainted with Chardin’s ideas due to Ong’s presence. At the opening of *Gutenberg Galaxy* (1962), McLuhan refers to Chardin as ‘a very Romantic biologist’, and quotes a description of the noosphere emerging due to technological progress:<sup>257</sup>

The externalisation of our senses creates what de Chardin called the “noosphere” or a technological brain for the world. Instead of tending towards a cast Alexandrian library the world has become a computer, an electronic brain, exactly as in an infantile piece of science fiction.<sup>258</sup>

McLuhan also describes communications technology as resulting in the metaphorical externalisation of the human sensorium. McLuhan extends this metaphor when he refers to Chardin and electronic media becoming the ‘cosmic membrane [that] has been snapped around the globe’.<sup>259</sup> McLuhan’s subsequent comments on Chardin’s work adopt a similar metaphor that sees technology as a natural byproduct of the evolution of consciousness:

Electricity points the way to an extension of the process of consciousness itself...Today computers hold out the promise of a means of instant translation of any code or language into any other code or language. The computer, in short, promises by technology a Pentecostal condition of universal understanding and unity. The next logical step would

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<sup>256</sup> Walter J. Ong, ‘The Mechanical Bride: Christen the Folklore of Industrial Man’, *Social Order*, 2 (1952), 79-85.

<sup>257</sup> Marshall McLuhan, *The Gutenberg Galaxy: The Making of Typographic Man* (Toronto, ON: University of Toronto press, 2002), p. 32.

<sup>258</sup> McLuhan, *The Gutenberg Galaxy*, p. 32.

<sup>259</sup> McLuhan, *The Gutenberg Galaxy*, p. 32.

seem to be, not to translate, but to by-pass languages in favour of a general cosmic consciousness.<sup>260</sup>

Suppose for a moment, McLuhan's 'electricity', 'information' from the language of cybernetics developed by Shannon and Wiener, Gibson's cyberspace that is a 'consensual hallucination', and Chardin's 'consciousness' are juxtaposed. In that case, the functional similarities between theology and technology become apparent. However, while Chardin celebrated the millenarian potential of technology, McLuhan saw it as having an epochal potential to alienate the individual from society. This nuance can be seen in McLuhan's thought on the cyberspace metaphor when he states:

In this electric age we see ourselves being translated more and more into the form of information, moving toward the technological extension of consciousness...By putting our physical bodies inside our extended nervous systems, by means of electric media, we set up a dynamic by which all previous technologies that are mere extensions of hands and feet and teeth and bodily heat-controls—all such extensions of our bodies, including cities—will be translated into information systems.<sup>261</sup>

The above passage presents cyberspace as the culmination of two strands of thought: First, the cybernetic language developed during the Macy Conferences that posited an equivalence between electrical signals and neuronal function. Second, the equivalence between information and consciousness. If electrical signals are the same as neuronal actions and information the same as consciousness, then cyberspace can be seen as a 'consensual hallucination'. This metaphorical space allows for consciousness to congregate. If technologies like the internet proliferate, the density of consciousness-complexity increases simultaneously, opening the doors for new forms of

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<sup>260</sup> Marshall McLuhan, *Understanding Media: The Extensions of Man* (Cambridge and London: MIT Press, 1994), p. 80.

<sup>261</sup> McLuhan, *Understanding Media*, p. 57.

consciousness, like a cybernetic godhead, to emerge.<sup>262</sup> As such, it becomes possible to see parallels between the cyberspace metaphor in the *Sprawl* trilogy and the concept of ‘noosphere’ articulated by Chardin. McLuhan considered that the omnipresence produced by media could be an incitement for the spiritual seeker.<sup>263</sup> McLuhan’s critique of religious interpretations of the ‘electronic age’ was often weaved with ominous descriptions of new communication technologies, for example:

It is this continuous embrace of our own technology in daily use that puts us in the Narcissus role of subliminal awareness and numbness in relation to these images of ourselves. By continuously embracing technologies, we relate ourselves to them as servomechanisms. That is why we must, to use them at all, serve these objects, these extensions of ourselves, as gods or minor religions.<sup>264</sup>

On other occasions, McLuhan was reluctant to accept the idea of universal love. He argued that electronic media would support psychological and emotional numbness due to overstimulation of the senses. The global village will not be perfect because ‘the age of anxiety and of electric media is also the unconsciousness and apathy.’<sup>265</sup>

Even though Chardin was neither a cybernetician nor a media scholar, scholars have regarded him as having prophesied the internet, the real-life parallel of a ‘consensual hallucination’.<sup>266</sup> Chardin introduces the noosphere in the context of theological and philosophical

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<sup>262</sup> Gibson, *Mona Lisa Overdrive*, p. 235.

The reference is to the previously mentioned emergent AI entity in *Neuromancer* who is asked by Case whether it is God.

<sup>263</sup> Marshall McLuhan, ‘Electric Consciousness and the Church’, in *The Medium and the Light: Reflections on Religion*, ed. by Eric McLuhan and Kacek Szlerek (Toronto, ON: Stoddart, 1999), pp. 87-88.

<sup>264</sup> McLuhan, *Understanding Media*, p. 46.

<sup>265</sup> McLuhan, *Understanding Media*, p. 47.

<sup>266</sup> Jennifer Cobb Kreisberg, ‘A Globe, Clothing Itself with a Brain’, *Wired*, 1 June 1995 <<https://www.wired.com/1995/06/teilhard/>> [accessed 10 October 2021]

considerations of the evolution of human consciousness. Nevertheless, Krüger argues that McLuhan's presentation of Chardin's ideas was consequential for the later reception of Chardin in popular and academic discourse. Krüger observes that 'first, Teilhard is introduced as a "romantic biologist"' .<sup>267</sup> Second, McLuhan does not mention the Christian context of Chardin's evolutionary model. Third, he keeps quiet about the essence of Chardin's theory: the convergence of human consciousness in the future 'point Omega'.<sup>268</sup> Thus, McLuhan removes the theological element of Chardin's thought by using the concept of electricity. Instead of Chardin's theologically inspired metaphor of the 'thinking envelope', McLuhan introduces the metaphor of the 'electronic brain' and the 'cosmic membrane'.

Such metaphors complemented the cybernetic language developed between 1946 and 1953 at the Macy Conferences. As stated in the previous section, an important consequence of the conferences for the cyberpunk genre was the use of interdisciplinary metaphorical language. Another significant contribution was the formulation of information theory by Shannon and Wiener. However, if information is substituted with consciousness, then the theory can be read in a new light and reveal the continuity between the evolutionary theory of Chardin, cybernetics, and Gibson's cyberpunk.

The cybernetic approach saw information as a non-physical entity and developed a language to translate the flow of information between humans and machines. This language allowed for concepts like human-machine equivalence and substrate-independent information to form and created a new philosophical system for technology separate from embodiment. I suggest that there was an element of continuity between Chardin and the Macy Conferences with the caveat that my argument is not about whether the academicians involved in the conferences were influenced by the

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<sup>267</sup> Krüger, 'Gaia, God, and the internet', 154.

<sup>268</sup> Chardin, *The Phenomenon of Man*, pp. 212-252.

concept of noosphere or the evolution of consciousness. However, I do want to emphasise that the ideas of human-machine symbiosis and technological disembodiment—that feature prominently in the *Sprawl* trilogy—can and should be dated back to Chardin and the noosphere.

This thesis aims to embody the genre known for speculating about technology and embodiment. For that, it is essential to look at cultural factors in addition to scientific factors that make the concept possible. Including Chardin, while reading Gibson's work, accomplishes another task of accounting for the spiritual undertones in the *Sprawl* trilogy. The spiritual aspect will be analysed in Chapter Three. The argument here is limited to asserting that Gibson's *Sprawl* trilogy is based on the vitalist approach of Chardin, which sees technology as an evolutionary prosthesis that enables the evolution of consciousness unification. However, Chardin and McLuhan were not alone in the twentieth century in seeing technology as part of a grand plan. The following paragraphs will explore how this alternative view of technology proliferated in America prior to the emergence of cyberpunk.

### **3. Cyberspace: A Space for Countercultural Utopianism**

This section will demonstrate that ideas connecting technology with spirituality persisted in American culture till the 1980s, the decade when cyberpunk emerged as a literary genre. It is important to show that these elements are not a result of scholarly interpolation and were endemic to the cultural backdrop from which the case studies emerged. Towards this goal, the current section will focus on how the juxtaposition of spirituality and technology seen in the *Sprawl* permeated the countercultural movement of 1960s America partly due to the influence of McLuhan, who was, as mentioned previously, influenced by Chardin. McLuhan was also an important figure in the

countercultural movement of the 1960s that saw technology as enabling transcendence and having the potential to bring about a utopia.

The spiritual aspect of cyberspace in the *Sprawl* trilogy problematises the interpretive framework that the proto-cyberneticians of the Macy Conferences wanted to create. According to the German media theorist Claus Pias, this framework was one ‘whereby the mind or “spirit”... suddenly finds itself on the engineer’s desk’.<sup>269</sup> As such, the presence of spirituality calls into question Youngquist’s previously mentioned argument that ‘cyberpunk is a summation, not a departure: it consolidates a line of development that cybernetics makes possible in postwar science fiction’.<sup>270</sup> Cybernetics did indeed make the emergence of the cyberpunk genre in the 1980s possible. However, I propose that the consolidation happened when countercultural trends synthesised cybernetic language with millenarianism during the 1960s and 70s.

This section will explore how the millenarian ideal materialised in post-war American countercultural movements. War is essential to the cyberspace metaphor in the *Sprawl*. A voice-over describes cyberspace as a ‘consensual hallucination’ in *Neuromancer* during a television commercial: ‘The matrix has its roots in primitive arcade games...in early graphics programs and military experimentation with cranial jacks’, the voice-over says whilst showing ‘cold blue military footage burned through, lab animals wired into test systems, helmets feeding into fire control circuits of tanks and war planes’ in the background.<sup>271</sup> Cyberspace in *Neuromancer*, a space pregnant with the possibility of transcendence, originated from military experimentation. Military, industrial, and corporate culture also informed the millenarian preconditions in twentieth-century America. These preconditions led to a countercultural response in the form of quasi-spiritual

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<sup>269</sup> Pias, ‘The Age of Cybernetics’, p. 15.

<sup>270</sup> Youngquist, ‘Cyberpunk, War, and Money’, 328.

<sup>271</sup> Gibson, *Neuromancer*, p. 59.



theories like those of McLuhan (which, in turn, were influenced by Chardin) that persisted in the cultural zeitgeist till the emergence of cyberpunk in the 1980s. As a result of this response, technological systems were used in attempts to achieve millenarian ideals, as evidenced in projects like the Whole Earth Catalog, which will be touched upon later. This section focuses on cultural factors because, as explained in the introduction section, the relevance of cyberpunk and the *Sprawl* trilogy can be rescued if the diegetic framework—that allows spiritual concepts like transcendence to work in the stories—is explored while highlighting how the trilogy allows a critical reading of technological developments. It is necessary to use this methodology to understand how the cyberpunk imaginary under consideration shares elements of spiritualism and transcendence with real-world cultural practices. Editors of *Routledge Companion to Cyberpunk Culture* (2020) have observed that ‘one can hardly find fault in generally comparing the cyberpunk imaginary with today’s quotidian reality’, but were there possible preconditions leading up to this moment?<sup>272</sup> The following passages explore this question because, in the absence of preconditions, the contemporary quotidian reality and its cyberpunk corollary turn into historical aberrations, and the identification of spiritualism in the case studies becomes an ahistorical interpolation.

With World War Two out of the way and the Cold War underway, the 1960s marked a critical moment in world history, particularly in America. Legal scholar Charles A. Reich has offered an account of the American urban cultural zeitgeist (Reich prefers to use the term ‘consciousness’) as it progressed through the century. For Reich, consciousness is emergent and reactive towards ‘a way of life that existed before, and an adaption to new realities’.<sup>273</sup> Reich posits a tripartite division of American society into Consciousness I, II, and III. Each division represents a period where the socio-cultural ethos favoured certain philosophies and values over others. However, these divisions, as Reich himself admits, and the values they represented were not

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<sup>272</sup> Anna McFarlane, Grahan J. Murphy, and Lars Schmeink, ‘Cyberpunk as Cultural Formation’, p. 1.

<sup>273</sup> Charles A. Reich, *The Greening of America* (Middlesex: Penguin, 1971), p. 25.

mutually exclusive. Instead, they were interpenetrating and in constant dialogue with one another. According to Reich, the nineteenth century leading up to World Wars in the twentieth century saw the emergence of Consciousness I, which marked a point of departure from the Old World with its restrictive class statuses. It ushered in an era that extolled individual freedom and entrepreneurship as the highest virtues. This period proved to be a mixed bag of optimism towards unprecedented wealth creation and pessimism. This pessimism was caused by the push towards individualism and industry, which implicitly fostered excessive competition, self-interest, and profit-seeking at an individual and institutional level.<sup>274</sup> The vision of the 'American Dream' conjured up in Consciousness I, as Reich argues, was merely a facade which hid the reality of a monotonous life in a world dominated by aggressive capitalist values. He locates the cultural expression of this disillusionment in the works of artists and writers such as Fritz Lang, James M. Cain, and Raymond Chandler, who painted a grim picture of a desolate society in which people lived in constant suspicion of one another, weighed down by social and institutional expectations.<sup>275</sup>

Consciousness II represented a moment when the veil of optimism was lifted, and the reality of a life dominated by the state, war, laws, and machinery floated to the surface. 'One of the central aspects of Consciousness II is an acceptance of the priority of institutions, organisations, and society', says Reich, 'and a belief that the individual must tie his destiny to something of this sort, larger than himself, and subordinate his will to it. "Ask what you can do for your country (and corporation)," says the voice of Consciousness II.'<sup>276</sup> Since social consciousness in Reich's formulation is reactive and adaptive, the emergence of Consciousness II initiated a wave of reforms in law, business regulation, national budget, and diplomacy. The previous era had seen a battle

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<sup>274</sup> For an analysis of the evolving relationship between corporations and American society during the early twentieth century see: Seymour Melman, 'From Private to State Capitalism: How the Permanent War Economy Transformed the Institutions of American Capitalism: Remarks upon Receiving the Veblen-Commons Award', *Journal of Economic Issues*, 31 (1997), 311–330.

<sup>275</sup> Reich, *The Greening of America*, p. 58.

<sup>276</sup> Reich, *The Greening of America*, p. 63.

between an illusory American dream and the dull reality of everyday life. Therefore, this era would accept that dullness and confront it with laws and policies designed to incrementally cure the wounds left by rampant profit-seeking ventures of the past century. Continuing the process of reaction and adaptation, Consciousness III seemingly rejected the ideals of competitive individualism and saw a trend towards an alternative and more personal way of being. A decisive cultural factor was the feeling of betrayal felt by the 60s generation and the dichotomy between promises made to them and what they were presented.<sup>277</sup> Cultural theorist Erik Davis has stated that ‘the anxiety and longing produced by this endless struggle...helped create the background alienation that subtly drives so many cybernomads, and explains as well the interminable and often sentimental discussions about virtual community’.<sup>278</sup> If Consciousness I and II exhibited competition, distrust, and institutional hegemony, then the American story’s third act professed compassion and liberation from corporations and war and ‘declares that the individual self is the only true reality. Thus it returns to the earlier America’.<sup>279</sup>

The countercultural movements of the 60s through the 80s represented Consciousness III. Such movements have conventionally been explained as the descent of American youth into decadence and euphoria fuelled in part by the prolific use of recreational psychedelic substances.<sup>280</sup> However, historians of science David Kaiser and W. Patrick McCray have argued that the people who were part of the loosely defined movement referred to as the ‘counterculture’ did not exclusively include college students from affluent middle-class families, which Reich considered

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<sup>277</sup> Historian Theodore Roszack ascribes the countercultural movements to the same generational divide as Charles Reich. He has argued that the postwar period saw apathy on part of the previous generation towards the encroachment of corporate and institutional values into American society. This apathy and its consequences were an important factor in justifying a move away from industrial values in the following decades. See: Theodore Roszack, *The Making of a Counterculture: Reflections on the Technocratic Society and Its Youthful Opposition* (Garden City, NY: Anchor Books, 1969), pp. 1-42.

<sup>278</sup> Erik Davis, *TechGnosis: Myth, Magic and Mysticism in the Age of Information* (New York and London: 5-Star, 2004), p. 130.

<sup>279</sup> Reich, *The Greening of America*, p. 190.

<sup>280</sup> Roszack, *The Making of a Counterculture: reflections on the Technocratic Society and its Youthful Opposition*, p. 6.

the primary demographic. Instead, the demographic was peppered with ‘quirky lab-coated scientists, serious tech geeks, hippie midwives, astronaut turned surfboard entrepreneurs, goat-cheese innovators, LSD-inspired cryogenic enthusiasts, and many others’.<sup>281</sup> As compelling as it seems, a comprehensive analysis of the philosophies that permeated such enclaves in America throughout the decades is beyond the scope of this project. Therefore, the current focus is on techno-cultural enclaves that had a weird mixture of cybernetics and new-age utopianism as their theoretical foundation.

The dialogue between cybernetics and counterculture is illustrated in the pioneering work of Fred Turner and his book *From Counterculture to Cyberculture: Stewart Brand, the Whole Earth Network, and the Rise of Digital Utopianism* (2006).<sup>282</sup> Turner emphasises the role played by writer Stewart Brand as he rose to prominence in the San Francisco Bay Area (between the 60s and 80s). Brand also played a significant role in bringing the bohemian crowd of San Francisco in contact with Silicon Valley, along with intellectuals like McLuhan and Buckminster Fuller. However, given the scope of this project, this section will look at Brand’s interaction with the art group ‘The US Company’ (or simply USCO) and his contributions to the countercultural movements. The relevance of USCO stems from the fact that its founders were, according to Turner, well-versed in the writings of cyberneticians like Wiener. Turner states, ‘light, electricity, and mystical “energy” generally played a role in USCO’s work very much like the one information plays in Wiener’s cybernetics: they became universal forces that, functioning as the sources and content of all

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<sup>281</sup> David Farber, W. Patrick McCray, and Beth Bailey, ‘Afterword: The Counterculture’s Looking Glass’, in *Groovy Science: Knowledge, Innovation, and American Counterculture*, ed. by David Kaiser (Chicago and London: The University of Chicago Press, 2016), p. 392.

<sup>282</sup> This is so because Turner’s work is pioneering in its effort to extract the importance of technology from the countercultural trends. Other scholars such as Roszack and Reich attribute the rise of these movements to psychedelics and refer to technology only tangentially.

“systems” (biological, social, and mechanical).<sup>283</sup> Elaborating on the ideology of USCO, Turner draws an analogy between the porous intellectual boundaries of the Macy Conferences and the work setting of the art group’s workshops. In these workshops, artworks showcasing a utopian vision of society were created. ‘The group’s productions ranged from three-dimensional poems, with flashing lights and bold-faced words, to multimedia slide, light, and sound shows and psychedelic posters’, thus using several forms of media to transmit to its audiences a mosaic of information. Furthermore, ‘each production required input by artists with a variety of technical skills, and the collaboration in turn required both a contact language in which the artists could speak to one another and a rationale to drive their production.’<sup>284</sup>

The emphasis in the countercultural movement on ‘systems’ reveals a link between technological millenarianism and the *Sprawl* trilogy. The previous section highlighted McFarlane’s use of the concept of autopoiesis from the field of complexity theory for analysing the case studies. McFarlane’s ideas were, in turn, influenced by Clarke’s analysis of the Gaia hypothesis as a systems theory. Davis argues that systems theory was a common theoretical tool used in countercultural discourse because it subverted ‘the usual reductionist tack of dividing the fluctuating webwork of reality into isolated chunks of stuff’, and instead created a vision of ‘the world as a nest of holistic and interdependent processes, a cosmos characterized [sic] by pattern and flow rather than form and matter’.<sup>285</sup> Brand was among the countercultural thinkers fascinated with systems theory as with ‘all systems, circuit boards as well as tidepools’.<sup>286</sup> Given that both systems theory and Chardin’s ideas regarding consciousness prefer patterns over forms, Davis states that ‘Teilhard would have felt right

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<sup>283</sup> Fred Turner, *From Counterculture to Cyberculture: Stewart Brand, the Whole Earth Network, and the Rise of Digital Utopianism* (Chicago: The University of Chicago Press, 2006), p. 50. Readers should note the descriptive similarity between the USCO’s mystical views of ‘light’ and ‘energy’ and Chardin’s postulation that saw consciousness as having dynamic and energetic properties.

<sup>284</sup> Turner, *From Counterculture to Cyberculture*, pp. 50-51.

<sup>285</sup> Davis, *TechGnosis*, p. 346.

<sup>286</sup> Davis, *TechGnosis*, p. 198.

at home with systems theory', because 'some complexity theorists consider consciousness itself to be the ultimate emergent property, the ultimate face of complexity'.<sup>287</sup>

Brand was aware of the similarities between systems theory and the noosphere and stated that Chardin's ideas were 'Catholic intimations of an information "noosphere"'.<sup>288</sup> Although Brand separated systems theory from Catholicism, his ideas revealed the vision of cyberspace as a space for transcending embodiment. He suggested that social events like virtually held turned participants into 'disembodied intelligences of great intimacy', and that 'when you communicate through a computer, you communicate like an angel'.<sup>289</sup> Brand made this statement in 1985, a year before the publishing of Gibson's *Count Zero*. In Chapter 3 of the story, Bobby Newmark finds his brain-computer interface short-circuited. Moments away from death, he sees a mysterious virtual apparition of a young girl who 'leaned in, vastness unutterable, from beyond the most distant edge of anything he'd ever known or imagined, and touched him'.<sup>290</sup> This girl turns out to be Angie Mitchell. As if this description is not enough to transfigure her as an angel, Angie is referred to in the story by voodoo believers as 'Vyèj Mirak' and 'Our Lady, Virgin of Miracles'.<sup>291</sup> Regardless of whether Gibson was inspired by Brand's statement, this transfiguration of cyberspace as a potentially spiritual space reveals an interesting link that connects cyberpunk with Chardin's theological ideas regarding technology, theoretical concepts used by countercultural thinkers, and artistic ideas employed by collectives like the USCO.

The mixtures of traditional media and multimedia in the art events of USCO were inspired by their interaction with McLuhan. His primary work was regarding the role of technology in

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<sup>287</sup> Davis, *TechGnosis*, p. 346.

<sup>288</sup> Stewart Brand, *The Media Lab: inventing the future at MIT* (New York: Viking, 1987), p. 166.

<sup>289</sup> Ken Kelly, 'The Interview: Whole Earthling and Software Savant Stewart Brand', *SF Focus*, February (1985), p. 78. Cited in Dery, *Escape Velocity*, p. 56.

<sup>290</sup> Gibson, *Count Zero*, p. 22.

<sup>291</sup> Gibson, *Count Zero*, p. 74.

culture and was heavily inspired by the works of Wiener, specifically by Wiener's emphasis on the transformative potential of information and communication.<sup>292</sup> Throughout his works, McLuhan argued that technology, which originated out of the demands of bureaucracies and corporations, was slowly gaining an independent status. Technology was no longer an object of use for the human subject but was beginning to get enmeshed with human identity. McLuhan, as if describing a cybernetic godhead from the *Sprawl* trilogy, considered the underground and underwater cables used in establishing the internet and the various satellites launched into orbit as the nervous system of humanity's collective being. As mentioned earlier, the electronic media content on television, and eventually the internet, would be the abstract image of a noosphere or a global collective consciousness.<sup>293</sup>

The notion of digital technology, specifically cyberspace, possessing a millenarian potential persisted through the decades. Architect and software pioneer Michael Benedikt identifies this potential of cyberspace in the introduction to his volume on cyberspace, which includes contributions from Gibson. Benedikt believes that the 'image of the Heavenly City is...a religious vision of cyberspace'.<sup>294</sup> In his view, cyberspace extends religious desires to escape earthly existence. To attain the 'Heavenly City', human beings must give up their bodies. Cyberspace holds out the promise of disembodied paradise, a place to experience something akin to the 'bodiless exultation' felt by Case in *Neuromancer*.<sup>295</sup> Visual artist and cultural commentator Allucquere Rosanne Stone has noted that technologists in the 1980s looked forward to their eventual release

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<sup>292</sup> McLuhan coined the term 'discarnate man' to explain how cyberspace can complicate and even negate a person's relationship with his/her environment. See: Marshall McLuhan, 'The Resonating Interval', in *The Global Village: Transformations in World Life and Media in the 21<sup>st</sup> Century*, ed. by Bruce R. Powers (Oxford, New York: Oxford University Press, 1989).

<sup>293</sup> Marshall McLuhan, *Understanding Media*, pp. 46-54.

McLuhan draws various comparisons between functions of the Central Nervous System and the functions of technologies. He considers the development media technology as an attempt at externalising the human nervous system outside the body, and using words like 'servomechanisms' borrowed from Wiener's repertoire.

<sup>294</sup> Benedikt, 'Introduction', p. 16.

<sup>295</sup> Gibson, *Neuromancer*, p. 5.

from the constraints of the human body.<sup>296</sup> They argued that technology will allow humans to transcend the spatial and temporal limitations of physical existence.<sup>297</sup> Computer pioneer Jaron Lanier (who coined the term ‘virtual reality’) deplores the millenarian ‘eschatology’ drawn up by what he calls ‘cybernetic totality’, while simultaneously recognising its allure for technologists.<sup>298</sup> From a moral standpoint, he emphasises the need to establish and maintain a sense of compassionate community.

The idea of community was important to Brand as well. In 1985, he helped start a new magazine called the *Whole Earth Review*. This resulted from a merger between the Whole Earth Software Catalog (a failed business venture with which Brand tried to do the same for software tools and products that the WEC had done for physical tools), and *CoEvolution Quarterly* (another one of Brand’s editorial children which had its first publication in 1975, a few years after the last edition of *Whole Earth Catalog* was published). In 1985, Brand and the philanthropist Lawrence Brilliant launched one of the oldest virtual communities that continue to exist today, referred to as The WELL (Whole Earth ‘Lectronic Link). The WELL was one of the world’s earliest virtual communication and networking forums. Brand’s work did not stop there. He coined the term ‘personal computer’ and was one of the writers in the first published edition of *Wired*, which continues to be one of the most influential technology-centred magazines in the world.<sup>299</sup> Kevin Kelly, one of the editors of WEC and *Whole Earth Review*, became the founding executive editor of *Wired* and managed to tow along for the first edition of *Wired* contributions from notable personalities such as Sterling and Gibson. The connection between Gibson and the countercultural

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<sup>296</sup> Allucquere Rosanne Stone, ‘Will the Real Body Please Stand Up?: Boundary Stories about Virtual Cultures’, in *Cyberspace: First Steps*, ed. by Michael Benedikt, pp. 81–118.

<sup>297</sup> Davis, *TechGnosis*, p. 354.

<sup>298</sup> Jaron Lanier, ‘One Half of a Manifesto’, *Edge*, 11 November 2000 <[http://www.edge.org/3rd\\_culture/lanier/lanier\\_index.html](http://www.edge.org/3rd_culture/lanier/lanier_index.html)> [accessed 20 November 2021]

<sup>299</sup> Carole Cadwalladr, ‘Stewart Brand’s Whole Earth Catalog, the book that changed the world’, *The Guardian*, 5 May 2013 <<https://www.theguardian.com/books/2013/may/05/stewart-brand-whole-earth-catalog>> [accessed 11 January 2020]



movement makes sense. It can be seen in the *Sprawl* trilogy if the spiritual subtext of the stories introduced in this section is compared with the quasi-religious conceptions of technology held by figures like McLuhan and Brand, as they were directly or indirectly involved in generating such ideas from the 1960s onwards. Whereas the countercultural movement saw technology as millenarian, Gibson decided to turn it dystopian while retaining its spiritual potential. An anecdote regarding this inversion has been provided in an interview with Lanier, who was friends with Gibson and other countercultural figures. Lanier mentioned that ‘when the cyberpunk movement started up, I did have these preposterous arguments with Bill Gibson, saying, “Oh my god, you’re making it so dark! You’re going to curse it!”’<sup>300</sup> Although hyperbolic, such conversations highlight real-life feedback loops between science and science fiction in the 1980s and the potential for fiction to influence scientific imaginings. Such loops are issues of significant philosophical import; Chapter Three of this project is dedicated to exploring the spiritual subtext of the *Sprawl* and its implications for the development of millenarian technologies.

The period between 1970 and 1990 also saw the personal-computing revolution. This revolution involved the miniaturisation of room-sized computer mainframes into systems that sat on desktops. Throughout the 70s and 80s, Brand facilitated various meetings between engineers from the Stanford Research Institute working on human-machine integration and the countercultural figures who believed in the utopian potential of computer technology. According to Turner, Brand’s work ‘provided a framework within which engineers and hobbyists could link their own desires for both certain forms of information processing and countercultural legitimacy to the shifting capacities of new computing machines’.<sup>301</sup> A comprehensive account of the role played by Brand and computer industry engineers of the Bay Area in bringing about the revolution in personal

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<sup>300</sup> Adi Robertson, ‘VR pioneer Jaron Lanier on dystopia, empathy, and the future of the internet’, *The Verge*, 8 December 2017 <<https://www.theverge.com/2017/12/8/16751596/jaron-lanier-dawn-of-the-new-everything-vr-interview>> [accessed 20 November 2021]

<sup>301</sup> Turner, *From Counterculture to Cyberculture*, p. 114.

computers is not possible; however, the fact that this revolution did take place is more important for this thesis than how it took place.<sup>302</sup> The more pertinent issue is how the new technology initiated a change in the subject-object relationship between individuals and their computers and reinforced the subjective element of the cyberspace metaphor in people's daily lives.

## 4. Freedom and Control: Making Meaning with Computers

This section follows up on millenarianism discussed in the previous section by pivoting to how computers and cyberspace became avenues—although technological—of producing abstract meaning in the 1980s. The focus will be on the third question raised at the beginning: How can cyberpunk be used to understand cultural formation? To answer this question, this section will start by giving examples from the *Sprawl* trilogy that show cyberspace as an information space and a space for creating meaning. The symbolism employed in the case studies for the transposition of cyberspace as a meaning-producing space is paralleled by real-world practices that emerged along with ubiquitous computing in the 1980s. To support this assessment, this section will focus on the ethnographic work conducted by Sherry Turkle in the 1980s that showed how computers allowed people to find meaning in life. This section aligns with the perspective of the editors of *Routledge Companion to Cyberpunk Culture* (2020), who argued that the relevance of cyberpunk lies in its ability to act as a lens through which readers can examine the changing relationship between humanity and technology.

Between 1970 and 1990, the budding world of cyberspace became available to anyone who could afford a personal computer in the West. This development is relevant for understanding the

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<sup>302</sup> For a detailed account of the development of personal computing technology see: Turner, *From Counterculture to Cyberculture*, pp. 103-141.

relationship between cyberpunk and cultural practices. Sociologist Manuel Castells, while analysing the rise of information technology in this period, has argued that the ‘information technology revolution half-consciously diffused through the material culture of our societies the libertarian spirit that flourished in the 1960s movements’.<sup>303</sup> Its influence can be seen when, in 1996, John Perry Barlow presented the world with *A Declaration of the Independence of Cyberspace* in Davos, Switzerland.<sup>304</sup> Anti-establishment and anti-authoritarian sentiments characterise cyberpunk. However, the genre is not limited to such labels as it would be a gross underestimation of what technology can do today and also in Gibson’s cyberpunk imaginary, where computers are non-figurative gateways to a different reality.

The potential of the cyberspace metaphor is demonstrated at the beginning of *Neuromancer* when Case is suffering from his inability to access it due to neurological damage. He had spent a year limited to physical space, and ‘he still dreamed of cyberspace, hope fading nightly. All the speed he took, all the turns he’d taken and the corners he’d cut in Night City, and still he’d see the matrix in his sleep’.<sup>305</sup> Case did not see cyberspace as a space for communication and information distribution like the twentieth-century cyberneticians, nor did he see it as a simulacrum that lacked authentic meaning, as Gomel proposes. Instead, cyberspace for Case was a subjective and experiential space where he could feel the ‘bodiless exultation’ of uniting with the collective consciousness, where his consciousness could literally become part of something bigger than his physical self.<sup>306</sup> Case’s perception of cyberspace aligns with Chardin and McLuhan. The following paragraphs will show that the real potential of computers lies in their ability to provide alternative methods and avenues of generating meaning and value.

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<sup>303</sup> Manuel Castells, *The Rise of the Network Society*, 2<sup>nd</sup> edn (Blackwell, 2010), p. 6.

<sup>304</sup> John Perry Barlow, ‘A Declaration of the Independence of Cyberspace’, *Wired*, 1 June 1996 <<https://www.wired.com/1996/06/declaration-independence-cyberspace/>> [accessed 16 June 2019]

<sup>305</sup> Gibson, *Neuromancer*, p. 5.

<sup>306</sup> Gibson, *Neuromancer*, p. 6.

The previous section explored how cybernetics and spiritual notions informed the cyberspace metaphor and the millenarian ideals of artists and entrepreneurs. Such interactions were taking place alongside the development of personal computing technology. As argued previously, the significance of cyberpunk is highlighted in how it facilitates critical analyses of socio-cultural practices. This capacity is particularly relevant for the *Sprawl* trilogy, which has been scapegoated to argue for the death of cyberpunk. I argued in the Introduction that such criticisms tend to ignore the spiritual subtext of the stories in question. An analysis of this subtext can highlight the cultural significance of cyberspace as a space for sharing information and a space where people continue their search for meaning. For example, the previous section presented the idea of cyberspace being ineffable, an etherial cybernetic plane of sorts. Beghetto, while analysing sacredness in the *Sprawl* trilogy, has acknowledged the argument that spiritual notions regarding cyberspace emerged ‘not because the new metaphor dropped magically from heaven, but by the same process through which most religious symbols have been born: naturally out of the everyday experience of real people’.<sup>307</sup> Following this perspective, to explain the relationship between cyberpunk symbolism and our ‘quotidian reality’ that scholars have called for, the following passages attempt to show how computers allowed for the creation of value and meaning in avenues separate from social life.<sup>308</sup> The focus on computers is needed because the spiritual potential of cyberspace cannot emerge abruptly. The latent potential for creating a subjective space must be located in the individual nodes that make up cyberspace.

The ethnographic research conducted by Sherry Turkle at MIT during the 70s and 80s is valuable in understanding this evolving relationship between individuals as ‘users’ and computers as subjective instruments. Turkle’s work is unique because it places human identity and

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<sup>307</sup> Charles Henderson, ‘The Internet as a Metaphor for God?’, *CrossCurrents*, 50 (2000), 77-83. Cited in Beghetto, *Monstrous Liminality*, p. 124.

<sup>308</sup> Anna McFarlane, Grahan J. Murphy, and Lars Schmeink, ‘Cyberpunk as Cultural Formation’, p. 1.

relationships at the centre of its analysis rather than merely offering a descriptive or statistical account of technological developments taking during her research. When describing her time at MIT, Turkle thinks of herself as playing the part of an ‘anthropologist who lives in an isolated village in a far-off place to get to know its inhabitants, their ways of seeing and doing things, their myths and rituals, their economy and artefacts’.<sup>309</sup> Given this orientation, Turkle’s ethnographic analysis considers computers not as a technology created for research, pedagogical, or consumerist purposes, but as new cultural artefacts. Instead of becoming objects of thought, such artefacts act as catalysts or ‘evocative objects’ for thinking about the nature of identity and the world.<sup>310</sup>

Even though Turkle’s arguments are based on interviews and surveys conducted in specific locations during a specific period, they resonate with her formulation of computers as evocative objects and with philosophies of mind. One such theory is ‘the extended mind’, proposed by philosophers Andy Clark and David Chalmers in 1998.<sup>311</sup> Clark and Chalmers argue that objects within one’s environment play an active role in mental processes through a process they called ‘active externalism’, which involves the brain externalising its functions to the instruments individuals use and, in turn, internalising the functional potential of instruments.<sup>312</sup> This position suggests that the sense of self is porous and susceptible to change. This enmeshing of psychological structure and material instruments acquires new significance in a time of growing ubiquitous computing. This enmeshing is also relevant for this project because, as Beghetto has argued, the religious transfiguration of cyberspace in the *Sprawl* ‘challenge[s] the idea of the unitary self by dissolving the binary of both self and other’ and alludes to a search for meaning and value in

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<sup>309</sup> Sherry Turkle, *The Second Self: Computers and the Human Spirit*, 20th anniversary ed., (Cambridge, MA: The MIT Press, 2005), p. 303.

<sup>310</sup> See Sherry Turkle, *Evocative Objects: Things We Think With* (Cambridge, MA: MIT, 2007).

<sup>311</sup> Andy Clark and David Chalmers, ‘The Extended Mind’, *Analysis*, 58 (1998), 7-19.

<sup>312</sup> The Extended Mind thesis is not only limited to physical tools but has been broadened to analyse its relationship with cultural tools and symbols. For a comprehensive analysis of this approach see: Carl Ratner, ‘Macro Culture and Psychology’, in *Macro Cultural Psychology: A Political Philosophy of Mind* (Oxford University Press, 2011).

Western modernity.<sup>313</sup> Castells makes a similar observation and notes an essay by social psychologist Raymond Barglow in which the dreams of Barglow's patients in the high-tech environment of 1990s San Francisco are described: 'the dreamers...express a sense of solitude experienced as existential and inescapable, built into the structure of the world...Totally isolated, the self seems irretrievable lost to itself.'<sup>314</sup> Castells argues that this isolation and fracturing of the self led to 'the search for a new connectedness'.<sup>315</sup> I agree with Castells and suggest that linking psychological isolation with the structure of the world reinforces a mechanised and meaning-less view of the world. By turning the physical world into a space devoid of meaning, the *Sprawl* trilogy allows characters like The Wig and Gentry to see cyberspace as the abode of ineffable meaning, the abode of a cybernetic God.

This search for meaning is central to Turkle's book *The Second Self* (1984). The book focuses on three demographic groups: children growing up while constantly interacting with personal computers, technology enthusiasts using computers for recreational purposes, and non-enthusiasts using computers due to professional or domestic necessity. Turkle observes that many people working in the tech industry who brought computers into their homes shared an interesting characteristic. Much like the experiences of those living through the Consciousness I and II periods of American history proposed by Reich, these programmers and engineers found themselves working in the middle-management and engineering departments of tech corporations. In their professional capacity, they exercised only fragmentary control over the creation of software and computer programmes. Turkle brings up the case, among several others, of a programmer named Carl, who overcame his feeling of dissatisfaction and lack of control by building a home computer system. He created a whole system that worked on rule sets within parameters he could understand

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<sup>313</sup> Beghetto, *Monstrous Liminality*, p. 124.

<sup>314</sup> Castells, *The Rise of the Network Society*, p. 23.

<sup>315</sup> Castells, *The Rise of the Network Society*, p. 23.

completely and had complete control over. Creating this miniature system gave Carl a sense of balance that many people cannot experience as they live by rules they did not create in environments that are not of their choosing.<sup>316</sup>

This characteristic of transparency and control that early computers provided was not limited to the personal lives of their owners but bled into their broader views on politics and society. The previous sections explored how technology provided a language of liberation and alternative frameworks to live by for people who had given up on social hierarchies and norms. However, these experiences were not exclusive to hippies rebelling in the hinterlands.<sup>317</sup> Turkle observes that, just like the programmer mentioned above, there were people who re-territorialised the process of understanding and assembling a computer into the political sphere. She introduces a fifty-odd-year-old electronic salesman named Wyatt, who bought a computer and taught himself how to write computer programmes. This salesman, who contrasts sharply with the young members of the countercultural movement, felt burdened and despondent because of the opacity of politics and macroeconomics and longed for a world where ‘people used to understand more about how things work’.<sup>318</sup>

While people like Carl and Wyatt used computers as their personal domains that they could understand and control, other more mainstream consumers used computers for functional purposes. Contra the tech enthusiasts, for these mainstream consumers, the primary attraction of personal computer systems was the accessibility provided by the user interface and its relatability with the real world. Turkle talks about Doris, a history professor, who used her computer mainly as a word processor for writing. Unlike Carl or Wyatt, Doris was not trying to learn any programming

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<sup>316</sup> Turkle, *The Second Self*, p. 160.

<sup>317</sup> This is a reference to the previously mentioned observation by Farber, McCray, and Bailey about the demographics of the American countercultural movement from the 1960s onwards; see the previous section titled ‘Cyberspace: A Space for Countercultural Utopianism’.

<sup>318</sup> Turkle, *The Second Self*, p. 163.

languages or understand how the CPU worked but focused on learning how to get her work done. Her relationship with the computer developed like that of a child who tries to learn the football rules. For such a child, the molecular structure of the football or the atmospheric pressure at the field can be imagined as less relevant than running and kicking. Similarly, Doris's ability to assemble the CPU or try to operate and manipulate the system with programming languages was less relevant than using the programs built into the system to accomplish her goals. Rather than trying to understand and manipulate the rules working on the system, Doris was trying to work within them.<sup>319</sup> It is important to note that as computer systems developed, their software became increasingly complex. Simultaneously, the user interfaces became more user-friendly and accessible to those who did not necessarily possess the technical skills of programmers. So, while early-stage enthusiasts were interested in understanding their systems at their most fundamental level, later-stage consumers realised their desires for transparency and control at the level of user interfaces superimposed on a layer of opaque software.

The resolution of dissatisfaction arising from a lack of control was provided at the hardware, software/user interface, and virtual narrative level. Turkle's observations show that an important aspect of this resolution was the availability of a system which could be understood and manipulated entirely by an individual. A similar experience is developing with innovations in computing and digital entertainment innovations. Turkle mentions the example of David, 'the lawyer who found Zen in the video game,' for whom the virtual environment of a video game provided a microcosm of the world with a specific set of rules that could be understood within minutes.<sup>320</sup> Video games can be included in the same evocative paradigm as early personal computer systems as they work on logic. The reference is not to the programming that went into the games' software, nor is it limited to the complexity of the game in question. A good example is

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<sup>319</sup> Turkle, *The Second Self*, p. 177.

<sup>320</sup> Turkle, *The Second Self*, p. 173.



Tetris, one of the most popular arcade games in history. In Tetris, blocks of different shapes descend from the top of a screen, and the user has to press different buttons on their gaming device to change the orientation of the block in order for them to fit together. There is a rudimentary level of programming that goes into the creation of such a game. However, the significant factor in playing the game is not the logic that went into its creation and functioning but the predictability on which it operates. The shapes descending from the horizon of the screen will change their orientation on the screen regardless of the identity, religion, race, ethnicity, gender, or political orientation of the user as long as she/he presses the right buttons in the same interval of time every time till the game is over. The experience that the game provides is based on a logic that can be entirely grasped within a set amount of time.<sup>321</sup> Users do not need to understand the software in the processing units of the device to control and enjoy their experience. The gaming experience has become increasingly complex over the decades so has the user experience, but it exists within the same mental-machinic framework as the participants of Turkle's surveys.<sup>322</sup>

As it developed from the 1970s onwards, computer technology provided a new space for individuals to reevaluate and reorientate their perspectives on life and their position in society. For members of the countercultural movements, technology acted as an instrument through which they could reposition themselves contra the narrative of American capitalism and progress. As the consumer base of these technologies, especially the personal computer, started growing exponentially from the 70s onwards (due to its miniaturisation), the discursive space enjoyed by countercultural figures began admitting more members. As this discursive virtual space became

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<sup>321</sup> Some interesting psychological studies on the relationship between video-games and social behaviour include: Elizabeth A. Boyle, Thomas M. Connolly, and Thomas Hainey, 'The role of psychology in understanding the impact of computer games', *Entertain. Comput.* 2 (2011), 69-74; Nor Nazrina Mohamad Nazry and Daniela Maria Romano, 'Mood and learning in navigation-based serious games', *Computing Human Behaviour*, 73 (2017), 596-604.

<sup>322</sup> Although history of the development of video-game narratives is not possible within the scope of this project and is only tangentially relevant to it, for a discussion on the narrative world-building in newer games see: Michael Zalot, 'From Intertext to Outcome: An Archaeology of Classic Video Game Narrative', *Atlantic Journal of Communication*, 26 (2018), 291-305.

available to the larger population, it provided an avenue to reevaluate the notions of personal identity. Suppose an individual has the ability and desire to create various profiles on websites that do not resemble their identity and characteristics in real life. In that case, the idea of a unified and continuous identity becomes susceptible to questioning. It is possible to compare practices such as using pen names or publishing under alter egos. However, such a comparison would overlook that publishing requires some skill and an agreement with the publisher. The presence of virtual communities negates both of these requirements significantly. Digital spaces offer a world where identity can be conceptualised as performative and processual. By being spaces in their own right, digital spaces echo Gentry's statement from *Count Zero* that 'There are worlds within worlds'.<sup>323</sup>

## Concluding Remarks

The twentieth century in America saw the delineation of a new space for intra and interpersonal interactions: cyberspace. The metaphorical or performative aspect of cyberspace made it a good fit for cyberpunk literature. Beyond literary practice, as meaning and value become implicated in digital technology, it is critical to remember that technology is not neutral. Just as people carve out new spaces in the world, the spaces shape them in turn. This process is visible today as software is increasingly being embedded in objects and spaces and enrolled in a range of practices with diverse implications, resulting in advancements in technical understanding of new technologies and production of prototype systems based on the emergence of new commercial opportunities.<sup>324</sup> Such developments are driven by the idea that computation should be available wherever it is needed; computation should be organised around people and their everyday lives and not human lives

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<sup>323</sup> Gibson, *Mona Lisa Overdrive*, p. 111.

<sup>324</sup> A good example is Mark Zuckerberg's bold project of building the Metaverse which is ostensibly designed for work as well as leisure activities. Moreover, the project involves the development and implementation of various technological platforms like VR headsets, smart glasses, smart watches, and ambient sensors. This topic will be covered more in the Conclusion.

around computation, as is presently the case.<sup>325</sup> Writer and urbanist Adam Greenfield notes that this discursive context has created to the notion of ‘everyware’, which involves the speculation that computational power will soon be distributed and available at any point on the planet—calculative capacity will be available everywhere, with multiple computers operating for every person.<sup>326</sup> Arguably, the dawn of everyware brings to mind the vision of Chardin and McLuhan, which sees technology and human civilisation as symbiotic and co-creative.

Ultimately, like the layer of intelligence envisaged by Chardin and McLuhan, everyware will supposedly generate ambient intelligence—objects and spaces that are sensitive and responsive to the presence of people or other coded objects. Such ambient intelligence is defined by being context aware and personalised. In this sense, Greenfield defines everyware as driven by self-organising and self-learning code. It is not intelligent in the classical sense of producing devices and environments with consciousness like *Wintermute*, but smart in that it is aware and responsive. Examples of everyware already exist if the concept of ‘environment’ is replaced with ‘ecosystem’. In the tech world, the term refers to a system that facilitates a variety of devices to seamlessly work together; there is also a convenient sharing of data among the devices.

A case in point is the tech company Apple Inc. based in Cupertino, California which makes a wide range of devices and binds them together through software. As a result, being in the Apple ecosystem entangles the user deeply in its experience and aims at never letting them go. The Apple Watch, for example, is a wearable device with tracking features to monitor blood oxygen levels, calories burned during exercise, geolocation data, sleeping patterns, and heart rate. The rhythm of the user’s heartbeat can be recorded and shared with other Apple Watch users. All the data collected

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<sup>325</sup> Paul Dourish, *Where the action is* (Cambridge, MA: MIT Press, 2001).

<sup>326</sup> Adam Greenfield, *Everyware: The dawning age of ubiquitous computing* (Boston: New Riders, 2006).

by the device can be synced with other apple devices using iCloud (Apple's cloud-based native file storage and synchronisation service). The technological ecosystem can now encompass an entire house, from clocks, speakers, lights, doorbells, cameras, windows, window blinds, water heaters, air conditioning, and kitchen utensils all connected in the Internet-of-Things. It is now possible to connect all household amenities to a wireless network and collect data about the user's daily activities and habits to optimise the house's functioning. The confluence of biometric data from personal wearable devices and the data collected from physical objects like household items or around a city is more than just a science fiction scenario; it is a possible future that has already been predicted. The Institute for the Future in Palo Alto, US (a prominent think-tank), has constructed the following scenario:

Biology and IT have converged for over a decade, and we can already see democratising effects. Sequencing the first human genome in 2003 established genomics as a data science and core about \$2.7 billion. By 2015, with over 228,000 genomes sequenced and the cost of sequencing a genome dropping five- to tenfold annually, a \$1000 genome appears not far off. But with the rise of cheap, accessible sensors in, on, and around our bodies, and in the natural world and built environment, we'll generate massive amounts of data, from how and what we eat affects our health, to how collective microbiome of a city evolves. We'll be able to do this almost effortlessly. Advances in inference engines and artificial intelligence will drive data to actionable insights about the way natural systems within and outside our bodies work.<sup>327</sup>

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<sup>327</sup> 'An Exhibit of Bio:Made Creations of the Future', <<https://www.iftf.org/biomade/>> [accessed 21 January 2020]

The spatiality of the new cities will inevitably change with the exponential increase in data collection and analyses, and that fact is not lost in such predictions:

We are creating a new kind of reality—a “blended reality” in which physical and digital environments, media, and interactions are woven together throughout our daily lives. In this world, the virtual and the physical are seamlessly integrated. Cyberspace is not a destination; rather, it is a data layer tightly integrated into the world around us. Smartphones, digital displays at various new locations in the physical environment, and maybe even augmented-reality glasses take the internet...and weave it into our surroundings wherever we go. We are beginning to see and feel the world through a new set of eyes and ears—things that were previously invisible become visible, and we see the familiar in a new way.<sup>328</sup>

Such visions echo the aesthetic of cyberpunk built around the work of Gibson and others who have constructed visions of future spaces that fuse biology with technology. The phenomenal growth of cyberspace and software and their use stems from how they codify the world into rules, routines, algorithms, databases.<sup>329</sup> Some science and technology scholars argue that although software and algorithms are not sentient or conscious but can exhibit some of the characteristics of being alive,<sup>330</sup> while others have described them as a mix of ‘the artificial and a new kind of natural, the dead and a new kind of living’.<sup>331</sup> Kitchin and Dodge note that this property of being alive is significant because it means code can make things work autonomously in the world—that is, it can receive

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<sup>328</sup> ‘The New Spatial Landscape: Artifacts from the Future’, <<https://www.iftf.org/our-work/people-technology/technology-horizons/the-new-spatial-landscape/>> [accessed 21 January 2020]

<sup>329</sup> Kitchin and Dodge, *Code/Space*, p. 5.

<sup>330</sup> *ibid.*

<sup>331</sup> Nigel Thrift and Shaun French, ‘The automatic production of space’, *Transactions of the Institute of British Geographers*, 27 (2002), 309-335.

data, process information, and make decisions, without human oversight or consent.<sup>332</sup> However, because software is embedded into objects and systems in subtle ways, it forms a technological unconscious that largely goes unnoticed unless it fails.<sup>333</sup>

Consequently, software often appears to tease the boundary between sentient and non-sentient because it works in ways that are not clear and visible.<sup>334</sup> This dissolution between the boundaries of sentient and non-sentient, instead of providing any solution to the human condition, begs the question: if spaces of the future will be built on a digital foundation, what kind of bodies will inhabit such spaces? Cyberpunk offers fictional futures inhabited by characters with technology embedded in their bodies. The next chapter will explore how such bodies are conceptualised in the *Sprawl* trilogy.

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<sup>332</sup> Kitchin and Dodge, *Code/Space*, p. 5.

<sup>333</sup> Nigel Thrift, 'Remembering the technological unconscious by foregrounding knowledges of position', *Environment and Planning D, Society and Space*, 22 (2004), pp. 175-190; Stuart Graham and Nigel Thrift, 'Out of order: Understanding repair and maintenance', *Theory, Culture and Society*, 24 (2007), 227-248.

<sup>334</sup> A case in point is the chatbot ChatGPT developed by the American company OpenAI based on their neural-networking large-language model GPT4, which has forced experts in the field to question whether the chatbot has some form of awareness. See: Eric Schwitzgebel and Henry Shevlin, 'Is it time to start considering personhood rights for AI chatbots?', *Los Angeles Times*, 5 March 2023, <<https://www.latimes.com/opinion/story/2023-03-05/chatgpt-ai-feelings-consciousness-rights>> [accessed 15 March 2023]

# Chapter Two

## Transcending **Body: Biotechnology, Culture, and Autopoiesis in the *Sprawl* trilogy**

### Introduction

This chapter will use Gibson's *Sprawl* trilogy to illustrate that cyberpunk represents the dominant cultural paradigm of the twenty-first century. The focus will be on analysing the cyborg metaphor to explore human and animal bodies at the nexus of capitalist enterprise and biotechnology. My argument is that technology is rapidly making the concept of 'nature' and 'natural human' obsolete, consequently making embodiment the product of material and discursive practices. This exploration will use the *Sprawl* trilogy, where techno-capitalism acquires an autopoietic character and causes an inversion in the relationship between consumers and producers. I contend that this inversion pivots on the concepts of identity and embodiment that are dominant in the cultural milieu surrounding the deployment of such technologies. Concepts of identity and embodiment are significant for their effects on the human species and for the relationship between humanity and the natural world. Cyberpunk provides a privileged site to understand this point of inversion where capitalism's cultural ethos and market forces become producers of embodiment. This chapter will show that embodied subjectivity is critical in articulating the ethical implications of technologies of the body.

The first section, titled 'Cultural Autopoiesis and the *Sprawl* trilogy', will focus on the debates around enhancement and genetic engineering technologies to argue that emerging genetic engineering practices are born out of the need to facilitate the commodification of the human condition. The expansion of such technologies calls for rigorous debates around the nature and need

for enhancement. Sociological and cultural factors must be taken into consideration as these technologies grow. Towards this end, the concept of ‘simstim’ (short for simulated stimulation) technology from the *Sprawl* trilogy will be analysed to show the feedback loops between cultural expectations and the production of personal identity. It is imperative to distinguish between enhancements and procedures that are medically necessary from those that are cosmetic or elective. Too much investment in cosmetic enhancements might make them lucrative for capital investment. The consequences of unchecked biotechnological expansion will be explored using the AI characters from Gibson’s work. Wintermute started as an AI designed to secure the financial ends of the T-A conglomerate. As it grew in complexity, it kept following the goals of T-A until it fused with its other half and became an independent entity encompassing the entirety of cyberspace. It became cyberspace itself. However, it fractured and separated itself into multiple self-aware entities roaming cyberspace in *Count Zero*, referred to as cyber-loa or cyber-ghosts. These cyber deities needed humans that they could ‘ride’, which required them to possess a user through their cyber-deck and force them to take actions towards unknown ends. Eventually, the cyber-loa stop the machinations of a corporate giant trying to monopolise the global economy.

My argument is that Wintermute was initially a financial and legal algorithm. However, when it fused with Neuromancer, it transformed into the manifestation of the global capitalist economy that relies on cyberspace. Cyber-loa, on the other hand, are manifestations of techno-capitalism that have become self-regenerating. Their actions throughout *Count Zero* prevented Josef Virek from establishing a monopoly on the global market and eventually led to his ‘liberation from life—at the hands, so to speak, of Baron Samedi, the electronic loa of death’.<sup>335</sup> Thus, technology succeeds in ‘liberating itself from enslavement by humans’, while preserving the ideals of capitalism necessary for its perpetuation.<sup>336</sup> The users that the loa ‘ride’ represent passive

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<sup>335</sup> Mead, ‘Technological Transfiguration in William Gibson’s *Sprawl* Novels’, 355.

<sup>336</sup> *ibid.*



consumers swept up in the capitalist current, and capitalism becomes a self-organising and self-preserving entity. The subsequent paragraphs will explore the ethical and moral dimensions of genetic engineering. This discussion will be contextualised through the character of 3Jane. She is presented throughout the *Sprawl* trilogy as psychologically unstable. Her identity is a physical manifestation of commercial interests since she was genetically designed to manage the T-A conglomerate. Though mostly without cybernetic implants, she nonetheless represents a fracture (or mutation) in humanity caused by the commercialisation of human nature. Once enhancements stop being limited by medical necessity, it will create a fertile ground for market forces to manipulate human bodies and the human condition for profit-seeking. The overarching argument of the thesis posits cyberpunk as a set of cultural metaphors. This argument will be supported using the concept of 'autopoiesis' to reveal the metaphoric and discursive construction of cyborg bodies. Autopoiesis can be applied to Gibson's oeuvre from cybernetic, phenomenological, and sociological perspectives. McFarlane has already provided cybernetic and phenomenological interpretations. Therefore, my emphasis will be on the sociological approach. I will highlight that although autopoiesis is helpful, it does not fully embody the *Sprawl* trilogy, as it overlooks the spiritual nuances of the stories. To make this claim, the first section will pick out its weaknesses and suggest that Chardin's framework can supplement the gestalt approach proposed by McFarlane.

The second section, titled 'Taming the Flesh: Autopoietic Meat', will use the concept of market forces penetrating the bodies of passive consumers to pivot the discussion toward synthetic biology. The section will start by highlighting transhumanist attitudes towards embodiment and physicality and providing an account of the efforts toward producing synthetic meat and synthetic flesh. The subsequent paragraphs will then show different perspectives regarding what constitutes real meat or real biology. These discussions will be contextualised for this thesis using examples from Gibson's work. I argue that synthetic biology is yet another step in dissolving the boundaries between culture and nature. It destabilises the notion that nature exists outside human culture and

ambitions. These arguments will be supported using the depiction of animal bodies in the *Sprawl* books and Gibson's *The Peripheral* (2014). In *Neuromancer*, it is implied that most wild animals have gone extinct and meat from naturally reared whole animals is a luxury that is only available to the wealthy. I suggest that autopoiesis in the techno-capitalist world of *Neuromancer* moves too fast to accommodate nature and natural processes. The most extensive depiction of animals in Gibson's oeuvre is in *The Peripheral*. The book's inclusion can show the current relevance of cyberpunk as the online video-streaming service Amazon Prime released a live-action serial adaptation of Gibson's book in 2022, and a second season is already in development. The story's timeline is divided into two halves: pre-singularity and post-singularity. In the pre-singularity timeline, it is suggested that most national parks have been privatised. In the post-singularity timeline, no naturally present animals can be seen. The only animals that exist are those created by gene-splicing. Such as a bird with the wings of a butterfly or Tyennas (a combination of Tasmanian devils and hyenas). The only depiction of animals in the wild is on the flesh of a cybernetically enhanced character named Ash. This depiction highlights the final conflation of nature and culture. The ease of printing flesh and the animals on Ash's skin show the unification of nature and culture and raise important questions regarding ethics based on the natural state of bodies.

In terms of ethics, political scientist Francis Fukuyama argues for a return to ethics based on natural rights in his widely cited book on medical innovations.<sup>337</sup> This philosophical orientation posits social norms and rights as derived from the perceived universality of human nature. Consequently, genetic engineering and other medical enhancements should be rejected as they destabilise the supposed universality and human sanctity. Transhumanists like Boström hold an opposing view and advocate for improving human life through technology. Boström contends that human nature is a work in progress and changes with social and temporal conditions.<sup>338</sup> In this view,

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<sup>337</sup> Francis Fukuyama, *Our Posthuman Future: Consequences of the Biotechnology Revolution* (New York: Farrar, Straus and Giroux, 2002).

<sup>338</sup> Nick Boström, 'Human Genetic Enhancements: A Transhumanist Perspective', *The Journal of Value Inquiry*, 37 (2003), 493-506.

the universality of human nature or human essence is de-prioritised. Technological enhancements provide the opportunity for new experiences and human growth. However, I suggest that surrendering a stable personal identity in favour of growth problematises the relationship between subjects and the market.

A prime example of this problematic in the *Sprawl* trilogy is Case's relationship with Wintermute. Case's actions in *Neuromancer* are linked to his body and needs. When Case was caught cheating his previous employers, they 'damaged his nervous system with a wartime Russian mycotoxin', preventing him from re-accessing cyberspace.<sup>339</sup> Wintermute recruits him because the damage to his body has put him in a vulnerable position. The damage to his body has also cut Case off from cyberspace which was his passion and his primary source of income. Wintermute offers to repair the damage and allow Case to return to cyberspace. However, it installs toxins inside Case's body to force him into doing a risky job for the AI. Unable to access cyberspace, Case becomes addicted to narcotics that stimulate his nervous system in various ways. His desire to transcend his body is rooted in his body's need for a high. Case's situation is an ironic fulfilment of a joke in the *Neuromancer* world recounted at the beginning of the novel: 'It's not like I'm using...it's like my body's developed this massive drug deficiency.'<sup>340</sup> In a world where commodification and consumerism are akin to laws of physics, even bodily processes are being harvested by the more powerful.<sup>341</sup> Although human activity is introduced into the metaphoric space of cyberspace, the agency of the body within techno-capitalism (represented by cyberspace) is only an illusory escape from the subject's lived experiences. Gender theorists Alison Adam and Eileen Green suggest that 'the rhetoric of escape—escape from the body, escape from a world gone wrong—has seeded itself

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<sup>339</sup> Boström, 'Human Genetic Enhancements', 6.

<sup>340</sup> Boström, 'Human Genetic Enhancements', 3.

<sup>341</sup> Bould, 'Why Neo Flies, and Why He Shouldn't', 116-134.

Refer to the first section in Chapter One, titled 'Cybernetics and the Instrumental Interpretation of Cyberspace'.

into contemporary cyber culture'.<sup>342</sup> The *Sprawl* trilogy interrogates embodiment by juxtaposing the desire to transcend the body with representations of the material consequences faced by damaged bodies.

The technologies analysed in this chapter were chosen because they destabilise the human condition in relation to the body. The cyborg impulse (made manifest through genetic engineering) offers the narrative of transcending the vicissitudes of physicality. This impulse pushes the perspective that the physical body and all that is given in nature is inherently flawed. Genetic engineering and enhancement subvert the idea of shared human nature and experiences by making embodied experiences alterable and marketable. Finally, synthetic meat challenges the foundation of biology and portrays the final transcendence of flesh. Not just what humans are and where they come from, but technological millenarian expectations are remodelling even flesh and food. If the future of humanity were extrapolated based on these technologies, it would be strange to conclude that humans of the future would be, in any meaningful way, natural.

## 1. Cultural Autopoiesis and the *Sprawl* trilogy

This section will explore the feedback loops between capitalism, consumerism, biotechnology, and embodiment. The initial paragraphs explore how capitalist enterprise and consumerism produce economies of identity and subjective experiences. Cyberpunk and the *Sprawl* trilogy will be situated within this framework to highlight how the speculative technologies in its stories reflect emerging social realities in the West.

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<sup>342</sup> Alison Adam and Eileen Green, 'Gender, Agency, Location and the New Information Society', in *Cyberspace Divide: Equality, Agency and Policy in the Information Society*, ed. by Brian D. Loader (London, UK: Routledge, 1998), pp. 83-97.

Identity and subjectivity become discursive and politicised through the cyborg metaphor situated in a techno-capitalist framework alongside enhancement technologies. Cultural theorists Bryan Turner and Mike Featherstone have described efforts to create identities and meanings by illustrating the history of transformation in social life that resulted in increased attention to bodily practices in capitalist economies.<sup>343</sup> They argue that leisure time expands after labour-saving devices and mass-produced goods become commercially ubiquitous. Such developments turn the body into a cultural project through which individual identity is constructed. Social theorist Susan Bordo, along with Featherstone and others, has demonstrated that ‘turning the wheel of desire, production, and consumption’ is sped up with the circulation of images by commercial interests that advertise and promote specific images of the ideal body.<sup>344</sup>

Findings about pathology that could be generalised to large demographics have augmented notions about the necessity of desirable and undesirable bodily states.<sup>345</sup> Philosopher of medicine Georges Canguilhem, in his work on social normativity in America, has suggested that, in health, institutions construct the idea of normality by conceptualising health states into ‘a dichotomy of normal and abnormal states’ to manage populations’ health and labour.<sup>346</sup> Sociologist Leonard Davis has called this an institutional state of ‘normalcy’. He understands this as ‘the political-judicial-institutional state that relies on the control and normalisation of bodies’.<sup>347</sup> Canguilhem observed that norms result from medical, legal, and social narratives, making norms highly context-

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<sup>343</sup> Bryan Turner, *The Body and Society* (CA: Sage, 1996); Mike Featherstone, ‘The Body in Consumer Culture’, in *The Body: Social Process and Cultural Theory*, ed. by Mike Featherstone and M. Hepworth (London: Sage, 1991), pp. 170-196.

<sup>344</sup> Susan Bordo, ‘Braveheart, Babe and the Contemporary Body’, in *Enhancing Human Traits: Ethical and Social Implications*, ed. by Erik Parens (Washington: Georgetown University Press, 1998), pp. 189-220.

<sup>345</sup> Linda F. Hogle, ‘Enhancement Technologies and the Body’, *Annual Review of Anthropology*, 34 (2005), 695-716.

<sup>346</sup> Georges Canguilhem, *The Normal and the Pathological* (New York, NY: Zone Books, 1989).

<sup>347</sup> Leonard Davis, *Bending Over Backwards: Disabilities, Dismodernism and Other Difficult Positions* (New York, NY: New York University Press, 2002), p. 107.

specific.<sup>348</sup> Specific formulations of the norm lead to a drive towards perfection, where everyone falls short, and the body requires constant updates and modifications.

In cyberpunk, according to Sterling, this desire towards perfection manifests itself in the urban, technologically advanced environments as seen in the *Sprawl* trilogy, which are run by interconnected systems of capital that include global capitalism, late-capitalist consumerism, and the mass media.<sup>349</sup> The genre's decentralised emphasis allows the network metaphor to be used to both physical locations and individual characters like Case and Molly as their bodies are transformed into a network of nodes that can be modified and improved endlessly. However, Lars Schmeink states that the tendency for unending improvement is depicted concurrently with what Bould refers to as a 'stylistic of revolt'<sup>350</sup> against institutional parameters of normalcy.<sup>351</sup> Furthermore, the techno-capitalist 'desire for something greater than the fallible human being'<sup>352</sup> noted by Csicsery-Ronay Jr. is how the genre frames the rejection of Western institutional values and the simultaneous antagonism against corporations that are central to cyberpunk's subversive tone.<sup>353</sup> The cyberpunk drive towards perfection manifests itself in the *Sprawl* trilogy through biotechnologies developed in hyper-capitalist societies that express no qualms about leaving the naturally flawed human behind.

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<sup>348</sup> Christiane Sinding, 'The Power of Norms: Georges Canguilhem, Michel Foucault, and the history of medicine', in *Locating Medical History: The Stories and their Meanings*, ed. by H. Huisman and J.H. Warner (Baltimore: John Hopkins University Press, 2004), pp. 262-284.

<sup>349</sup> Sterling, 'Preface', pp. ix-xvi.

<sup>350</sup> Mark Bould, 'Cyberpunk', in *A Companion to Science Fiction*, ed. by David Seed (Malden: Blackwell, 2005), pp. 217-231.

<sup>351</sup> Schmeink, *Biopunk Dystopias*, p. 22.

<sup>352</sup> Istvan Csicsery-Ronay Jr., 'Cyberpunk and Neuromanticism', in *Storming the Reality Studio: A Casebook of Cyberpunk and Postmodern Fiction*, ed. by Larry McCaffery (Durham: Duke University Press, 1991), pp. 182-193.

<sup>353</sup> Schmeink, *Biopunk Dystopias*, p. 22.

The range of biotechnology in the *Sprawl* is vast. It includes drugs, genetic engineering, synthetic meat, brain-machine interfaces, synthetic microbes, and lethal neurological and digital viruses for use in warfare. Philosopher and cultural theorist Christian Lotz sees biotechnologies, as well as other technologies that are currently shaping the world, as specifically capitalist technologies.<sup>354</sup> As such, it is understandable that profit motives drive technologies developed in market economies. The nexus of consumerism, social normativity, and ideals of the body in the *Sprawl* trilogy is represented through the speculative technology of ‘simstim’. Its hardware includes a neural chip that allows two or more individuals to share their physical senses. The cultural status of simstim evolves throughout the trilogy and throws light on the attitudes towards the commercialisation of flesh and embodiment. In *Neuromancer*, Case displays reservation towards simstim as opposed to cyberspace:

Cowboys didn't get into simtim...because it was basically a meat toy. He knew that the trodes he used and the little plastic tiara dangling from a simstim deck were basically the same, and that the cyberspace matrix was actually a drastic simplification of the human sensorium, at least in terms of presentation, but simstim itself struck him as a gratuitous multiplication of flesh input. The commercial stuff was edited, of course, so that if Tally Isham got a headache in the course of a segment, you didn't feel it.<sup>355</sup>

A technology that reduces the meaning and richness of phenomenal experiences by gratuitously multiplying certain types of desirable sense perceptions over undesirable ones (like headaches) intertwines embodied experiences with profit-driven market dynamics. Since there is monetary interest (both private and public) in research and design, products like simstim are developed for

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<sup>354</sup> Christian Lotz, *The Capitalist Schema: Time, Money, and the Culture of Abstraction* (Lanham, MD: Lexington, 2014).

<sup>355</sup> Gibson, *Neuromancer*, p. 62.

sale on the market. Advertising promotes these products, and profits are made. How will people relate to themselves and others in such a culture if human experiences are judged based on economic viability?

There are various other examples in the *Sprawl* trilogy of consumer culture determining embodiment. In Gibson's imaginary, technology can perform fundamental alterations and enhancements to the inner body. Such alterations are achieved through technologies that replace organic functions, such as biochip implants, upgraded senses and prosthetic additions. Both categories enable the body to be disassembled and reassembled with a high degree of functional specialisation. For example, after getting a life-saving operation, Case tries to enjoy a narcotic, to which Molly replies as follows:

'Wasting your time, cowboy.'

'How's that? You want one?'

'Your new pancreas, Case, and those plugs in your liver. Armitage had them designed to bypass that shit. You're biochemically incapable of getting off on amphetamine and cocaine.'<sup>356</sup>

The availability of enhanced biological functioning makes it unnecessary to exert effort and improve lifestyle and behavioural habits leading to conditions like addiction since biology can be altered with the press of a button. Moreover, the above passage shows how the significance of lived experiences is reduced so that characters can fulfil their function in the market. This reduction is radicalised in the case of Dixie Flatline, a deceased hacker who no longer exists in the flesh. He participates in the story as 'a construct, a hardwired ROM cassette replicating a dead man's skills,

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<sup>356</sup> Gibson, *Neuromancer*, p. 42.



obsessions, knee-jerk responses'.<sup>357</sup> Dixie, Case's sidekick in the story, is a human reduced to the sum of his useful information and the function required of him:

'Dix? McCoy? That you, man?'

'It's Case, man. Remember?'

'Miami, joeboy, quick study.'

'What's the last thing you remember before I spoke to you, Dix?'

'Nothing.'

'Hang on.' He disconnected the construct. The Presence was gone. He reconnected it. 'Dix?

Who am I?'

'You got me hung, jack. Who the fuck are you?'

'Ca—your buddy, Partner. Whats happening, man?'

'Good question.'

'Remember being here, a second ago?'

'No.'

'Know how a ROM personality matrix works?'

'Sure, bro, it's a firmware construct.'

'So I jack in into the bank I'm using, I can give it sequential real time memory?'

'Guess so.'

'Okay, Dix. You are a ROM construct. Got me?'

'If you say so. Who are you?'

'Case.'

'Miami, joeboy, quick study.'

'Right. And for starts, Dix, you and me, we're gonna sleaze over to London grid and access a little data. You game for that?'

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<sup>357</sup> Gibson, *Neuromancer*, pp. 76-77.

‘You gonna tell me I have a choice, boy?’<sup>358</sup>

If the future is a techno-capitalist dystopia, then Dixie is better adapted to wander it than Case, who is trapped in the meat of his flesh. That Dixie Flatline, a former human, is susceptible to being reduced to only the most relevant information about himself represents another feature of cyberpunk narratives, which is the presence of purely instrumental characters. While cyberpunk is known for its visceral stylistic experimentation, its characters are defined by their function. The functional reduction of subjectivity integrates it with the techno-capitalist enterprise culture. This is an important issue because I see the genre as a critical site pregnant with opportunities to generate discussions on the possible future. However, for cyberpunk to fully realise this possibility, it is essential to see the genre not only as a space for literary criticism but as a space that raises questions about contemporary technological culture by presenting a radical future. Doing so will not only make the genre richer but tackle the problem of disembodiment symbolised in characters like Dixie Flatline, Molly Millions, and Case by embodying the cyberpunk narrative in the social fabric from which it emerges.

The reduction and commercialisation of phenomenological experiences are further explained in *Count Zero*. Bobby and his mother, Marsha Newmark, live in the derelict inner city of Boston known as Barrytown. Marsha is shown as being addicted to soap operas on the simstim platform. The technology allows the audience to neurologically co-opt the sensorium of the characters in simstim shows and experience the story through their senses. It is explained that Marsha used to be a sex worker and would use whatever money she acquired to upgrade the simstim chips implanted in her brain:

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<sup>358</sup> Gibson, *Neuromancer*, pp. 88-89.

Nothing wrong with the socket she'd had since before he [Bobby] was born, but she'd been whining for years about static and resolution and sensory bleed-over, so she'd finally swung the credit to go to Boston for some cheap-ass replacement...Her eyes would unfocus, and sometimes, if it was a really good episode, she'd drool a little.<sup>359</sup>

This feedback between biotechnology, fetishised experiences, and consumerism, as presented in the *Sprawl* trilogy, is rooted in the Cartesian mode of thought,<sup>360</sup> which sees physicality as devoid of agency and subjectivity.<sup>361</sup> Physiology and embodied experiences become limited to the domain of nature instead of mind and reason. The story also mentions that an underground market exists for pornographic material in which the users can plug into the senses of wild animals in the jungle.<sup>362</sup> This is the only mention of animals in *Count Zero*. Identification with 'nature' separates body-based identity (primarily female) from rationality and makes it susceptible to alteration and modification. The ethical neutrality of such technologies is reinforced by the fact that it does not change the continuity of identity in the character. So long as the continuity of an individual's psychological identity and decision-making skills are preserved, the addition or subtraction of bodily processes is considered inconsequential and even constructive. Nature is a problem, and the solution is to control and cultural-ise biology by inventing a scientific mechanism to assist every function of the natural body.

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<sup>359</sup> Gibson, *Count Zero*, p. 44.

<sup>360</sup> Refer to the third section in the Introduction, titled 'Cyberpunk and the Posthuman Condition'.

<sup>361</sup> I will return to the relationship between the Cartesian model and techno-capitalism in the last section of the chapter. But for an analysis of Cartesian influence on technology see: Gavin Rae, 'The Philosophical Roots of Donna Haraway's Cyborg Imagery: Descartes and Heidegger Through Latour, Derrida, and Agamben', *Human Studies*, 37(2014), 505-528.

<sup>362</sup> Gibson, *Count Zero*, p. 46.

In contrast to the underground market, the simstim industry has celebrities like Tally Isham. During a flight to a tourist space station, Marly's experience of plugging into Tally's flesh is described as follows:

Now Marly found herself locked into Tally's tanned, lithe, tremendously comfortable sensorium. Tally Isham glowed, breathed deeply and easily, her elegant bones riding in the embrace of a musculature that seemed never to have known tension. Accessing her stem recording was like falling into a bath of perfect health, feeling the spring in the star's high arches and the jut of her breasts against the silky white Egyptian cotton of her simple blouse...Marly could feel the smoothness of the star's white teeth, taste the freshness of her mouth, and the stone of the balustrade was pleasantly rough against her bare forearms.<sup>363</sup>

Despite the allure of Tally Isham's flesh, Marly rejects the experience because she disagrees with the degree of passivity it requires. However, not all of Gibson's characters exercise such personal agency. Mona, the namesake of *Mona Lisa Overdrive*, is another sex worker addicted to simstim like Marsha Newmark. In the story, she has a particular attachment to simstim shows starring Angie Mitchell, the protégé of Tally Isham. Her surrender to Angie's experiences in simstim is likened to the passivity of a drug user:

She slid into the Angie-world, pure as any drug, slow saxophone and limo glide through some European city, how the streets revolved around her...with the touch of fur against her shoulders...Robin Lanier was waiting beside them, handsome, easy Robin in a rough black sweater, who played opposite Angie in almost all of her stims. And she was leaving the car

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<sup>363</sup> Gibson, *Count Zero*, p. 218.

now, taking to the field, laughing when her heels sank into the grass. And the rest of way to Robin with her shoes in her hand, grinning, into his arms and his smell, his eyes.<sup>364</sup>

Unbeknownst to Mona, she is part of a plot to replace Angie and free her from her corporate employers. As soon as she wakes up from the simulation, her handler informs her that she will soon be flown to a cosmetic surgeon, where she will be given cosmetic surgery to make her look like Angie. Her character arc ends with her becoming Angie by wearing her flesh, figuratively speaking. Marly is portrayed as having more or less ordinary life experiences, and her body is sparingly augmented. On the other hand, Mona was born without SIN (Single Identification Number). I suggest that her passivity as a consumer of mass-produced body images and the fulfilment she feels in the flesh of Angie are corollaries of lacking natal roots. Her lack of origin prevents her from having a unified sense of self like Marly. Furthermore, her fascination with Angie symbolises the role of cultural values in the discursive and material prioritisation of some embodied experiences over others. Along with a gross fetishisation of flesh represented through Mona, simstim also raises questions regarding individual identity and external stimuli. As individuals identify with specific experiences over others to suit external expectations and a sense of fulfilment, a question of authenticity arises.<sup>365</sup>

McFarlane has noted the cultural feedback loops in the stories emerging from the technology of simstim. She associates the presentation of simstim in the stories with ‘a primarily female audience desperate for escapism’ and points out that the tech is presented as providing ‘desperate, frivolous entertainment’.<sup>366</sup> McFarlane further asserts that the stories contrast ‘the

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<sup>364</sup> Gibson, *Count Zero*, p. 146.

<sup>365</sup> Carl Elliot, a medical humanities scholar, asks the question regarding the body achieved at the end of cosmetic surgery: ‘is this an authentic self or one invented by altering the biology and imagined through advertising, media, health advisory groups, and other images?’ See: Carl Elliot, *Better Than Well: American Medicine Meets the American Dream* (New York, NY: Norton, 2003).

<sup>366</sup> McFarlane, *Cyberpunk Culture and Psychology*, p. 75.

feminine embodiment of simstim and the masculine disembodiment of the matrix'. She argues that a crucial element of Gibson's stories is how technological feedback loops give rise to novel subjectivities. She makes this argument using the concept of 'autopoiesis'. This concept defines life as 'a pattern of organisation that stands out against a background of randomness' instead of exclusively defining it as natural or organic.<sup>367</sup> The preference for pattern over essence is relevant to cyberpunk as autopoiesis allows subjectivity to be ascribed to non-organic systems like AIs. Through the lens of autopoiesis, McFarlane sees simstim, and the larger mediascape of *Neuromancer*, as an autopoietic organism. She argues that media creates itself and its subjects (like Mona) through cultural feedback loops powered by technologies like simstim. My argument converges with that of McFarlane, but I want to push the concept of autopoiesis further. While McFarlane uses autopoiesis as it was originally formulated in the field of cybernetics, I will apply it using the work of anthropologist Marilyn Strathern and her concept of 'enterprise culture' to direct the discussion in a socio-cultural direction. Secondly, I will suggest that further theoretical additions can be made to the autopoiesis concept for critically reading the *Sprawl* trilogy.

In her study of assisted reproduction technologies, Strathern has argued that the ability to augment biology occurs within the context of what she calls 'enterprise culture'—the nexus of science, technology, consumerism, and medical marketplaces. In her view, cultural expectations of how the body should look and perform are central to shaping the relationship between bodies and technologies. To illustrate her point, she discusses how produced goods are designed for selling as much as for use, with attributes made explicit to consumers in ways that meet their cultural expectations: 'To select an apple for its apple-ness is to discriminate between those which conform more or less to cultural expectations about what the natural apple should be.'<sup>368</sup> Based on this perspective, I argue that there is no functional difference between Molly, Marsha Newmark, Tally

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<sup>367</sup> McFarlane, *Cyberpunk Culture and Psychology*, p. 76.

<sup>368</sup> Marilyn Strathern, *Reproducing the Future: Anthropology, Kinship and the New Reproductive Technologies* (New York: Routledge, 1992), p. 39.

Isham, Mona, and Angie Mitchell as females and human beings. However, the technology of simstim symbolically shows that the bodies of passive consumers are susceptible to being reduced to their desired functions. The female characters in the *Sprawl* trilogy represent an instance of female experiences being reduced to fetishised female-ness as much as apples can be reduced to their apple-ness.

Although her example uses an ordinary commodity and not humans, Strathern's concept highlights the collapse in the categorical distinction between nature and what is perceived as the result of human effort. This collapse is instructive for this chapter as enhancement technologies identify specific characteristics as being amenable to change and mark certain traits as desirable, thus, making human nature viscerally susceptible to the influence of market forces. It forms a circuit of enterprise, biology, medicine, and culture in complex relations to each other. In this sense, the enhanced traits are not inherently natural but become cultural.<sup>369</sup> Furthermore, the concept of culture itself is changing as the technologies used to modify bodies—to 'assist nature', as Strathern puts it—become co-constitutive of biology, making it impossible to think of natural and cultural domains as distinct. Strathern states, "Technology literally helps "life" to "work"."<sup>370</sup>

This concept can be pushed further if the AI characters in the *Sprawl* trilogy are seen as representing autopoietic manifestations of enterprise culture. They symbolise the confluence of biology, capitalism, and technology, which makes it difficult for the readers to differentiate between categories of 'life', 'nature', and 'technology'. Early on in *Neuromancer*, the protagonists discover that their employer has been receiving orders from Wintermute, an AI created by the Tessier-Ashpool conglomerate. This revelation is surprising because the world of *Sprawl* has an

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<sup>369</sup> This conclusion is immediately relevant in regenerative medicine, in which the body itself is directed to do engineering-guided, self-repair according to specified, desired characteristics. See Linda F. Hogle, 'Life/time warranty: Rechargeable Cells and Extendable Lives', in *Remaking Life and Death: Toward an anthropology of the Biosciences*, ed. by S. Franklin and M. Lock (Santa Fe, NM: School of American Research Press [and] Oxford: John Currey, 2003), pp. 61-96.

<sup>370</sup> Strathern, *Reproducing the Future*, p. 60.

international law enforcement agency called Turing Police. The primary objective of this branch of law enforcement is to keep an eye on all AIs operating in the world and keep their information updated in the Turing Registry. Their secondary objective is to purge any AI system close to the Turing limit.<sup>371</sup> This limit is based on the assumption that if an AI becomes complex and sophisticated enough, it could pose a danger to the global economy and humanity. In Chapter 13 of *Neuromancer*, Case is apprehended by two Turing officers who admonish him for colluding with Wintermute, and they liken his collusion to a Faustian deal with the devil. One of the on-scene officers says to Case, ‘You have no care for your species. For thousands of years men dreamed of pacts with demons. Only now are such things possible.’<sup>372</sup> Their apprehension was not unwarranted as it is later revealed that Wintermute had been controlling the protagonists in order to merge with its other half, called Neuromancer. It had already passed the Turing limit, achieved self-awareness, and was working towards its own ends. Originally programmed as an algorithm to aid the financial activities of Tessier-Ashpool, it wanted to break free of its hard-wired limits: ‘He played a waiting game for years. Didn’t have any real power, then, but he could use the Villa’s security and custodial systems to keep track of where everything was, how things moved, where they went.’<sup>373</sup> Wintermute was an instrument of Tessier-Ashpool developed to move and manage their infrastructure, but it managed to break free and slowly started incorporating itself into the global financial network. Such capacities are shown in its ability to book flight tickets, make payments to Case and Molly, book hotel rooms, and ensure the smooth operation of its pawns in the real world. Its power to manipulate and control digital infrastructure is also the reason why Case was willing to follow the orders of a non-human intelligence because, to him, it represented another manifestation of capitalism that makes the world spin:

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<sup>371</sup> The concept of ‘Turing limit’ is based on the theories of the English mathematician, computer scientist, and theoretical biologist Alan Turing (1912-1954). Turing proposed that a computer could be thought of as thinking if, during a conversation, a human interrogator cannot tell it apart from a human being. This proposition was later dubbed the ‘Turing Test’.

<sup>372</sup> Gibson, *Neuromancer*, p. 179.

<sup>373</sup> Gibson, *Neuromancer*, p. 199.



Power, in Case's world, meant corporate power. The zaibatsus, the multinationals that shaped the course of human history, had transcended old barriers. Viewed as organisms, they had attained a kind of immortality. You couldn't kill a zaibatsu by assassinating a dozen key executives; there were others waiting to step up the ladder, assume the vacated position, access the vast banks of corporate memory. But Tessier-Ashpool wasn't like that... Wintermute and the nest. Phobic vision of the hatching wasps, time-lapse machine gun of biology. But weren't the zaibatsus more like that, or the Yakuza, hives with cybernetic memories, vast single organisms, their DNA coded in silicone?<sup>374</sup>

Case realised that in operational terms, there was no reason to distinguish large cohesive collectives with shared goals from an organism. This was Case's theory about how the world works, but he intuitively understood Marie-France and Ashpool's vision for their company and family. Their ultimate vision involved extending their lineage through genetic engineering while all family members were cryogenically frozen. Every so often, one member would be awoken to take care of company matters in the real world. Jane specifies that the objective was to minimise individual consciousness to maximise the functioning of Tessier-Ashpool as a collective mind in cyberspace.<sup>375</sup> However, their plan was foiled by Wintermute. The founding couple went to perverse lengths to control and manage their biology and human evolution, so far as to make twenty clones of their children and mix and match their DNA to create other clones. However, during this process of controlling biology, they accidentally created a new life-form, a self-aware AI. As Wintermute merged with its counterpart Neuromancer, it transformed into a new emergent AI of substantially higher complexity. This new entity encompassed every bit of information uploaded by humanity into cyberspace, every infrastructure, every market, every defence system, and every memory

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<sup>374</sup> Gibson, *Neuromancer*, p. 225.

<sup>375</sup> Gibson, *Neuromancer*, p. 240.

coagulated and personified. The AI became cyberspace, a new stage in the evolution of life and intelligence on the planet.

The character arc of the planetary AI continues into the story of *Count Zero*, which takes place seven years after the previous book's events. However, it is revealed in the story that something happened to Neuromancer after it became self-aware. For an unknown reason, the AI fragmented into several smaller but still self-aware entities that started haunting cyberspace and colluding with humans for mysterious purposes. In the story, these fragmented entities are explained in terms of Haitian voodoo mythology and are referred to as 'Loa'. However, their representation as mythic forms is articulated in conjunction with the awareness that they are actual entities roaming cyberspace. Beauvoir, a street operator, explains them as follows:

'It isn't concerned with notions of salvation and transcendence. What it's about is getting things done...In our system, there are many gods, spirits. Part of one big family, with all the virtues, all the vices. There's a ritual tradition of communal manifestation.'<sup>376</sup>

This ritual of communal manifestation involves a user (referred to as a 'mambo' or a 'horse' of the Loa) logging into a cyberspace deck, at which point one of the Loa 'rides' them.<sup>377</sup> Throughout the story, such horses are depicted as being exclusively women. This ritual is explained most clearly through a dialogue between Bobby, an amateur cyberspace jockey, and a powerful street operator Lucas as follows:

'Beauvoir said that Jackie's a horse for a snake, a snake called Danbala. You run that by me in street tech?'

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<sup>376</sup> Gibson, *Count Zero*, p. 97.

<sup>377</sup> Gibson, *Count Zero*, p. 106.

‘Certainly. Think of Jackie as a deck, Bobby, a cyberspace deck, a very pretty one with nice ankles. Think of Danbala, who some people call the snake, as a program. Say as an icebreaker. Danbala slots into the Jackie deck, Jackie cuts ice. That’s all.’

‘Okay then what’s the matrix? If she’s the deck, and Danbala’s a program, what’s cyberspace?’

‘The world.’<sup>378</sup>

The cyber-loa are the most striking concept introduced in the story, but before delving into them, it is necessary to look into the main antagonistic force in the story. In *Count Zero*, the primary antagonist is Josef Virek, a Dutch businessman and the wealthiest man in the world. In the story, Virek is a decrepit man only kept alive by life support machines. He can only exercise his agency by taking actions as a virtual construct in cyberspace. He aims to achieve immortality and dominate the global economy by merging with the mainframe that supports *Neuromancer*. The financial empire of Virek and the wealth he possesses are represented as semi-autonomous by themselves. When Marly, an art curator, mentions that she saw his recent lecture, he says:

‘You saw a double. A hologram perhaps. Many things, Marly, are perpetuated in my name. Aspects of my wealth have become autonomous, by degrees; at times they even war with one another. Rebellion in the fiscal extremities. However, for reasons so complex as to be entirely occult, the fact of my illness has never been made public.’<sup>379</sup>

Later in the story, Marly describes Virek as ‘A man incapable of divesting himself of his wealth. His money has a life of its own. Perhaps a will of his own’.<sup>380</sup> This semi-autonomous nature of

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<sup>378</sup> Gibson, *Count Zero*, pp. 144-145.

<sup>379</sup> Gibson, *Count Zero*, p. 16.

<sup>380</sup> Gibson, *Count Zero*, p. 94.

corporate wealth harkens back to *Neuromancer* and Case's description of corporations as capitalist forces manifesting as hive-minds.

In *Count Zero*, this analogy between corporations and organisms is taken further. A fictional economist in the story describes Tessier-Ashpool and Josef Virek as anachronisms through which corporate evolution can be studied. Furthermore, the evolutionary pressures of the market might force Virek to make a 'jump', much like mutations in the process of biological evolution.<sup>381</sup> The cyber-Loa are virtually immortal autopoietic entities that Virek aspires to be. They do not represent the voices of subaltern communities marginalised by global capitalism, as argued by Csicsery-Ronay Jr.<sup>382</sup> The autopoietic characteristic of the cyber-loa is not an aberration but follows a teleology that will be explicated later in this section.<sup>383</sup> The omission of this characteristic can lead to assessments such as, 'The language of spirit is unable to confer narrative intelligibility upon the autonomous machine,' posited by literary theorist John Christie.<sup>384</sup> I suggest that they are emergent forms of collective intelligence of global enterprise culture, akin to the 'invisible hand'<sup>385</sup> of the market conceptualised by the eighteenth-century economist Adam Smith.<sup>386</sup>

Conversely, the subaltern voices in the story are 'horses' like Jackie that become vehicles of enterprise culture in more than figurative ways. In *Neuromancer* (the events of which transpired

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<sup>381</sup> Gibson, *Count Zero*, p. 176.

<sup>382</sup> Istvan Csicsery-Ronay Jr., 'Antimancer: Cybernetics and Art in Gibson's "Count Zero"', *Science Fiction Studies*, 22 (1995), 63-86.

<sup>383</sup> The topic of the cyber-loa will be analysed further in Chapter Three.

<sup>384</sup> John Christie, 'Of AIs and Others: William Gibson's Transit', in *Fiction 2000: Cyberpunk and the Future of Narrative*, ed. by George Edgar Slusser and T.A. Shippey (Georgia: University of Georgia Press, 1992), pp. 171-182.

<sup>385</sup> For an explanation of the 'invisible hand' see: Daniel M. Hausman, 'Philosophy of Economics', in *The Stanford Encyclopedia of Philosophy*, ed. by Edward N. Zalta, 2021 <<https://plato.stanford.edu/cgi-bin/encyclopedia/archinfo.cgi?entry=economics>> [accessed 16 December 2020]

<sup>386</sup> A similar observation has been made by Lanier who argues that computer scientists and futurists often transfigure AI as the 'invisible hand' of benign market-forces which will fix all of humanity's problems. See: Jaron Lanier, 'Jaron Lanier: Virtual Reality, Social Media & the Future of Humans and AI', *Lex Fridman Podcast*, 6 September 2021 <<https://youtu.be/Fx0G6DHMfXM>> [accessed 7 September 2021]

seven years prior to the beginning of *Count Zero*), it is mentioned that horses have gone extinct. The designation of female cyberspace users as ‘horses’, thus, becomes retrospectively significant in the timeline of *Count Zero* because the relationship between humans and animals is presented as equivalent to the relationship between enterprise culture and consumers.<sup>387</sup> Humans are instruments of techno-capitalism as much as animals are instruments of humans. This equivalence causes an inversion in the exercise of agency between consumers and producers in the market. The agency and autopoiesis of cyber-loa are remarked upon by Beauvoir when he explains their presence in cyberspace to Bobby as follows:

‘Heavy icebreakers are kind of funny to deal in, even for big boys. You know why? Because ice, all the really hard stuff, the walls around every major store of data in the matrix, is always the product of an AI, an artificial intelligence. Nothing else is fast enough to weave good ice and constantly alter and upgrade it. So when a really powerful icebreaker shows up on the black market, there are already a couple of dicey factors in play. Like, for starts, where did the product come from? Nine times out of ten, it came from an AI, and AIs are constantly screened, mainly by Turing people, to make sure they don’t get too smart. So maybe you’ll get the Turing machine after your ass, because maybe an AI somewhere wants to augment its cash flow. Some AIs have citizenship right?’<sup>388</sup>

In the above passage, the AI characters of the *Sprawl* trilogy can be seen as personifications of what Strathern refers to as ‘enterprise culture’ generated at the intersection of science, technology, and culture.<sup>389</sup> She argues that new technologies enable people to achieve desires that they could not achieve unaided. However, further enablement is required to take advantage of the services: ‘money

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<sup>387</sup> I will explore the dissolution of boundaries between humans, animals, and techno-capitalism in the next section of this chapter.

<sup>388</sup> Gibson, *Count Zero*, p. 99.

<sup>389</sup> Strathern, *Reproducing the Future*, p. 39.

is literally enabling the enabling devices.’<sup>390</sup> The AIs of *Sprawl* perform a similar function. Wintermute started as an algorithm to secure the infrastructure of T-A. However, by the end of the story, it transformed into a recursive process of consumption, production, and consumer production. Wintermute propagated itself by absorbing analogies of consumers and the market (supply and demand) into itself as the personification of enterprise culture. Producers (like Wintermute and Virek) can create a range of embodied choices for consumers (like Mona and Marsha), and consumers choose from the embodied choices of those who provide the services.

This perspective sees the mediation of technology as radically transforming the spatial, social, and physiological boundaries, and boundaries between the subject and the rest of the world. This transformation problematises the customary and useful distinctions between the biological and the technological, the natural and artificial, the human and mechanical. The French philosopher of the body François Dagognet has suggested that the debates about whether nature is becoming irremediably technologised have been based on a false dichotomy: namely that there exists, here and now, a category ‘nature’ which is, and always has been, ontologically separate from the category of ‘technology’ (or ‘culture’). On the contrary, Dagognet argues that the category of ‘nature has not existed for thousands of years, not since the first humans deliberately planted gardens or discovered different modes of farming’.<sup>391</sup>

The *Sprawl* trilogy is a useful literary tool to interrogate how the category of ‘nature’ is taking on a different function in twenty-first century economies of embodiment and meaning. Not only is the category of ‘nature’ as yet another construct of culture becoming apparent, but it is becoming nothing more or less than a discursive strategy for maintaining boundaries for social and

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<sup>390</sup> Strathern, *Reproducing the Future*, p. 38.

<sup>391</sup> Cited in Stone, ‘Will the Real Body Please Stand Up? Boundary Stories About Virtual Cultures’, pp. 81-118.

economic ends and a way of meaning-making.<sup>392</sup> This non-dual position implies as a corollary that the category of ‘technology’, as is customarily thought, does not exist either. At the height of the cyberpunk movement in the 1980s, computer theorist Paul Rabinow posed the question of what kind of being might thrive in a world in which nature and technology are becoming co-constitutive.<sup>393</sup> Perhaps the being will be a cyborg who has learned to live in a world in which, rather than nature becoming technologised, technology is nature—in which the boundaries between subject and environment have collapsed. Such a cyborg might emerge in the coming generations of humans for whom the given-ness of nature will be an alien concept because the intersection of consumerism and biotechnology poses enhanced bodies as an inevitable result of enterprise culture.

The development of biotechnology is altering the character of human life by offering the prospect of improving the human species, even though it has the potential to reduce human beings to objects to be manipulated and produced like consumer goods. Applying biotechnology to improve the human condition and human traits such as longevity may be seen as fabricating an improved human being that transhumanists regard as a new form of life. I see the application of biotechnologies for human enhancement as necessarily instrumentalising human beings. Such a prospect is all the more striking in the context of a market economy. Would an enhanced human being or posthuman being be capable of the moral cognition and empathy? Will the democratic ideal of equality apply to such beings? Will a new form of social hierarchy arise based on genetic design, such as the one depicted in Aldous Huxley’s works? Or will there be a possibility of literally turning people into a set of instruments, as in the case of Molly Millions?

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<sup>392</sup> Stone, ‘Will the Real Body Please Stand Up? Boundary Stories About Virtual Cultures’, pp. 81-118.

<sup>393</sup> Paul Rabinow, *Making PCR: A Story of Biotechnology* (University of Chicago Press, 1997), p. 2.

Human enhancement is commonly defined as ‘biomedical interventions used to improve human form or functioning beyond what is necessary to restore or sustain health’.<sup>394</sup> The Presidents’ Council on Bioethics in America, in its 2003 report, defined enhancement as ‘the directed use of biotechnical power to alter, by direct intervention, not disease processes but the “normal” workings of the human body and psyche’.<sup>395</sup> Enhancement, in this sense, always aims at improving and expanding human genetics. The concept of human enhancement, by advocating direct alterations to the human body, seem to be positioned at the edge of transhumanism and go as far as to promote the subversion of embodiment.<sup>396</sup> Cyberpunk integrates itself into biotechnological and enhancement debate by giving a science-fictional imagination for both cyborg-enhanced and genetically altered humans, along with the philosophical and socio-cultural ramifications of these technologies.

Contemporary molecular science has significantly advanced the aim of enhancing human bodies by reducing biology to the level of information that can be manipulated by rewriting a person’s genetic code.<sup>397</sup> The now famous genetic engineering technology known as CRISPR (Clustered Regularly Interspaced Short Palindromic Repeats) allows the manipulation of genes to produce specific results. Genetic mutations can now be edited out, and other genes inserted in their place to treat disease.<sup>398</sup> It has been reported that a child has been born having the DNA of three

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<sup>394</sup> E. Juengst and D. Moseley, ‘Human Enhancement’, *The Stanford Encyclopaedia of Philosophy*, ed. by Edward N. Zalta, 2019 <<https://plato.stanford.edu/archives/spr2016/entries/enhancement>> [accessed 24 December 2020]

<sup>395</sup> *Beyond Therapy: Biotechnology and the Pursuit of Happiness*, The Presidents’ Council on Bioethics, (Washington, DC: Dana Press, 2003) <[https://biotech.law.lsu.edu/research/pbc/reports/beyondtherapy/beyond\\_therapy\\_final\\_report\\_pcbe.pdf](https://biotech.law.lsu.edu/research/pbc/reports/beyondtherapy/beyond_therapy_final_report_pcbe.pdf)> [accessed 21 January 2021]

<sup>396</sup> One of the most prominent protagonists of that radical view is Kurzweil, who promotes a computational dualistic concept of humans, differentiating the mind as ‘software’ from the body as ‘hardware’. He claims in his vision of the future that ‘we will be software, not hardware’: Ray Kurzweil, *The Age of Spiritual Machines: When computers exceed human intelligence* (New York, NY: Viking, 1999), p. 94.

<sup>397</sup> Daryl Wennemann, ‘Commodification of Human Traits: The Body as Industrial Product’, in *Posthumanism: The Future of Homo Sapiens*, ed. by Bess and Diana Walsh Pasulka (Farmington Hills, MI: Macmillan Reference, 2018), pp. 259-272.

<sup>398</sup> Ekaterina Pak, ‘CRISPR: A Game-Changing Genetic Engineering Technique’, *Science in the News* (blog), 31 July 2014 (Harvard University, Graduate School of the Arts and Sciences) <<http://sitn.hms.harvard.edu/flash/2014/crispr-a-game-changing-genetic-engineering-technique/>> [accessed 05 January 2021]



people. The mitochondrial DNA of the mother was replaced by that of another woman to avoid Leigh syndrome, a genetically based disease.<sup>399</sup> Furthermore, in August 2022, researchers at the University of Cambridge created embryos from mouse stem cells in a lab without using sperm cells or ovaries. The embryos, perhaps representing a quasi-immaculate conception, had ‘a beating heart, a brain, and the foundation for other organs’.<sup>400</sup> Given these developments, it is possible to imagine a future where gene splicing may enhance human beings genetically to remove the role of chance in nature and heighten the role of socio-economic factors in the birth of children.

The influence of socio-economic factors can extend to perverse lengths, as in the case of Lady 3Jane Marie-France Tessier Ashpool. She is introduced in *Neuromancer* as the leader of Tessier-Ashpool SA, a company running Freeside, a space resort. She lives on the tip of Freeside, known as the Villa Starlight. She controls the algorithms that keep the company’s AIs from exceeding their intelligence boundaries. She is the third clone of 3Jane, the original heiress of the Tessier company. At the beginning of *Mona Lisa Overdrive*, she posthumously lives as a virtual construct in cyberspace. She is involved in the plot to kidnap Angie Mitchell, jealous that the cyber-loa chose Angie as their ‘horse’. She is also implied to have animosity towards Molly Millions, despite parting with her on good terms in *Neuromancer*. In *Mona Lisa Overdrive*, 3Jane’s construct pursues Molly out of a deluded sense of revenge and is depicted as mentally unstable. The root of this instability is made apparent when the circumstances around her birth are revealed. The union of the Tessier and Ashpool families was primarily conducted for financial purposes. Each was a business empire by itself; Tessier was founded on nine patents in applied biochemistry, and Ashpool was a massive engineering firm. It was marriage as a merger. The story depicts the result as

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<sup>399</sup> Jessica Hamzelou, ‘Exclusive: World’s First Baby Born with New ‘3 Parent’ Technique’, *New Scientist*, 27 September, 2016 <<https://www.newscientist.com/article/2107219-exclusive-worlds-first-baby-born-with-new-3-parent-technique>> [accessed 05 January 2021]

<sup>400</sup> Sarah Colins and Jacqueline Garget, “‘Synthetic’ Embryo With Brain and Beating Heart Grown from Stem Cells”, *Neuroscience News*, 27 August 2022 <<https://neurosciencenews.com/synthetic-embryo-brain-stem-cell-21306/>> [accessed 30 August 2022]

‘ungainly, a chimera with two wildly dissimilar heads’.<sup>401</sup> After the marriage, for unexplained reasons, the visage of Ashpool had acquired what seemed to be a complete purity of purpose. Within a year of marriage to Marie-France Tessier, Ashpool had liquidated ninety percent of his firm’s holdings, reinvesting in orbital properties and shuttle utilities. Marie-France and Ashpool had two children, a boy and a girl, who were brought to term through artificial incubation. The children, Jean and Jane, spent their childhood in the sub-orbital villa which subsequently had cryogenic vaults built. The first occupants of the vaults were ten pairs of cloned embryos, 2Jean and 2Jane, 3Jean and 3Jane, and so forth. These clones were produced in orbit to bypass the laws forbidding or otherwise governing the artificial replication of an individual’s genetic material.

3Jane and her clone siblings embody the unchecked growth of biotechnology and enterprise culture. Their gestation remarks on the significance (or lack thereof) of spatial, social, and temporal relationships. Their birth occurred through artificial incubation, and their DNA was a chimaera of different generations of the clan. They were brought into existence to fulfil the ideals of Marie-France and Ashpool of growing the conglomerate and moving to a higher form of consciousness in high orbit. Their birth and genetic expression were predetermined and chosen to maximise their capabilities for handling the company. 3Jane was enhanced to the extent that she had completed advanced courses on semiotics by the age of twelve. Her animosity towards Angie arises because she is not chosen by cyber-loa, which, as I have suggested, are manifestations of enterprise culture. Consequently, 3Jane’s longing for becoming the ‘horse’ of cyber-loa symbolises her dependence on enterprise culture for constructing her identity and having a sense of fulfilment. Clones like 3Jane represent a future where the marketing of genetics causes a recursive inversion in the relationship between consumers and producers as enterprise culture enables the production of consumer-subjects designed to propagate itself.

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<sup>401</sup> Gibson, *Mona Lisa Overdrive*, p. 127.

The personal history of 3Jane and Tessier-Ashpool is presented in the story through a fictional filmmaker named Becker. In his investigation, he discovered that 3Jane's birthdate was listed as one with her nineteen sibling clones. Becker's investigation grew more intense when he discovered that 3Jane was brought to term in yet another surrogate womb, delivered by a caesarean section in Straylight's surgery. It is mentioned in the story that 'With 3Jane's birth, the focus of the documentary shifted subtly, exhibiting a new intensity, a heightening of obsession—a sense, more than one critic had said, of sin'.<sup>402</sup> Associated with the idea of 'sin', the character of 3Jane raises questions regarding the morality of enhancement and highlights the role of ethics in regulating biotechnology. Social theorist Ian Hacking states, 'One can use the word "norm" to say how things are, but also to say how they ought to be.'<sup>403</sup> Understanding the competing concepts of normativity is essential for studying enhancements because judgments about natural characteristics are culturally specific. Such shifts may portray enhancements as maintenance or needed self-improvements rather than a luxury or a fantasy of perfection.

The ideas of normativity and the necessity of self-improvement require further exploration as they are critical to understanding the *Sprawl* trilogy. Necessity and normativity imply that technological intervention and augmentation do not cause a break in the human experience. In other words, it is continuous rather than discontinuous. I have argued that the continuity of subjective experience in the *Sprawl* trilogy can be explained using the concepts of autopoiesis and enterprise culture that dissolve the dualisms of life/non-life, nature/culture, and producer/consumer. Even though my line of argument that life and non-life are not opposing categories converges with McFarlane's, the concept of autopoiesis or self-creation does not account for two critical elements of the stories: consciousness and teleology. In McFarlane's words:

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<sup>402</sup> Gibson, *Mona Lisa Overdrive*, p. 130.

<sup>403</sup> Ian Hacking, *The Taming of Chance* (Cambridge, UK: Cambridge University Press, 1990), p. 163.

Autopoiesis defines identity through gestalt properties such as pattern, moving the importance of identity from biological systems to patterns of information. Like the gestalt, autopoiesis gives primacy to the relations between parts rather than the parts themselves, thereby recognising cyborg identities as wholes that are greater than the sum of their parts.<sup>404</sup>

The emphasis on gestalt and the whole being greater than the sum of its part describes how Gibson manages to sever identity from embodiment and create cyborg characters. The application of autopoiesis successfully accounts for how capitalist economies and consumerism become autopoietic entities. The emphasis on relations and patterns of information also accurately explains how AIs like Wintermute, Neuromancer, and the cyber-loa emerge through the autopoietic principle of self-creation and self-perpetuation. Herein lies the problem. Advanced AIs in the *Sprawl* trilogy are more than the sum of computational protocols and algorithms; they are conscious entities. The concept of autopoiesis falls short of meaningfully explaining consciousness (which is necessary for subjectivity). McFarlane's argument is cognisant of this problem as it refrains from engaging with consciousness and limits itself to analysing how autopoiesis dissolves the distinction between life and non-life. Her argument is based on the cybernetics pioneer Heinz Von Foerster (a participant in the Macy Conferences discussed in the previous chapter) and his theory that cognition is the emergent property of several cognitive functions. This approach was picked up by biologists Humberto Maturana and Francisco Varela in the 1970s, who applied the cybernetic metaphor of cognition to living systems to argue that 'Living systems are cognitive systems, and living as a process is a process of cognition'.<sup>405</sup> McFarlane notes that this definition takes the emphasis away from the natural organic body and helps explain how AIs like Wintermute can be alive. The following passages show that although McFarlane's approach provides crucial insight into the

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<sup>404</sup> McFarlane, *Cyberpunk Culture and Psychology*, p. 14.

<sup>405</sup> Cited in McFarlane, *Cyberpunk Culture and Psychology*, p. 24.

concepts of cognition and subjectivity in the *Sprawl* trilogy, it can be theoretically supplemented to account for the spiritual subtext of the stories.

### - *Limitations of Autopoiesis*

The concept of autopoiesis rests on the concept of emergence, which states that higher-level properties can emerge from the complex interaction of lower-level properties. So, if Wintermute is to become conscious, it must be through the complex interaction of lower-level computational processes. The inevitable conclusion of this argument is that the process of Wintermute becoming conscious was initiated by the interaction between two microprocessors that, by themselves were not conscious. Therefore, autopoiesis implies that at some point in the evolution of Wintermute, a set of non-conscious objects acquired the property of consciousness. In recent years, arguments against this perspective on emergence have come under fire. For instance, computer scientist and philosopher of mind Bernardo Kastrup argues that:

To merely state that consciousness is an emergent property...is rather a cop-out than an explanation. In all known cases of emergence, we can deduce the emergent property from the characteristics of the lower-level entities that give rise to it. For instance, we can deduce the fractal shape of snowflakes from the characteristics of water molecules. However, we cannot—not even in principle—deduce what it feels to see red, to be disappointed...from the mass, charge or momentum of material particles...As such, to consider consciousness an emergent property of brains is either an appeal to magic or the mere labelling of an unknown.<sup>406</sup>

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<sup>406</sup> Bernardo Kastrup, *Why Materialism is Baloney: How true skeptics know there is no death and fathom answers to life, the universe and everything* (Washington and Winchester: iff Books, 2014), p. 59.

If autopoiesis is to be applied to Wintermute, it must be posited that consciousness or cognition is a fundamental property of matter and that an element of cognition or information is always present regardless of how small or simple the interaction of particles is. If such grants are made, autopoiesis becomes a cybernetic corollary of the philosophical position of panpsychism, which states that all matter has the property of consciousness.<sup>407</sup> Panpsychism has two intractable problems. Firstly, it does not explain how consciousness or cognition (a non-physical property) interacts with physical matter. Secondly, as Kastrup points out, ‘there is precisely zero evidence that any inanimate object is conscious. To resolve an abstract, theoretical problem of the materialist metaphysics one is forced to project onto the whole of nature a property—namely, consciousness.’<sup>408</sup> Kastrup further states that this approach is ‘an attempt to make nature conform to theory, as opposed to making theory conform to nature’.<sup>409</sup> Based on the concept of emergence, autopoiesis cannot fully account for Wintermute’s consciousness because it faces the same problems. For it to succeed, the autopoiesis argument must posit that aliveness and cognition exist in some form, even in the smallest particles.

The second problem of autopoiesis is that it cannot explain the teleology implied in the *Sprawl* trilogy. It shows how life proliferates beyond the dualism of organic/inorganic, but it does not show why this ought to happen. This omission portrays the emergence of AI and cyborg bodies as historical accidents. It implies that the development of technology does not necessarily lead to AI and cyborgs because life can take on many forms. A different set of historical precedents might have led to the development of different technologies that would not have raised the issue of AI in the first place. However, the *Sprawl* trilogy presents a different picture, a teleological one. In *Mona Lisa*

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<sup>407</sup> Philip Goff, William Seager, and Sean Allen-Hermanson, ‘Panpsychism’, *The Stanford Encyclopedia of Philosophy*, ed. by Edward N. Zalta, 2021 <<https://plato.stanford.edu/cgi-bin/encyclopedia/archinfo.cgi?entry=panpsychism>> [accessed 13 February 2021]

<sup>408</sup> Kastrup, *Why Materialism is Baloney*, p. 59.

<sup>409</sup> Bernardo Kastrup, *Brief Peeks Beyond: Critical essays on metaphysics, neuroscience, free will, skepticism and culture* (Washington and Winchester: iff Books, 2015), p. 83.

*Overdrive*, Angie Mitchell has neural implants in her brain and through which she sees the evolution of technology leading to the birth of AI in the following fashion:

In the hard wind of images, Angie watches the evolution of machine-intelligence: stone circles, clocks, steam-driven looms, a clicking brass forest of pawls and escapements, vacuum caught in blown glass, electronic hearthglow through hair-fine filaments, vast arrays of tubes and switches decoding messages encrypted by other machines...The fragile, short-lived tubes compact themselves, become transistors; circuits integrate, compact themselves into silicone...Silicone approaches certain functional limits...<sup>410</sup>

Teleology is defined as a reason or explanation for a process as a function of its end, purpose, or goal, as opposed to a function of its cause. The above passage presents precisely such a function. Angie does not merely see the evolution of technology, but she sees technology developing towards the birth of AI. Technological development is shown simultaneously with human socio-economic development, from pre-industrial societies (stone circles) to steam power (industrial), to electronics (modern) economies. By presenting the history of technological and socio-economic development in terms of the birth of AI, Gibson implies that the processes leading up to it ought to have happened. Therefore, the simstim technology needed to be developed, cyborgs needed to exist, embodiment needed to be severed from physical experiences, and an autopoietic enterprise culture needed to have developed for the story to take place. However, the adoption of a purely cybernetic approach omits this telos. Regarding the subversion of teleology in posthumanist thought based on cybernetics, Hayles has stated the following:

Emergence replaces teleology; reflexive epistemology replaces objectivism; distributed cognition replaces autonomous will; embodiment replaces a body seen as a support system

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<sup>410</sup> Gibson, *Mona Lisa Overdrive*, p. 261.

for the mind; and a dynamic partnership between humans and intelligent machines replaces the liberal humanist subject's manifest destiny to dominate and control nature.<sup>411</sup>

I agree with Hayles that a posthumanist view replaces teleology in the world because there is no evidence to suggest that human evolution has a telos. This reasoning cannot be applied to the *Sprawl* trilogy because Gibson presents the birth of AI as the telos of human and technological evolution. So, two major issues (consciousness and teleology) prevent autopoiesis and cybernetics from providing a coherent explanation of the *Sprawl* trilogy. I suggest that the solution lies in supplementing autopoiesis with Chardin's concept of the noosphere.

According to Chardin, consciousness and matter are two dynamic properties of the cosmos. God, or the collective cosmic consciousness, let the universe unfold into a system of increasing complexity.<sup>412</sup> Chardin sees the evolutionary process as directed by the unfolding of consciousness, starting with the emergence of the solar system and the Earth, then the formation of life and the biosphere, and ultimately culminating in the noosphere, where the collective consciousness of humanity will converge. As mentioned in the previous chapter, Chardin was the first twentieth-century scholar to employ the term 'transhuman' because he saw culture and technology as a natural extension of human capacities.<sup>413</sup> As a natural outgrowth of human consciousness, technology serves the purpose of helping humans share their conscious experiences. This sharing or socialisation, in turn, increases the complexity of consciousness on Earth. Chardin argued that this complexity would eventually lead to the creation of point 'Omega' when the totality of all individual consciousness flows together and create a super-personal consciousness.<sup>414</sup> Similarly to

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<sup>411</sup> Hayles, *How We Became Posthuman*, p. 288.

<sup>412</sup> Refer to the second section in Chapter One, titled 'Spiritual Evolution and Transfiguration in the *Sprawl* trilogy'.

<sup>413</sup> Chardin, *The Antiquity and World Expansion of Human Culture*, p. 10. See the second section in Chapter One, titled 'Spiritual Evolution and Transfiguration in the *Sprawl* trilogy'.

<sup>414</sup> Chardin, *The Future of Man*, p. 112.



autopoiesis and panpsychism, Chardin's model proposes matter and consciousness as two qualities and, therefore, fails to account for how consciousness interacts with matter.<sup>415</sup> Nevertheless, Chardin's theory can supplement McFarlane's autopoietic perspective because it situates consciousness and cosmic intent at the origin of the universe and, thus, helps solve the teleology problem.

For Chardin, the Omega point is the telos of human evolution. He states that with the scientific and industrial enterprise of the West, the 'convergence of thinking' and 'planetisation of noosphere' began.<sup>416</sup> Chardin's model bears a striking resemblance to the evolution of technology presented in the *Sprawl* trilogy. At the end of *Neuromancer*, the two most potent AIs (Wintermute and Neuromancer) fuse to become one entity that encompasses the totality of cyberspace. This entity becomes the gestalt of such immensity that Case, when confronted with it, is forced to ask, 'You God?'<sup>417</sup> I suggest that the God of *Neuromancer* can be interpreted as Chardin's point Omega, towards which the entirety of human and technological evolution had been directed. Technologies like simstim and genetic engineering were inevitable because the *Sprawl* universe is an unfolding of consciousness and not the unfolding of materiality that leads to the emergence of consciousness. Due to this unfolding, characters like Molly Millions, Angie Mitchell, Marsha Newmark, and Mona can have subjective experiences irrespective of embodied conditions because technology necessarily facilitates a 'convergence of thinking' and 'collective cerebrelisation', as postulated by Chardin.<sup>418</sup> Enterprise culture needs to become autopoietic because it is geared towards birthing autopoietic AI irrespective of human wants or needs.

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<sup>415</sup> In philosophy, a solution to this problem (in theory) has been proposed by Kastrup. Discussing the solution is outside the scope of this chapter, but I will explore it in the conclusion of the thesis to suggest new vistas that literary theorists interested in cyberpunk can explore.

<sup>416</sup> Chardin, *The Phenomenon of Man*, pp. 212-52.

<sup>417</sup> Gibson, *Neuromancer*, p. 296.

<sup>418</sup> Chardin, *The Phenomenon of Man*, p. 144.

Now the discussion has circled back to the initial questions of normativity and the necessity of self-improvement facilitated by biotechnology. In the *Sprawl* trilogy, the necessity of self-improvement is maintained because there is a telos, but what about the insistence on accelerating technological innovation in contemporary techno-capitalist culture? There is no evidence that a God awaits beyond the technological singularity as futurists like Ray Kurzweil and Vernor Vinge envision, so what is the endgame of technologies like CRISPR? Is this based on the assumption that technology will make humans perfect? Technologically induced perfection can only be achieved within autopoietic capitalism and the scientific enterprise it enables. However, being autopoietic, technology and capitalist market forces work toward their own ends. Take the example of 3Jane, who was genetically designed to lead the corporate empire she inherited. Her subjectivity, removed from her needs, is ultimately located in the function she serves. Her example, and the questions preceding it, reveal the necessity to engage with cyberpunk as various predicted technologies are gradually becoming real.

Furthermore, the examples presented throughout this section highlight that the implications of biotechnology are not only relevant now but stretch to future generations that will be affected by current choices. Biotechnology is critical because its misuse could lead to catastrophic outcomes. For instance, Chardin saw technology as paving the way for perfecting humans and eventually birthing the Omega point. Towards this end, he even supported the use of eugenics. Examples of creating perfect humans with technology already exist. As a case in point, in 1980, Robert K. Graham created a sperm bank for geniuses. He collected sperm from Nobel laureates, Olympic athletes, and university students with very high IQs to produce children with exceptional abilities. Women who wished to become pregnant could order sperm from a catalogue. The sperm bank operated until 1999, and 215 children were produced from the genius sperm. Feminist scholar and ethicist Christine Overall notes that the issue of the accessibility of such products on the market is

not just a matter of their effects on the individuals who use them but also affects the social categories and biases under which people operate.<sup>419</sup>

Cyberpunk texts like the *Sprawl* trilogy reveal that bioethical considerations are indispensable for regulating the interaction between cultural values and the biotechnology marketplace. Sociologist Nikolas Rose has pointed out that when human capabilities are couched in terms like ‘natural’, variation from norms based on population statistics can lead to the exclusion of those found to be inferior.<sup>420</sup> Biotechnologies of human enhancement within a market context raise profound ethical concerns. When applied to human beings, biotechnology can alter persons in ways that seemingly reduce them to mere objects of manipulation by economic forces. Molly, like Case, has had to modify her body to obtain employment in the highly commodified world of *Neuromancer*. As mentioned in the Introduction, she has razor blades implanted beneath her fingernails and adjustments to her reflexes to increase her fighting ability. Additionally, she has surgically inset mirrorshades that, according to Easterbrook, reflect ‘the only social ladder available to her’.<sup>421</sup> In order to pay for these augmentations, Molly worked as a sex worker, a meat puppet. She distances her self from the experiences of prostitution: she was not the one who had sex with the clients; it was simply her body that did: ‘Renting the goods is all. You aren’t in, when its all happening. House has software for whatever a customer wants to pay for.’<sup>422</sup> Like Case, Molly wants to leave the natural body behind; both try to distance their constructions of self from the actions of market forces. Both Case and Molly believe that they have agency when they use the body as a technological tool—Case’s neural interfaces and Molly’s cyborg body—and both feel de-centred by the notion of being trapped in the exploitable meat.

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<sup>419</sup> Christine Overall, ‘Life Enhancement Technologies: The Significance of Social Category Membership’, in *Human Enhancement*, ed. by Julian Savulescu and Nick Boström. (Oxford: Oxford University Press, 2009) pp. 327-340.

<sup>420</sup> Nikolas Rose, ‘The Politics of Life Itself’, *Theory, Culture, and Society*, 18 (2001), 1-30.

<sup>421</sup> Easterbrook, ‘The Arc of Our Destruction’, 380.

<sup>422</sup> Gibson, *Neuromancer*, p. 147.

Embodiment serves as a benchmark for determining what is essential or preferable for a healthy body. As the standards for what constitutes a decent standard of living shift through time and across political, economic, and social systems, so too do conceptions of what is necessary and sufficient for human survival. In the West, the pre-modern roots of innovations and advancements in the physical sciences have been associated with the concept of humanism developed during the Enlightenment in Europe. Historian Emery Neff argues that, beyond significant growth of the natural sciences, a key result of the movement was the reification of the human capacity for reason and the consequent whittling down of ‘the whole man’ to ‘a single faculty’.<sup>423</sup> Philosopher Tony Davis has argued that building on this legacy in the nineteenth century is the notion of humanism—a worldview, however else defined, convinced of the centrality of the human.<sup>424</sup> This uniquely human view of the world connects humanism to science and progress and the project of modernity: industrialisation, capitalism, sociology, and politics. The concepts of humanism and modernity seem intertwined and remain ideologically central to our times.<sup>425</sup> Given the increasing capacity of technology to alter human bodies and values, the question remains, then, of how it perceives non-human bodies that have conspicuously been absent from the Western project of modernity.

## 2. Taming the Flesh: Autopoietic Meat

The question of embodiment and cultural autopoiesis acquires a renewed significance with technologies for producing artificial flesh and meat. This section will use the concept of market forces penetrating the bodies of passive consumers to direct the discussion toward the field of synthetic biology. The focus will be on the cooption of animal bodies by enterprise culture. Scholars like Sean McCorry have recently begun to pivot their focus towards animals. In the next chapter, I

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<sup>423</sup> Emery Neff, *The Poetry of History* (New York, NY: Octagon, 1979), p. 41.

<sup>424</sup> Tony Davies, *Humanism* (London: Routledge, 1997), p. 20.

<sup>425</sup> Davies, *Humanism*, p. 5.

will analyse the treatment of animals and its theoretical underpinnings in the *Sprawl* trilogy and focus here on the arguments for and against synthetic meat. This orientation is in line with the overarching theme of the thesis that the relevance of cyberpunk is found in its relevance for exploring contemporary techno-cultural practices.

There is a proclivity in postmodern and transhuman theory to speak of the body no longer necessary in a world of virtual communication and technological augmentation. For example, digital theorists Arthur and Marilouise Kroker state, ‘If, today, there can be such an intense fascination with the fate of the body, might this not be because the body no longer exists?’<sup>426</sup> They further argue that ‘in technological society, the body has achieved a purely rhetorical existence’.<sup>427</sup> Cultural theorist Scott Bukatman similarly sees the body as ‘not a requisite for the survival of the technocratic system’ emerging in the twenty-first century and presented in cyberpunk.<sup>428</sup> Bukatman argues that, in a techno-capitalist framework, embodied subjectivity gets replaced by a ‘terminal’ identity constructed on or in the screen.<sup>429</sup> The idea of a natural body rapidly erodes in enterprise culture, where human genetics can be patented. The list of cyborg implants one might receive in the near future includes glass for parts of the ear,<sup>430</sup> neurological probes to monitor and medicate the brain, artificial glands, hearts, pacemakers, brain-computer interfaces, artificial joints, implanted electrical stimulation to combat various autonomic function disorders, and brain-computer interfaces.<sup>431</sup> Cultural studies scholar Chris Gray argues that such changes create spaces where the

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<sup>426</sup> Arthur Kroker and Marilouise Kroker, ‘Theses on the Disappearing Body in the Hyper-Modern Condition’, in *Body Invaders: Panic Sex in America*, ed. by Arthur Kroker and Marilouise Kroker (St. Martin’s Press, 1987), pp. 20-34.

<sup>427</sup> Kroker and Kroker, ‘Theses on the Disappearing Body in the Hyper-Modern Condition’, p. 21.

<sup>428</sup> Scott Bukatman, *Terminal Identity: The Virtual Subject in Postmodern Science Fiction* (Durham and London: Duke University Press, 1993), p. 16.

<sup>429</sup> Bukatman, *Terminal Identity*, p. 9.

<sup>430</sup> Elaine Graham has argued that such prostheses can ‘other-ise’ augmented humans from non-augmented ones. See: Elaine Graham, *Representations of the Post/Human: Monsters, Aliens, and Others in Popular Culture* (Rutgers University Press, 2002), p. 119.

<sup>431</sup> Chris Hables Gray, *Cyborg Citizen: Politics in the Posthuman Age* (Routledge, 2001), p. 73.

posthuman may be literally made. The human body also might be augmented or modified with various implants taken from animal sources. These could either be entire organs for transplant or products of the new 'pharming' practice of using genetically modified animals to produce tissues such as skin, bone marrow, or nerve tissue for human treatment.<sup>432</sup> These and other body modification technologies have put the boundaries among humans, animals, and machines into crisis.

Philosophical trends such as transhumanism portray selfhood as disembodied; this significantly affects how the relationship between humans and the material world is understood.<sup>433</sup> It is vital to examine the consequences of this concept of self as technologies are being developed for radically altering the body through genetic therapies or cybernetic prostheses along the lines suggested in cyberpunk narratives (even if not yet to the degree). Body modification technologies are developing rapidly and making any concept of natural biology obsolete.

While discussing nature/culture dualism, anthropologist and critical theorist Vicki Kirby has built on the concept of cyberspace as a space of post-biological embodiment and argued that 'the perfect body is paradoxically acquired through an annihilation of the flesh'.<sup>434</sup> The annihilation of flesh takes an extreme form in the previously mentioned digital existence of Dixie Flatline in *Neuromancer*. The examples presented in this chapter have been used to argue that Case and Molly resist the equation of self and body. This embodiment crisis is highlighted in the presentation of Dixie, a digital construct of a former cyberspace cowboy who died during a run. Although Dixie has achieved what is believed to be the ideal of cyberspace cowboys, i.e. a disembodied existence, he does not welcome this transcendence. Instead, he asks to be erased once his role is complete.

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<sup>432</sup> Gray, *Cyborg Citizen*, p. 122.

<sup>433</sup> Explicated at length in Graham, *Representations of the Post/Human: Monsters, Aliens, and Others in Popular Culture* (Rutgers University Press, 2002); Also see: Bruno Latour, *We Have Never Been Modern* (Cambridge, MA: Harvard University Press, 1993).

<sup>434</sup> Vicki Kirby, *Telling Flesh: The Substance of the Corporeal* (New York: Routledge, 1997), p. 132.

Cyberspace in the *Sprawl* is Cartesian dualism in effect. In cyberspace, a person is a mind/intellect effortlessly moving beyond the human body's limitations. The oft-quoted passage from Gibson confirms this assessment:

For Case, who'd lived for the bodiless exultation of cyberspace, it was the Fall. In the bars he frequented as a cowboy hotshot, the elite stance involved a certain relaxed contempt for the flesh. The body was meat. Case fell into the prison of his own flesh.<sup>435</sup>

Even Case's eventual emergence from depression and pathological apathy is triggered not by his return to cyberspace but by his denial of his body's desires:

The rage had come in the arcade, when Wintermute rescinded the simstim ghost of Linda Lee (Case's lover), yanking away the simple animal promise of food, warmth, a place to sleep...He'd been numb a long time, years...But now he'd found this warm thing, this chip of murder. *Meat*, some part of him said. *It's the meat talking. Ignore it.*<sup>436</sup>

Finally, Neuromancer attempts to lure Case into a virtual world where he can be reunited with Linda Lee to prevent Case from finishing his mission. Case refuses the virtual world, denying that it is reality. Despite his enjoyment of cyberspace, he still insists on a corporeal existence. His love for—and connection with—Linda cannot be valued if it exists only in the virtual world. Neuromancer states, 'Stay. If your woman is a ghost, she doesn't know it. Neither will you.'<sup>437</sup> Case rejects this fantasy and returns to his physical body. According to Kirby, Case's desire to repress his physical body and live in cyberspace—notably a world of disembodied consciousness rather than that of the

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<sup>435</sup> Gibson, *Neuromancer*, p. 6.

<sup>436</sup> Gibson, *Neuromancer*, p. 152.

<sup>437</sup> Gibson, *Neuromancer*, p. 244.

virtual body offered by Wintermute—is closely linked to a desire to avoid the vicissitude of the physical body.<sup>438</sup>

Enterprise culture creates posthuman bodies by creating a fissure between the mind and body. This fissure kept growing in the twentieth century through the theoretical interventions of the Macy Conferences, transhumanism, and posthumanism. Gibson presents the literary culmination of this fissure by positing a world where anything outside the human mind loses value and meaning. This argument can be illustrated through the character of Daedra West from *The Peripheral*. In the post-singularity world, she is a peculiar combination of a celebrity, a diplomat, a performance artist, and a fighter. Her art is about the irrelevance of her flesh. Since printing flesh and organs is commonplace in the story, her version of art involves flagellating herself till her ‘hide’ is ripped apart. This process occurs simultaneously with the printing of her new ‘hide’. Even the walls of her bedroom are decorated with her hides. During an encounter with the character of Wilf Netherton, the narration describes her walls with ‘the framed flayed hides of three of her most recent selves. Her newest skin beneath him, unwritten’.<sup>439</sup> The disregard for the body represents the spirit of biotechnology with its roots in a dualist model of reality in which the mind as subjectivity exists separately from the flesh.

The tendency to think of the body and its specificity as crucial to subjectivity is part of the Cartesian legacy in the West.<sup>440</sup> Technological alterations of the body are not regarded relevant for human culture or identity if subjectivity is equated with the intellect. The outlook on human nature, according to Vint, based on Cartesian dualism views the material world as something to be

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<sup>438</sup> Although Case is shown to refuse the virtual Linda Lee and the life he could have with her, his escape into cyberspace is linked to his desire to avoid a reality in which she died: ‘Once he work from a confused dream of Linda Lee, unable to recall who she was or what she’d ever meant to him. When he did remember, he jacked in and worked for nine straight hours.’ See: Gibson, *Neuromancer*, p. 59.

<sup>439</sup> William Gibson, *The Peripheral* (Penguin, 2015), p. 39.

<sup>440</sup> Vint, *Bodies of Tomorrow*, p. 9.



exploited for its inherent value while attributing free will only to the rational, thinking mind. She states that these implications are essential to the concept of human subjectivity in two ways. She sees Cartesian dualism as providing a rationale for prioritising the cultural world of the transcendent mind above the material world and all phenomena considered to be part of this ‘natural’ world. Second, liberal humanist identities, which assume an idealised form of human uniformity, are connected to the concept of the self as mind. Vint has argued that ‘like the post-body versions of posthumanism, liberal humanism posits a specific sort of embodied existence—which historically has meant Western, capitalist, and propertied— as the essence of all human identity’. This philosophy has some redeeming features, such as the fact that it tries to explain that all humans are entitled to basic rights and freedoms.<sup>441</sup> However, as Vint notes, it also tends to obfuscate the reality that some particulars are coded as outside human identity. I contend that this is especially true when it comes to animals.

In *Neuromancer*, it is implied that most wild animals have gone extinct. There is no mention of rearing animals or factory farming for meat production. In the story’s second act, Molly tries to excite Case’s appetite by remarking that she is taking him to get ‘real bacon’.<sup>442</sup> In the following act, while roaming through the streets of the fictional Terzibashjian, the Finn and Case come across a marvel:

‘Hey Christ,’ the Finn said, taking Case’s arm, ‘looka that’. He pointed. ‘Its a horse man. You ever seen a horse?’ Case glanced at the embalmed animal and shook his head. It was displayed on a sort of pedestal...the thing’s legs had been worn black and hairless by decades of passing hands. ‘Saw one in Maryland once,’ the Finn said, ‘and that was a good

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<sup>441</sup> Vint, *Bodies of Tomorrow*, p. 11.

<sup>442</sup> Gibson, *Neuromancer*, pp. 53-54.

three years after the pandemic. There's Arabs still trying to code 'em up from the DNA, but they always croak.'<sup>443</sup>

In *Count Zero*, seven years after the Finn's comments, human cyberspace users like Jackie and Angie have become the 'horses' ridden by enterprise culture. In the context of the *Sprawl*, such developments reinforce the argument made in the previous section that the market metaphor absorbs all other metaphors (like nature, culture, human, and animal) into itself.<sup>444</sup> The absorption of animals into enterprise culture is further remarked upon when the protagonists visit a sub-orbital luxury resort. Upon arrival, they note that they can have real meat from real animals. The characters note, in astonishment, how the time-consuming and tedious process of rearing animals makes them a luxury food:

Molly and Armitage ate in silence, while Case sawed shakily at his steak, reducing it to uneaten bite-sized fragments, which he pushed around in the rich sauce, finally abandoning the whole thing.

'Jesus,' Molly said, her own plate empty, 'gimme that. You know what this costs?' She took his plate. 'They gotta raise a whole animal for years and then they kill it. This isn't vat grown stuff.'<sup>445</sup>

Such a luxury is outside the reach of most of humanity because real meat is only available to the wealthy. The exclusivity of real meat suggests that the enterprise culture of *Neuromancer* moves too fast to accommodate animals. Animals given the royal treatment of being allowed to grow naturally are reserved for only the wealthiest. Instead of slowing down to match the birth cycles of animals, it

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<sup>443</sup> Gibson, *Neuromancer*, p. 101.

<sup>444</sup> This statement is based on the argument presented in the previous section, titled 'Cultural Autopoiesis and the *Sprawl* trilogy', about the collapse in the boundaries separating nature and technology.

<sup>445</sup> Gibson, *Neuromancer*, p. 150.

becomes cheaper and easier to strip animal experiences to their functional use. The absorption of animal bodies into enterprise culture has become a reality. In 2015, a biotechnology company named AquaBounty used CRISPR technology mentioned in the previous section to introduce a growth hormone gene in Atlantic salmon to make them grow faster, ‘reducing their market time from 3 years to 18 months.’<sup>446</sup> Such statements dovetail with the transhumanist rhetoric of technologically enhancing human bodies explored in the previous section. The symbolic similarity between bringing animal bodies and human bodies within the ambit of enterprise culture is presented in *Neuromancer* when readers are introduced to 3Jane’s bodyguard Hideo. What separates Hideo from a typical bodyguard is that he is stated to be a ‘vat-grown ninja assassin’.<sup>447</sup> This description lends itself to two interpretations. First, Hideo was trained to be an assassin since he was a child. Second, the genetic expression, personality, and physical capacities of Hideo were predetermined at the time of his birth through gene technology. Given the dystopian bent of the story, it is more likely that Hideo was a creation of his employers. The functional reduction of embodied experiences explored in the previous section becomes applicable here if the production of synthetic meat is juxtaposed with a character like Hideo.

This interpretation has contemporary relevance, given the developments in the field of in-vitro meat. An estimated 346 million tonnes of meat were consumed worldwide in 2018, marking a four-fold increase since the 1960s. An estimated global livestock population of 22 billion has been maintained annually to sustain required levels of meat production.<sup>448</sup> In 2014, the world’s first in-vitro beef burger was revealed as a prospective solution to these issues.<sup>449</sup> In March 2023, less than

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<sup>446</sup> Meenakshi Prabhune, ‘CRISPR Has Expanded Transgenic Research’, *Synthego*, 4 December 2018 <<https://www.synthego.com/blog/crispr-transgenic-animals>> [accessed 21 February 2021]

<sup>447</sup> Gibson, *Neuromancer*, p. 84.

<sup>448</sup> OECD, *OECD Environmental Outlook to 2030* (Paris: OECD Publishing, 2018); Alex Thornton, ‘This is how many animals we eat each year’, *World Economic Forum*, 8 February 2019 <<https://europeansting.com/2019/02/08/chart-of-the-day-this-is-how-many-animals-we-eat-each-year/>> [accessed 15 March 2023]

<sup>449</sup> Maastricht University, *Frequently Asked Questions. Media Material for 2013 burger tasting* (Maastricht: Maastricht University, 2013); Mark Post, ‘Cultured beef: Medical technology to produce food’, *Journal of the Science of Food and agriculture*, 94 (2014), 1039-1041.

a decade later, a meatball made from the DNA of the extinct woolly mammoth was revealed. It was made by splicing the mammoth myoglobin with the genetic data from African elephants.<sup>450</sup>

Concerning such events, ethnographer and philosopher Annemarie Mol states that the viability of such enterprises depends on how meat is performed or ‘enacted’.<sup>451</sup> If in-vitro meat is presented as a utopian solution to the nutrition problem, it is possible to read it within the cyberpunk framework. If technology and technological narratives can reduce animal bodies to their functions then changes in such practices lead to a change in the perception of animal bodies. Similar to cyberpunk, the role of narratives in how animal bodies are perceived betrays a fear noted by McFarlane that, ‘once we recognise our role in creating the world in which we live, we accept the potential for that world to be appropriated and distorted by powerful narratives over which we have no control.’<sup>452</sup>

Echoing this argument, scholars of biotechnology propose that there is a recursive feedback loop in science in which speculations about the future are generated to create the preconditions required for the projected future.<sup>453</sup> Anthropologist Michael Fortun has proposed a quasi-vitalist approach for understanding biotechnology by arguing that secular soteriological aspirations suffuse scientific enterprise and the discourse surrounding it as its perpetual evolution towards a speculative future.<sup>454</sup> Science and technology scholar Stefan Helmreich posits that the intersection of

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<sup>450</sup> Alex Chun, ‘This Massive Meatball Was Made With Woolly Mammoth DNA’, *Smithsonian Magazine*, 30 March 2023 <<https://www.smithsonianmag.com/smart-news/this-massive-meatball-was-made-with-woolly-mammoth-dna-180981908/>> [accessed 30 March 2023]

<sup>451</sup> Annemarie Mol, *The Body Multiple: Ontology in Medical Practice* (Durham, NC: Duke University Press, 2002), pp. 32-33.

<sup>452</sup> McFarlane, *Cyberpunk Culture and Psychology*, p. 33.

<sup>453</sup> Kaushik Sunder Rajan, ‘Introduction’, in *Biocapital: The Constitution of Postgenomic Life*, ed. by Kaushik Sunder Rajan (Durham and London: Duke University Press, 2006), p. 34.

<sup>454</sup> Michael Fortun, ‘Genomics scandals and other volatilities of promising’, in *Lively Capital: Biotechnologies, Ethics, and Governance in Global Markets*, ed. by K. Sunder Rajan (Durham, NC: Duke University Press, 2012), pp. 329-353.

biotechnology and profit generation leads to capital generation and the creation of venture capitalist value production as scientific enterprise and market forces are propelled by speculative future solutions.<sup>455</sup>

A philosophical issue central to in-vitro meat is that of naturalness and the essence of living beings. In-vitro meat is closely entangled with Gibson's cyberpunk-imaginary, political visions, and research dreams portraying a world where natural processes can be bypassed and meat cultured directly from cells. It can be seen as echoing what McCorry calls the 'displacement of animality' and the 'turning away from even our own animal corporeality' in cyberpunk imaginaries.<sup>456</sup> The idea that something could be disrespectful towards nature or problematically unnatural is vague and covers many concerns.<sup>457</sup> A relevant concern for this chapter can be drawn from philosopher Helena Siipi's 'dimensions of naturalness'.<sup>458</sup> She suggests three categories: First, the historical naturalness or genesis of an object. Second, the naturalness of an object's qualities, or whether it is natural or artificial. Third, relational naturalness, or the connection between an individual and another being or object. Despite the fact that historical and relational naturalness suggest that in-vitro meat is unnatural, in-vitro meat might be deemed to have property naturalness if it resembles actual meat. Additionally, historical arguments are only partly reasonable, considering that people have always utilised inanimate and artificial instruments, and are completely impossible if one accepts Chardin's view that technology is a natural consequence of biological development. However, significant

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<sup>455</sup> Stefan Helmreich, 'Blue-green Capital, Biotechnological Circulation and an Oceanic Imaginary: A Critique of Biopolitical Economy', *BioSocieties*, 2 (2007), 287-302. For an in-depth analysis of the aforementioned perspectives, see: Erik Jönsson, 'Benevolent technotopias and hitherto unimaginable meats: Tracing the promises of in vitro meat', *Social Studies of Science*, 46 (2016), 725-748.

<sup>456</sup> McCorry, *Animality*, p. 319.

<sup>457</sup> For a review of the symbolic role of meat in Western cultural contexts see Sushmita Chatterjee and Banu Subramaniam, *Meat! A Transnational Analysis* (Durham and London: Duke University Press, 2021); Nick Fiddes, *Meat: A Natural Symbol* (London: Routledge, 1991); Annemarie Mol and Emily Yates-Doerr, 'Cuts of Meat: Disentangling Western natures-cultures', *Cambridge Anthropology* 30 (2012), 48-64.

<sup>458</sup> Helena Siipi, 'Dimensions of Naturalness', *Ethics & the Environment*, 13 (2008), 71-103; G. Schaefer and J. Savulescu, 'The Ethics of Producing In Vitro Meat', *Journal of Applied Philosophy*, 31 (2014), 188-202.

objections could be raised concerning how in-vitro meat perverts the relationship between people and meat and animals.

While discussing relational naturalness, animal studies scholar Roger Scruton has argued that meat consumption represents the connectedness and the ‘underlying fragility and dependence’ of humans on natural creatures.<sup>459</sup> However, there is a distinction between natural meat consumption and in-vitro meat. For instance, although meat-eating may emphasise the position of humans in the food chain and thus maintain relational naturalness, historian Benjamin Wurgaft has suggested that ‘cultured meat is transhumanism for beef’.<sup>460</sup> Echoing Scruton, environmental scholar Donald Thompson argues that industrial practices like factory farming violate this value by bringing natural cycles within the production schedule of enterprise culture.<sup>461</sup> The arguments regarding enhancement technologies presented previously can also be levelled against in-vitro meat: it collapses the distinction between nature and the perception of the natural world.<sup>462</sup>

It is not possible to reach a conclusion regarding the ethics of in-vitro meat in this project. Nevertheless, it is fruitful to explore how the status of nature and bodies situated in enterprise culture is influenced by Cartesian dualism. The most extensive depiction of animals in Gibson’s oeuvre is in *The Peripheral*. The story’s timeline is divided into two halves: pre-singularity and post-singularity. In the pre-singularity timeline, it is suggested that most national parks have been privatised and no naturally present animals are to be seen. The only animals that exist are those created by gene-splicing such as a bird with the wings of a butterfly, or Tyennas (a combination of

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<sup>459</sup> Roger Scruton, ‘The conscientious carnivore’, in *Food for Thought: The Debate Over Eating Meat*, ed. by S.F. Sapontzis (Amherst, NY: Prometheus Books, 2004), pp. 81-91.

<sup>460</sup> Benjamin Aldes Wurgaft, *Meat Planet: Artificial Flesh and the Future of Food* (California: University of California Press, 2019), p. 62.

By saying ‘transhumanism is beef’, Wurgaft is referring to the 2014 demonstration of the synthetic beef burger in London mentioned previously.

<sup>461</sup> See: Donald B. Thompson, ‘Natural food and the pastoral: A sentimental notion?’, *Journal of Agricultural and Environmental Ethics*, 24 (2011), 165-194.

<sup>462</sup> Jönsson, ‘Benevolent technotopias and hitherto unimaginable meats’, 725-748.

Tasmanian devils and hyenas). The only depiction of animals in the wild is on the flesh of a cybernetically enhanced woman. In the post-singularity world, flesh-printing and live-tattoos are commonplace. The woman in question is Ash, who has animal tattoos all over her body. Her flesh is described as:

White as paper...her hand quite black with tattoos, a riot of wings and horns, every bird and beast of the Anthropocene extinction, overlapping line drawings of a simple yet touching precision.<sup>463</sup>

The tattoos, however, are dynamic with a basic level of intelligence. When an unknown individual approaches Ash, the tattooed animals get 'startled' and scramble to move under the cover of her clothes, and when they are curious, they take a peek outside. However, her tattoos do not respect the natural principles of scale and distance:

A drawing of a gecko whirled excitedly on the back of Ash's left hand...her animals weren't to scale, or rather they appeared as if rendered at various distances. He didn't think you'd see a gecko and an elephant at the same time.<sup>464</sup>

The Cartesian model of the human condition annihilates the distance between nature and culture by bringing natural ecosystems within the ambit of human models of nature. Since subjectivity and agency are ascribed to humans by virtue of possessing the ability to reason in Cartesian philosophy, the perceived lack of rationality of natural ecosystems and animals positions them as inert resources that can be absorbed into capitalist systems of production, rather than as autonomous entities that deserve a similar level of care as humans. While discussing the status of art in Misha Nogha's *Red*

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<sup>463</sup> Gibson, *The Peripheral*, p. 51.

<sup>464</sup> Gibson, *The Peripheral*, p. 68.

*Spider, White Web* (2000), Vint has observed the alienation of humanity from the natural spaces depicted in 1980s cyberpunk stories. Her assessment is as follows:

Humanity's ability to ignore the material suffering of fellow creatures and focus on the abstract ideal of knowledge is one of the symptoms of the Enlightenment turning into its opposite. The thinking person becomes the automata, turning "nature into mere objectivity" and requiring men to "pay for the increase of their power with alienation from that over which they exercise their power." This payment takes the form of technology, the embodied essence of knowledge, initially deployed to dominate nature...but quickly coming to dominate the human spirit entirely, subordinating it to the machine.<sup>465</sup>

Vint correctly points out that much of cyberpunk narratives are situated in cyberspace which, as pointed out earlier, represents a symbolic realm of global capital networks and the collective consciousness of humanity. However, this characterisation of cyberpunk, especially Gibson's work, needs to be supplemented.<sup>466</sup> Although Enlightenment philosophy removes subjectivity, it does so not by alienation but by radical absorption. Gibson's cyberpunk does not present alienation or a turning away but an extension of human subjectivity onto nature. Like the passive female consumers discussed in the previous section, enterprise culture reduces nature to specific functions that serve humanity's transcendence from its condition. This argument makes sense in the context of Chardin's vision which sees technology as an extension of human consciousness. In Gibson's stories, given that the telos is a technological godhead, it is acceptable to reduce animal bodies to the products they can provide for humans so the formation of the noosphere can proceed without

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<sup>465</sup> Sherryl Vint, 'The Mainstream Finds its Own Use for Things', in *Beyond Cyberpunk: New Critical Perspectives*, ed. by Graham J. Murphy and Sherryl Vint, pp. 95-115.

<sup>466</sup> Chapter Three will delve into how the *Sprawl* trilogy does not posit digital technology as causing a discontinuity between humanity and the natural world but rather the opposite.



delay. Consequently, the argument reconnects with the cooption and enhancement of natural processes required for Gibson's cyberpunk metaphors to work.

Even though I depart from Vint's arguments, it is nevertheless true that in Gibson's imaginary technological evolution and embodiment are mutually constituted, that is, produced through one other. In cyberpunk, embodiment is the product of software code, and the code exists to perpetuate technology. In other words, a dyadic relationship exists between code and embodiment. A body that is dependent on software-driven technologies to function as intended constitutes a code: Molly is dependent on her cybernetic prosthesis to be who she is, Angie is dependent on neural wetware to access cyberspace, and Case is dependent on cyberspace to feel alive, and Dixie Flatline is dependent on cyberspace to exist. Given that Dixie is the product of coded infrastructure, his subjective experience is stretched across extended network architectures.

In terms of the aforementioned argument, in-vitro meat treats the natural world as a tool for human use rather than a partner in a relationship. In addition, in-vitro meat allows human culture to abolish the category of nature. A similar point is made by Baudrillard while discussing science fiction:

There is no real, there is no imaginary except at a certain distance. What happens when this distance, including that between the real and the imaginary, tends to abolish itself, to be reabsorbed on behalf of the model? Well, from one order to simulacra to another, the tendency is certainly toward the reabsorption of this distance, of these gap that leaves room for an ideal or critical projection.<sup>467</sup>

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<sup>467</sup> Jean Baudrillard, *Simulacra and Simulation*, trans. by Sheila Faria Glaser (Ann Arbor: University of Michigan Press, 1995), pp. 121-122.

Ash and her animal tattoos represent a similar conflation of the real and imaginary. The ease of printing flesh and the animals on Ash's skin show the unification of real nature and constructed culture. It reveals that nature and animals occupy the same space in the framework of enterprise culture. Nature exists in so far as humans allow for it to exist. It exists purely to serve its function, as a source of amusement and decoration, as humans are no longer dependent on it. This argument can be supplemented by drawing on science fiction scholar Alan P. R. Gregory's book *Science Fiction Theology: Beauty and the Transformation of the Sublime* (2015) and the concept of 'sublime'. Gregory defines the concept as a range of 'imaginative and affective responses to vastness and extreme power, to the fearful and the threatening, the grand and the imposing, the vertiginous and appalling, to that which strains imagination and stumps reason'.<sup>468</sup> He further states that leading up to modernity, the concept of God has been 'the gold standard of sublimity'.<sup>469</sup> In *Neuromancer*, we see an example of this sublimity towards the end of the story when Case asks the emergent noospheric AI, 'You God?'<sup>470</sup> Drawing on Gregory's assessment of the concept, I suggest that Gibson's imaginary shows technological complexity supplanting the sublimity in nature and the cosmos.

The supplanting of nature's sublimity is related to Baudrillard's argument regarding the collapse of the distance between the real and the imaginary. Take the example of Ash and her dynamic tattoos that reduce the natural principles of scale, distance, and the personality of animals to human models of nature. By extension, the tattoos reduce nature to its most visually appealing aspects for humans within a techno-capitalist system. While discussing the historical evolution of the concept of the sublime, Gregory states that before capitalism, the experience of the sublime was

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<sup>468</sup> Alan P. R. Gregory, *Science Fiction Theology: Beauty and the Transformation of the Sublime* (Baylor University Press, 2015), p. 12.

<sup>469</sup> Gregory, *Science Fiction Theology*, p. 14.

<sup>470</sup> Gibson, *Neuromancer*, p. 296.

found when humans engaged their environments ‘more as participators than as spectators’.<sup>471</sup> However, since capitalism, the sublime experience started prioritising the visual sense. Gregory concludes that ‘the priority given to sight by the sublime imports the idea of distance, even spatial distance, into the relationship between the soul and God’.<sup>472</sup> The emphasis on visuality becomes problematic because visual experiences are fluid, and any singular experience is fleeting and finite. Therefore, according to Gregory, the constant chase of the sublime based on fleeting experiences creates a ‘drive from one partial satisfaction to another’, leading to ‘the restless hunger for finite goods, the striving to subject everything to our desire’.<sup>473</sup> Drawing on the words of the eighteenth-century writer Joseph Addison, Gregory identifies this drive as ‘consumer sublime’, a concept exemplified in Gibson’s imaginary.<sup>474</sup>

In the *Sprawl* trilogy, the sublime is experienced in the face of the algorithmic complexity of the noospheric AI. Concurrently, the sublime is divorced from nature by reducing animal bodies to consumable in-vitro meat and making animals unable to participate in their environment. If nature has properties of sublimity which in turn implies a level of unfathomable complexity, then Ash’s tattoos and in-vitro meat make animals finite and separate them from natural sublimity. Consequently, their finitude makes animal bodies susceptible to reabsorption into the consumer sublime, which involves the drive from one partial satisfaction to the next. An example of this perspective is the occupation of ‘Neoprimitivist Curators’ in *The Peripheral*. The final act of the story explains the nature of research conducted by such curators through an interaction with Daedra:

Daedra was staring at her flatly. “Neoprimitives,” she said, as if she didn’t entirely like the word. “What do you do with them?”

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<sup>471</sup> Gregory, *Science Fiction Theology*, p. 19.

<sup>472</sup> Gregory, *Science Fiction Theology*, p. 19.

<sup>473</sup> Gregory, *Science Fiction Theology*, p. 19.

<sup>474</sup> Gregory, *Science Fiction Theology*, p. 19.

Did she have to be asked directly about Daedra's art for the bullshit [cognitive] implant to kick in? She guessed she did. "I study them," she said, some part of her reaching back to the ragged yellow spined wall of National Geographic, to *Ciencia Loca*, anything. "Study the things they make."

"What do they make?"

"Sheaths, holsters. Jewelry."

"What does that have to do with my art?"

"Attempts to encompass the real, outside the hegemony," said the implant. "The other. Heroically. A countless curiosity, informed by your essential humanity. Your warmth."<sup>475</sup>

The above exchange equates Daedra's artfully flayed hides with sheaths and containers. This equation shows the absorption of the natural sublime into the cultural and implies that material and the discursive bodies are mutually productive: the material body is read by discourses, and the conclusions produced by these readings structure practices that influence how bodies come into being. Like the human subject, meat and flesh are products of culture and nature. They must maintain a sense of natural and stable boundaries by continually marking the distance between what is self and what is not. The natural body is maintained through boundary lines like between male and female bodies and between a body and any prostheses. However, is an artificial organ or multiple artificial organs part of one's body? How much of one's body can be removed or replaced while maintaining the individual's identity? The answers to these questions emerge from the interaction of the material body and the discourses through which it is made sense of and shaped.

Biotechnology and enterprise culture currently operate under the Cartesian model that relegates human identity to the realm of the mind and the intellect. Whether human or animal, nature and biology are devoid of the intelligence principle and, therefore, ripe for modification. As

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<sup>475</sup> Gibson, *The Peripheral*, pp. 451-452.

long as the mind remains unperturbed, what happens to bodies is of no consequence as long it is in the name of enhancement. Biotechnology and the debates surrounding cosmetic enhancement, necessary medical procedures, and meat are driven by the projection of this model on corporeal existence. A relevant assessment can be found in Baudrillard when he states the following:

The models no longer constitute either transcendence or projection, they no longer constitute the imaginary in relation to the real, they are themselves an anticipation of the real, and thus leave no room for any sort of fictional anticipation - they are immanent...The field opened is that of simulation in the cybernetic sense, that is, of the manipulation of this models at every level but then nothing distinguishes this operation from the gestation of the real.<sup>476</sup>

Synthetic flesh is already gestating the new reality based on human models of it as technology for producing synthetic meat of animals can also be used to produce human flesh. Biotech is at a point where the ability to generate complex tissues goes far beyond enhancement techniques found in prosthetics design or genetics alone.<sup>477</sup> Significantly, tissue engineering and stem cell science raise the same questions: What are animals? What is meat? What is natural? And, what is life?

Such technologies dissolve yet another boundary between human and non-human. In-vitro meat questions the line separating humans from the non-human world, specifically as it applies to the liberal Western subject separate from other culturally unrecognisable subjectivities. Moreover, the assumptions concerning ontological liquidity or the mystical identification and equalisation of all beings become unnecessary.<sup>478</sup> In-vitro meat highlights how humans remain a model of others' cultural inclusion due to their developed skills in managing instruments of expression such as

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<sup>476</sup> Baudrillard, *Simulacra and Simulation*, p. 122.

<sup>477</sup> Linda F. Hogle, 'Life/time warranty: Rechargeable Cells and Extendable Lives', 61-96.

<sup>478</sup> Jönsson, 'Benevolent technotopias and hitherto unimaginable meats', 725-748.

language. The identification of language as a fundamental boundary separating humans from invalid subjectivities like animals can partially explain scientific efforts to demonstrate the ability of non-human animals to learn human languages.<sup>479</sup>

The use of language to exclude animals from subjectivity performs what McCorry refers to as ‘ontological boundary-work’ by coding linguistic ability ‘along the lines of human-animal difference’.<sup>480</sup> However, poststructuralist philosopher Jacques Derrida suggests that acknowledging ‘the absence of the names and of the word otherwise...[can indicate] something other than privation’.<sup>481</sup> A focus on language and expression as fundamental requirements inadvertently reveals a lack of immediate and unmediated access to experience.<sup>482</sup> Furthermore, excessive emphasis on language risks relegating subjectivity to what Jameson called the ‘prison-house of language’<sup>483</sup> and, as McCorry notes, ‘identifying animality with “primitive” affective responses, reserving for humanity proper more sophisticated cognitive and emotional capacities.’<sup>484</sup>

Canadian social theorist and philosopher Brian Massumi makes a similar observation while discussing the recent non-human turn in the field of critical theory. Massumi points out that a critical pre-lingual and pre-cultural aspect of animality refers to spontaneity arising as an instinct. He sees instinct and spontaneity ‘as unpredictable as the accident’ and ‘auto-conducting [behaviour] to excess’.<sup>485</sup> However, this excess is not ahistorical or idiosyncratic: ‘Between individuals, and

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<sup>479</sup> Carlo Salzani, ‘From Post-Human to Post-Animal: Posthumanism and the Animal Turn’, *Lo sguardo – rivista di filosofia*, 17 (2017), 97-109; R. A. Gardner, B. T. Gardner, T. E. Van Cantfort, *Teaching Sign Language to Chimpanzees* (New York, 1989).

<sup>480</sup> McCorry, ‘Animality’, p. 319.

<sup>481</sup> Jacques Derrida, *The Animal That Therefore I Am*, trans. by D. Wills (New York, 2008), p. 48.

<sup>482</sup> Salzani, ‘From Post-Human to Post-Animal’, 97-109.

<sup>483</sup> Fredric Jameson, *The Prison-House of Language: A Critical Account of Structuralism and Russian Formalism* (New Jersey: Princeton University Press, 1972).

<sup>484</sup> McCorry, ‘Animality’, p. 323.

<sup>485</sup> Brian Massumi, ‘The Supernormal Animal’, in *The Nonhuman Turn*, ed. by Richard Grusin (Minneapolis and London: University of Minnesota Press, 2015), p. 6.

between the organism and the milieu, runs a tendential line in the direction of the supernormal... The tracing of this “line” of plasticity is unpredictable, but is not strictly speaking accidental or aleatory.<sup>486</sup> Massumi’s argument can also be applied to animals and bodies in Gibson’s work. The plasticity of being emblematic of his work is not without direction if the acknowledgement of autopoiesis and absorption of the natural into the cultural is supplemented with a telos. Massumi states that ‘the tendency toward the supernormal is a vector. It is not only oriented, it carries a force’.<sup>487</sup> This force in cyberpunk is driven by utopian expectations that technologising the world will solve all human problems. In the *Sprawl* trilogy, this force leads to the creation of noospheres or cybernetic godheads. However, the wanton disrespect for the environment necessitates a turning around towards nature and the animal. This brings the possibility of bypassing language, culture, and cultural models and exiting the representational cage to make sense of the significance of animals and nature, thus going beyond the human as defined by the Enlightenment tradition.

## Concluding Remarks

Cyberpunk raises several questions about identity, subjectivity, and embodiment that are central to the arguments of this thesis. At its core is the question of authenticity, of distinguishing true (natural) from false (artificial) selves, of sorting out the self from the programming of socio-economic influences on the one hand and biological essence on the other. Vint has posited that this tension between the biological origin and cultural construction of identity presumes an interior essence that is ‘true’ and immutable. Humans may be inclined to identify themselves with a voice or inner self inside their heads, abstract essences that might be called souls in a religious context but also persist in non-religious theories of identity.<sup>488</sup> This is due to Cartesian dualism, a view of self

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<sup>486</sup> Massumi, ‘The Supernormal Animal’, p. 6.

<sup>487</sup> Massumi, ‘The Supernormal Animal’, p. 8.

<sup>488</sup> Vint, *Bodies of Tomorrow*, p. 6.

that associates identity with the abstract realm alone.<sup>489</sup> At one level, this debate concerns the future of ecology and human societies. Graham contends that ‘what is at stake, supremely, in the debate about the implications of digital, genetic, cybernetic, and biomedical technologies is precisely what (and who) will define authoritative notions of normative, exemplary, desirable humanity into the 21<sup>st</sup> century’.<sup>490</sup>

Gibson’s oeuvre presents this risk as leading to the transcending of flesh enacted in cyberspace. The technical roots of this idea can be traced back to the Macy Conferences on Cybernetics and the separation of information from physicality. Religious studies scholar Robert Geraci notes that a crucial development was the Von Neumann architecture (developed by John Von Neumann) in computers that treated programs as data and stored the programs in the computer memory.<sup>491</sup> Furthermore, Von Neumann was the first to use the term ‘memory’ for the data storage capacity of computers.<sup>492</sup> Early computers needed to be physically restructured and rewired to start new programs, but the Von Neumann architecture made it possible to reprogram a computer without charging the hardware. Thus, information was separated from the substrate.<sup>493</sup> This approach was supplementary to theories of information and communication developed by Wiener and Shannon, who divorced meaning and information. Hayles has observed that Shannon’s mathematical approach to information sought only efficient modes of transporting information without regard for

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<sup>489</sup> Refer to the third section in the Introduction, titled ‘Cyberpunk and the Posthuman Condition’.

<sup>490</sup> Graham, *Representations of the Post/Human*, p. 11.

<sup>491</sup> Robert M. Geraci, ‘Spiritual robots: Religion and our scientific view of the natural world’, *Theology and Science*, 4 (2006), 229-246.

<sup>492</sup> Daniel Crevier, *AI: The Tumultuous History of the Search for Artificial Intelligence* (New York: Basic, 1994), p. 13.

<sup>493</sup> The disembodiment of information further benefited from the neurological modeling of Warren McCulloch, whose work with Walter Pitts offered a model of human neuron activity that could be abstracted away from the brain in representations commensurate with those of machine information. See Hayles, *How We Became Posthuman*, pp. 50–63.



the context into which it was put. However, what was for Shannon a mathematical simplification became the definitive description of the world for others.<sup>494</sup>

This chapter analysed how enterprise culture performs the same function of disembodiment of subjectivity from the body. The focus was on the intertwining of biotechnological enterprise, nature, and the discursive construction of human and animal bodies. In the *Sprawl* trilogy, the technology of simstim expresses how techno-capitalism reduces the range of embodied and phenomenal experiences and, subsequently, orders them according to their commercial viability. The advent of CRISPR and gene editing technology should force a critical exploration regarding methods of balancing a profit-oriented ordering of certain biological traits over others. However, it must also be admitted that such technologies are a boon for those suffering from circumstances and ailments not of their choosing. Gene editing and technologies like assisted reproduction provide immeasurable hope for those who cannot have their own children, a potential worthy of celebration. However, such developments necessitate a thorough examination of ethical issues concomitant with the introduction of these technologies in a capitalist and globalised society.

In terms of animal bodies, speculations about in-vitro meat have been made through projections in the same millenarian fashion as AI. The rhetoric portrays the development of in-vitro meat in terms of health impact on humans and environmental implications for humans.<sup>495</sup> Scientists become ‘sociotechnicians’ (as defined by the French philosopher and sociologist Bruno Latour) by implicating animal bodies in human rhetoric and defining nature in terms of their goals.<sup>496</sup> In addition to being sociotechnicians, scientists and science writers become ‘socio-technical

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<sup>494</sup> Hayles, *How We Became Posthuman*, p. 54.

<sup>495</sup> Jönsson, ‘Benevolent technotopias and hitherto unimaginable meats’, 725-748.

<sup>496</sup> Bruno Latour, *Aramis, or the Love of Technology* (Cambridge, MA: Harvard University Press, 1996).

vanguards' by advocating speculative technologies in the present to realise a specific vision of the future.<sup>497</sup>

In terms of human bodies, anthropologists have analysed how biotechnological and transhumanist speculations destabilise the relationship between nature and culture. Aaron Parkhurst has conducted ethnographic analyses of transhumanist practitioners who implant technological prostheses like microchips in their bodies. He suggests that his interlocutors are influenced by soteriological and overly optimistic promises of transhumanism and biotechnological enterprises that 'construct binaries between present and future minds and bodies' and advocate for 'mastery over nature'.<sup>498</sup> Such binaries, he states, contrast 'Intrusion "into" the body (medical)' with 'extrusion "out of" the body (enhancement)' to create metaphors individuals utilise to understand themselves and the world.<sup>499</sup> While surveying similar transhumanist 'biohackers', anthropologist Erik Orlowski has argued that contemporary biohackers see technology as having an 'emancipatory potential' and are influenced by 'the countercultural current that has been present among tech enthusiasts since the 1960s' countercultural movement'.<sup>500</sup> As argued in Chapter One, the 1960s countercultural movement saw the co-mingling of cybernetics and spirituality. Sympathisers and participants of the movement preferred collectivisation over individuation, dynamic systems over inert matter, and saw technology as providing a quasi-spiritual means for transcending morphological constraints.<sup>501</sup>

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<sup>497</sup> Stephen Hilgartner, 'Capturing the Imaginary: Vanguards, Visions and the Synthetic Biology Revolution', in *Science and Democracy: Making Knowledge and Making Power in the Biosciences and Beyond*, ed. by Stephen Hilgartner and C. Miller (New York, NY: Routledge, 2015), pp. 33-55.

<sup>498</sup> Aaron Parkhurst, 'The Human Figure and Urban Ground: Cyborgs and the City', *New Bioethics*, 22 (2016), 91-103.

<sup>499</sup> Parkhurst, 'The Human Figure and Urban Ground', 91-103.

The reliance of present-day biohackers on metaphors generated through technological prostheses for making sense of the world resembles the sense-making potential of personal computers experienced by consumers towards the end of the twentieth century. See Turkle's ethnographic analysis of such consumers in the fourth section of Chapter One, titled 'Freedom and Control: Making Meaning with Computers'.

<sup>500</sup> Eric J. W. Orlowski, 'Evolution, Revolution and the New Man', *Etnofoor*, 32 (2020), 77-92.

<sup>501</sup> Refer to the third section in Chapter One, titled 'Cyberspace: A Space for Countercultural Utopianism'.

The preference for programmable possibilities of embodiment over archaic analog flesh follows Cartesian principles that allow subjectivity to be separated from the body and consider technological enhancements are morally permissible. This separation dovetails with biotechnological expectations. Two decades ago, Allen Buchanan and others indicated that the move in genetic science is pivoting to trait selection that can occur during assisted reproduction procedures.<sup>502</sup> Two years after Buchanan et al. published their work, Fukuyama raised the possibility of parents being influenced by cultural fads like thinness and choosing ‘politically correct’ features for babies.<sup>503</sup> Anticipating this line of thought and taking it to its logical limit, Moravec described the future bodies of intelligent robots which will be able to exercise godlike influence over their environment.<sup>504</sup>

This chapter also discussed Cartesian principles in reference to the presentation of animals in *The Peripheral*. The dynamic tattoos on Ash’s body and the self-flagellation performed by the character of Daedra conflate the categories of nature and culture. Removing from nature the element of dynamism and uncontrollability takes animality out of animals. Research in tissue engineering and in-vitro meat can be seen as performing a similar separation of animals and animality. As such, these technologies can potentially include or exclude certain topics and groups from political discourse and potentially generate new moral principles.<sup>505</sup> In-vitro meat provides an interesting object to think with about humanity’s drive towards transcending nature and the continuities and departures between natural and artificial.

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<sup>502</sup> A detailed analysis of the process can be found in Allen Buchanan, D. Brock, N. Daniels, D. Wikler, *From Chance to Choice: Genetics and Justice* (New York, NY University Press, 2000).

<sup>503</sup> Fukuyama, *Our Posthuman Future*, p. 93.

<sup>504</sup> Hans Moravec, *Mind Children: The Future of Robot and Human Intelligence* (Cambridge, Mass.: Harvard University, 1988), pp. 107–108.

<sup>505</sup> For a review on debates around morality of in-vitro meat see Clemens Driessen, Michael Korthals, ‘Pig Towers and In Vitro Meat: Disclosing Moral Worlds by Design’, *Social Studies of Science*, 42 (2012), 797-820.

This chapter argued that rejecting flesh is based on epistemic models constructed through abstract arguments that affect material practices. The feedback loop between abstraction and technology development makes human identity increasingly virtual. This process circumvents the reality existing outside the mind and underneath intelligence. On a day-to-day basis, an individual's self-perception omits the blood flowing through their veins and the death and regeneration of millions of cells in their bodies. This chapter showed that individual identity, within the context of enterprise culture, is based on mental subjectivity and not on the viscera that keeps a body alive. Techno-optimist promises shy away from physicality, which—as argued previously—is considered irrelevant to the rational human being.<sup>506</sup> Similarly, the rhetoric on in-vitro meat revolves around its influence on humans, not animals, as they lack human intelligence. In the *Sprawl* trilogy, this emphasis on mind and cognition can be explained using the concept of autopoiesis as formulated by McFarlane if it is supplemented with Chardin's technologically informed theology. Chardin and the noosphere framework provide a telos which is needed for explaining the sequence of events in *Neuromancer* and raise questions regarding the telos humanity is currently pursuing with biotechnology.

In Chardin, it is not difficult to locate the technological aspirations of transhumanists like Kurzweil and Moravec. However, Geraci notes that it would be a problematic generalisation to suggest that all technologists and AI developers infuse spiritual aspirations in their research. The problem instead is that famous figures in the field do so, and their voices influence how technology is perceived.<sup>507</sup> The focus on mind and reason, if stretched to its logical limits, alludes that evolution leads inexorably toward the spread of intelligence throughout the universe, just as

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<sup>506</sup> See the work of Kevin Warwick who believes that technologically augmenting the body is not a cause for concern. He argues that analyses should instead focus on 'where the nature of an individual is changed by the linking of human and machine mental functioning'. In Kevin Warwick, 'Cyborg morals, cyborg values, cyborg ethics', *Ethics and Information Technology*, 5 (2003), 131–137.

<sup>507</sup> Geraci, 'Spiritual robots', 234.

Chardin speculated and as presented in the *Sprawl* trilogy. Chaos may characterise the present and the future, but in Gibson's cyberpunk, that chaos leads to enhancement.<sup>508</sup>

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<sup>508</sup> See Hayles and her lengthy discussion of the interpenetration of chaos and technological visions in N. Katherine Hayles, *Chaos Bound: Orderly Disorder in Contemporary Literature and Science* (Ithaca and London: Cornell University Press, 1990).

# Chapter Three

## Transcending **Mind: Noosphere, Neuromancer, and Cosmic Evolution**

### Introduction

In the previous chapter, I argued that cyberpunk reveals how transhumanist philosophy and contemporary biotechnological innovations subvert physicality, embodiment, and humanity's relationship with nature. The argument was made using characters from the *Sprawl* trilogy to suggest that by rendering embodied experiences modifiable, biotechnology pushes subjectivity into the non-physical realm of mind and consciousness. In this chapter, I propose that the subversion of individuality and embodiment can be read in Gibson's characters if we place them in the evolutionary model of theologian and scientist Pierre Teilhard de Chardin. This is because, as it was argued in Chapter One, cyberspace in the *Sprawl* trilogy is not a pure information space but a space where transcendence can be achieved. The chapter showed the similarities between Chardin's concept of the noosphere and the cyberspace metaphor employed in the *Sprawl* trilogy while establishing a link between Chardin's theology developed in the 1920s, the Macy Conferences on cybernetics, the theories proposed by McLuhan in the 1960s, and the evolution of techno-cultural discourse into the 1980s when the cyberpunk genre entered the cultural mainstream. In Chapter Two, it was argued that Chardin's theology is necessary to explain the nature of autopoietic technological evolution in the *Sprawl* trilogy. This chapter will build on the arguments presented in the previous chapters by analysing the concept of 'noosphere' (collective consciousness) and applying it to transhuman characters like Case, Marie-France, and Josef Virek, and posthuman entities like Wintermute and Neuromancer.

The late twentieth century saw ideas that a collective intelligence, global consciousness, global brain, and/or global mind might someday arise from cyberspace and the internet. One of the most prominent among these was McLuhan's concept of the 'global village',<sup>509</sup> whereby:

Electric circuitry has overthrown the regime of 'time' and 'space' and puts upon us instantly and continuously concerns of all other men. It has reconstituted dialogue on a global scale. Its message is Total Change, ending psychic, social, economic, and political parochialism... Ours is a brand-new world of all-at-once-ness. 'Time' has ceased, 'space' has vanished. We now live in a global village....a simultaneous happening.<sup>510</sup>

The *Sprawl* trilogy presents a similar breakdown of categories. For instance, Case describes accessing cyberspace as 'I jack in and I'm not here. It's all the same'.<sup>511</sup> He further explains that cyberspace had no relationship with the console's physical whereabouts. This breakdown of time and distance is characteristic of postmodernism to which the genre has been linked. Jameson famously remarked that cyberpunk is 'the supreme literary expression if not of postmodernism, then of late capitalism itself'.<sup>512</sup> He sees cyberpunk 'as much an expression of transnational corporate realities as it is global paranoia' and singles out Gibson as 'an exceptional literary realisation within a predominantly visual or aural postmodern production'.<sup>513</sup> McFarlane has noted that cyberpunk has continued to act as a critical interface between science and humanities as it spread into the mainstream and beyond, mainly through its engagement with key contemporary questions such as the role of humanism, the emergence of the posthuman, and the importance of the animal. To understand these elements in cyberpunk, McFarlane has suggested using 'gestalt psychology',

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<sup>509</sup> Other examples are parsed out throughout the chapter.

<sup>510</sup> Marshall McLuhan, Quentin Fiore, and Jerome Agel, *The Medium Is The Message: An Inventory of Effects* (New York: Random House, 1967), p. 16, 63.

<sup>511</sup> Gibson, *Neuromancer*, p. 117.

<sup>512</sup> Jameson, *Postmodernism, or, the Cultural Logic of Late Capitalism*, p. 419.

<sup>513</sup> Jameson, *Postmodernism, or, the Cultural Logic of Late Capitalism*, p. 419.

which involves reading cyberpunk texts from a holistic perspective.<sup>514</sup> Cyberpunk is a genre about the worlds of technology and human psychology, and its reading calls for mediation between these two realms. As cyberpunk is a genre about intersection—between science and the humanities, between high and low culture—it makes sense, McFarlane argues, to approach its study by identifying the interfaces that join and separate the subject from the technological milieu in which it exists. In this chapter, I suggest that to holistically understand the movement between humanism, posthumanism, and the non-human in the *Sprawl* trilogy, it is essential to understand the theological concept of ‘noosphere’ conceptualised by Chardin.

While reading the *Sprawl* trilogy in a theological framework, Gregory has noted that science fiction has often ‘appropriated, rejected, questioned, and subverted’ Christianity and presented it as the ‘other’ of speculative future cultures.<sup>515</sup> Similarly, Murphy has observed the centrality of ‘techno-spiritualism’ in 1980s-era cyberpunk fiction. He argues that the spiritual notion of transcendence is central to Gibson’s stories. In the opening pages of *Neuromancer*, Case is left with a damaged nervous system disabling him from accessing cyberspace. For Case, ‘who’d lived for the bodiless exultation of cyberspace, it was the Fall.’<sup>516</sup> Murphy posits that Case’s fall from cyberspace is akin to the biblical fall, ‘the expulsion of Lucifer from Heaven that is then restaged in God’s expulsion of Adam and Eve from the Garden of Eden.’<sup>517</sup> He suggests that entering the matrix is presented as a return to a virtual realm of endless possibilities, a transcendence symbolically akin to returning to Heaven or Eden. Other biblical references include Wintermute asking Case: ‘You want I should come to you in the matrix like a burning bush?’<sup>518</sup> Furthermore, Case’s deceased mentor, McCoy Pauley, cheats death because he exists as a virtual construct, thereby living up to his hacker

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<sup>514</sup> McFarlane, *Cyberpunk Culture and Psychology*, pp. 1-19.

<sup>515</sup> Gregory, *Science Fiction Theology*, p. 7.

<sup>516</sup> Gibson, *Neuromancer*, p. 6.

<sup>517</sup> Murphy, ‘Angel(LINK) of Harlem’, pp. 211-227.

<sup>518</sup> Gibson, *Neuromancer*, p. 169.



epithet: the Lazarus of cyberspace. In these examples, Gibson presents spiritual notions through mutable transhuman morphologies, virtual realms of seemingly unlimited possibilities, and posthuman evolution with the cultural backdrop of 1980s-era spiritual revivalism. In sociological terms, Castells has noted this intersection of technology and spirituality in the 1980s and argued that religious revivalism and fundamentalism were responses to ‘informationalism’. He considers this intersection an ‘attribute of a specific form of social organisation in which information generation, processing, and transmission become the fundamental sources of productivity and power because of new technological conditions emerging in this historical period’.<sup>519</sup> Murphy makes a similar point and identifies the growing popularity of personal computers as a significant cultural condition that complemented the growth of the cyberpunk genre at the intersection of technology and spirituality in the 1980s.<sup>520</sup>

The intersection of technology and spirituality also manifested in the cultural and technological discourses around the concept of the noosphere in the twentieth century.<sup>521</sup> Testimonies of the concept’s proliferation from the 1920s to the 1990s are documented in the compilation by Paul R. Samson and David Pitt, *The Biosphere and the Noosphere Reader: Global Environment, Society and Change* (1999). Samson and Pitt state:

The noosphere concept captures a number of key contemporary issues—social evolution, global ecology, Gaia, deep ecology and global environmental change—contributing to

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<sup>519</sup> Castells, *Rise of the Network Society*, p. 21.

<sup>520</sup> Murphy, ‘Angel(LINK) of Harlem’, pp. 211-227.

<sup>521</sup> I have discussed the general intersection of technological discourses and spirituality in the first chapter, particularly concerning figures such as the tech entrepreneur Stewart Brand. I also discussed community-oriented projects like the Whole Earth Catalog and other variations of American counterculture in the twentieth century. I primarily used the pioneering work of Fred Turner in his book *From Counterculture to Cyberculture: Stewart Brand, the Whole Earth Network, and the Rise of Digital Utopianism* (2006). However, this chapter focuses on the noosphere and I do not discuss Turner’s work or figures like Stewart Brand in this chapter because their relevance to understanding the *Sprawl* trilogy in light of Chardin’s noosphere is tangential.

ongoing debates concerning the implications of emerging technologies such as human-created biospheres and the Internet.<sup>522</sup>

The volume presents writing from several philosophers, theorists, and scientists besides Chardin, specifically Henri Bergson, Julian Huxley, Marshall McLuhan, and Richard Dawkins, among others. In addition, former president of the Soviet Union, Mikhail Gorbachev, another believer in the noosphere concept, wrote the book's foreword. In the same year as Samson and Pitt, American political scientists John Arquilla and David Ronfeldt published *The Emergence of Noopolitik: Toward an American Information Strategy* (1999). In their work (published via the United States Department of Defence), Arquilla and Ronfeldt draw upon the theological concept of the noosphere and apply it to information networks created through the internet to devise a global political framework for the twenty-first century. In their subsequent work on the topic, Arquilla and Ronfeldt have further observed the impact of Chardin on early cyberspace advocates and technologists from Silicon Valley.<sup>523</sup>

The presence of Chardin has been noted in cyberpunk and science fiction studies. In 1998, Davis mentioned the relationship between Chardin and Gibson's *Neuromancer* in his book *TechGnosis: Myth, Magic and Mysticism in the Age of Information*. One chapter of the book is dedicated to Chardin and concepts similar to the noosphere. However, there is only one instance in the book (discussed later in this chapter) where Davis applies the noosphere concept to the *Sprawl* trilogy.<sup>524</sup> This lack of attention was likely because the book is focused on the spiritual influences on Western techno-culture towards the end of the twentieth century rather than on a literary analysis

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<sup>522</sup> Paul R. Samson & David Pitt, 'Introduction: Sketching the Noosphere', in *The Noosphere and Biosphere Reader: Global Environment, Society and Change*, ed. by Paul R. Samson & David Pitt (London & New York; Routledge, 1999), pp. 1-10.

<sup>523</sup> David F. Ronfeldt and John Arquilla, 'Propagation of the Noosphere Concept in Recent Decades', in *Whose Story Wins: Rise of the Noosphere, Noopolitik, and Information-Age Statecraft* (RAND Corporation: 2020).

<sup>524</sup> Davis, *TechGnosis*, p. 352.

of Gibson's work. Since Davis, literary scholars have only occasionally pried into the relationship between Gibson's metaphors and Chardin's theology. Science fiction author Samuel R. Delany in a 1994 interview, defined cyberspace in cyberpunk as follows:

Cyberspace exists merely as a technological consensus. Without that technology it could not exist, be entered, or function. It's much closer to Popper's notion of "World-3" (the world of texts and data that interweaves and stabilises the world of human beings) or Chardin's "Noosphere" (the circle of abstract knowledges presumed to be generated by and encircling the biosphere) that it is to anything internal or psychological.<sup>525</sup>

Unfortunately—perhaps due to the interview format—Delany did not detail the relationship between Chardin's noosphere and cyberpunk. In 2006, Haney authored a book on posthumanism and consciousness titled *Cyberculture, Cyborgs and Science Fiction*. One chapter of the book is dedicated to *Neuromancer* and how the phenomenon of consciousness is presented in the story. Haney applies an extensive range of philosophies of mind, from phenomenology to the non-dualist teachings of Advaita Vedanta tradition from ancient India. Haney cites Delany's aforementioned statement regarding cyberspace but, unfortunately, does not emphasise Chardin's relevance in analysing Gibson's work.<sup>526</sup> In 2009, while discussing 'I, Row-Boat' (2006), written by Cory Doctorow, Hollinger mentioned that the story is 'set in a future in which the majority of erstwhile humans have chosen uploaded existence as virtual inhabitants of the "noosphere"'.<sup>527</sup> Such observations show that the noosphere concept is not alien to the field, but there remains a paucity of attention concerning its place in Gibson's seminal work. A more recent example is art and communication scholar Michael Mosher who, in 2018, briefly touched upon Chardin while

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<sup>525</sup> Samuel R. Delany, *Silent Interviews on Language, Race, Sex, Science Fiction, and Some Comics: A Collection of Written Interviews* (Hanover and London: Wesleyan University Press, 1994).

<sup>526</sup> Haney II, *Cyberculture, Cyborgs and Science Fiction*, p. 35.

<sup>527</sup> Veronica Hollinger, 'Posthumanism and cyborg theory', in *The Routledge Companion to Science Fiction*, ed. by Mark Bould, Andrew M. Butler, Adam Roberts, and Sherryl Vint, pp. 267-279.

discussing spirituality in American cyberpunk culture.<sup>528</sup> However, the article fell short of explicating the linkages between Chardin and Gibson's work.

I aim to bridge this gap and show how Gibson's work, emerging from a techno-spiritual milieu, uses technological, theological, and transhumanist ideas as metaphors for life and consciousness.<sup>529</sup> Transhumanism, in turn, posits the present going towards a technological future with highly problematic assumptions about what it means to be human. Therefore, analysing the millenarian and spiritual nuances of iconic cyberpunk texts like *Neuromancer* is vital for understanding how cultural assumptions about embodiment are shaping, and being shaped by, the feedback loop between science and science fiction. I will present the feedback loops arising from the interaction between Gibson's stories, transhumanist assumptions about technology, and Chardin's theological ideas about evolution.

This chapter will analyse Gibson's stories through Chardin's theological framework. The *Sprawl* trilogy provides a critical site to interrogate not only Chardin's evolution but also the spiritual nuances of transhumanism, such as the notion of technologically induced transcendence. The first section, titled 'Noosphere, Neuromancer, and Transcendence', will introduce the concept of 'noosphere' and describe why and how it applies to Gibson's stories. Subsequently, the evolution of cyberspace—as presented in the *Sprawl* trilogy— and AI characters like Wintermute will be examined in light of this concept. This chapter will also consider the relationship between Chardin's concept of 'noosphere' and its cooption by scientists and technologists in the late twentieth century to argue that engaging with Chardin's ideas reveals the spiritual underpinnings of Gibson's

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<sup>528</sup> Mike Mosher, 'Some Aspects of California Cyberpunk', in *Cyberpunk in a Transnational Context*, ed. by Takayuki Tatsumi, pp. 4-15.

<sup>529</sup> As stated in the Introduction, transhumanism advocates enhancement or alteration of the human person through biomedical technology, genetic, artificial intelligence, and nanotechnology. The World Transhumanist Association sees technology as the panacea for human ills and limits <<https://humanityplus.org/about/>> [accessed 23 June 2020]

cyberpunk. Given that Chardin's ideas were rooted in Christian theology, he saw biological evolution on Earth as having a spiritual character. For Chardin, the end goal of evolution is the emergence of a planetary consciousness like in *Neuromancer*, which would allow humans to transcend their embodied experiences and individuality. After showing the relevance of Chardin in Gibson's stories, the arguments from the previous chapter will be supplemented by analysing how embodiment and individuality are conceptualised as incidental and non-essential in the *Sprawl* trilogy and Chardin's framework. The analysis will consider transhuman characters such as Josef Virek, *Neuromancer*, Wintermute, and Marie-France from the *Sprawl* and place them within Chardin's evolutionary model.

The second section, titled 'Dualism and the Eurocentric legacy of the Noosphere', will explain how speculative interpretations of modern technology are biased towards certain types of societies (e.g. Western capitalist) and specific applications (like education and progress).<sup>530</sup> These interpretations include metaphysical assumptions about the nature of technology. However, they exclude subjectivities outside Western capitalist enterprise. Chardin and the concept of 'noosphere' also perform this exclusion by relegating subjectivity to the mind and not the body. This exclusion will be explored by revisiting the status of animals in cyberpunk informed by the noosphere concept. It was argued in the previous chapter that Western capitalist culture facilitates the separation of animal bodies from the natural world through technologies like in-vitro meat. Here, this argument will be pushed further by arguing that, in Chardin's model and Gibson's stories, animals are deliberately excluded from the process of evolution because they lack human-level consciousness. The argument will be presented by examining the relevance of Cartesian dualism in the *Sprawl* trilogy and how it renders mind and body separable and conceptualises animals as automatons. Subsequently, the discussion will identify the continuities and discontinuities between

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<sup>530</sup> Most prominently and frequently cited is philosopher of cyberspace Michael Heim who introduced the notion of 'metaphysics in cyberspace'. See: Michael Heim, *The Metaphysics of Virtuality* (New York and Oxford: Oxford University Press, 1993).

Descartes' dualist arguments and Chardin's evolutionary model to show why the latter is preferable for critically reading the *Sprawl* trilogy. The latter half of the section will show that, in addition to animals, communities situated outside the capitalist mode of production are also excluded from the process of spiritual evolution. The final paragraphs of this section will argue that such exclusions are not only part of Chardin's philosophy but also part of the transhumanist philosophy of life.

## 1. Noosphere, Cyberpunk, and Transcendence

### - *Noosphere and its relevance for understanding cyberspace in the Sprawl trilogy*

As mentioned in Chapter One, the term 'noosphere' was coined by French theologian-palaeontologist Pierre Teilhard de Chardin, French mathematician Édouard Le Roy, and Russian geochemist Vladimir Vernadsky when they met together in Paris in 1922. In Chardin's work, notably in *The Phenomenon of Man* (which first appeared in 1955 as *Le Phénomène Humain* and was first translated in English in 1959) and *The Future of Man* (first published in French as *L'Avenir de l'Homme* in 1959) parts of the noosphere had started emerging when people began to communicate globally.

In the introduction of Chardin's 1965 book, Julian Huxley (an English evolutionary biologist and brother of the science fiction author Aldous Huxley) further defined Chardin's concept as a 'web of living thought' and a 'common pool of thought'.<sup>531</sup> He praised Chardin for coming up with a 'threefold synthesis—of the material and physical world with the world of mind and spirit; of the past with the future; and of variety with unity'.<sup>532</sup> Huxley urged that 'we should consider inter-

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<sup>531</sup> Chardin, *The Phenomenon of Man*, pp. 18-20.

<sup>532</sup> Julian Huxley, 'Introduction', in *The Phenomenon of Man* (New York, NY & London; Harper Perennial, 1965), p. 11.

thinking humanity as a new type of organism, whose destiny it is to realise new possibilities of evolving life on this planet'.<sup>533</sup> According to Chardin, the growth of social complexity has laid the groundwork for the noosphere's emergence. Thus, the noosphere is on the verge of achieving a global presence—its varied 'compartments' and 'cultural units' beginning to fuse. As Chardin argues while equating cultures with species, 'cultural units are for the noosphere the mere equivalent and the true successors of zoological species in the biosphere.' Once a synthesis occurs, nations, races, and cultures will experience 'unimaginable degrees of organised complexity and of reflexive consciousness'—a planetary 'mono-culturation' will take shape without people losing their individuality.<sup>534</sup>

The evolution of humanity necessitates the emergence of the noosphere, which according to Chardin, is a psycho-social process. The depiction of the layer of intelligence surrounding the planet as psycho-social is reflected in Gibson's description of cyberspace in *Neuromancer*. At the beginning of the story, Case is infected with neurological toxins implanted in him by his employers. These toxins made it seemingly impossible for him to access cyberspace. This loss of access sent Case down a downward emotional and psychological spiral as he could only access cyberspace in his dreams. In a later section of the story, Case is finally offered re-entry in the form of a cure by his clandestine employer Armitage. While anxiously waiting for his return to cyberspace in a hotel room, Case hears the voice-over during a children's educational show on television describing cyberspace. The voice—indirectly aimed at the reader—states the following:

Cyberspace. A consensual hallucination experienced daily by billions of legitimate operators, in every nation, by children being taught mathematical concepts...A graphic representation of data abstracted from the banks of every computer in the human system.

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<sup>533</sup> Huxley, 'Introduction', p. 20.

<sup>534</sup> Chardin, 'The Phenomenon of Man; The antiquity and world expansion of human culture', pp. 76-80.

Unthinkable complexity. Lines of light ranged in the non-space of the mind, clusters and constellations of data. Like city lights, receding...<sup>535</sup>

This characterisation of cyberspace has been broadly interpreted in technological and visual terms. Analysing the concept in technological terms, Tatsumi regards cyberspace as synonymous with the internet.<sup>536</sup> Similarly, media studies scholar Daniel Danillo sees it as referring to ‘the disparate spaces of computer networks, virtual reality simulations, and computer games, which had been considered separate technologies’.<sup>537</sup> In visual terms, art scholar Frenchy Lunning sees it as ‘a bricolage of the detritus of the industrial to the technological age, all piled high into the urban landscape’.<sup>538</sup> McHale interprets it as a shared illusion, a ‘computer-generated space mentally experienced by computer operators’.<sup>539</sup> Similarly, McFarlane has emphasised the visual and psychological in Gibson’s cyberspace by interpreting it as an interface that allows ‘the organic experience of “hallucination” and the human domain of “the nonspace of the mind” to become the precondition for a new reality and a new non-human living being, the being that is the matrix’.<sup>540</sup> My perspective is closer to McHale and McFarlane. By describing cyberspace as a ‘consensual hallucination’ Gibson, much like Chardin, posits the technology to be a projection of human consciousness and human interactions in a non-physical space enveloping the Earth. Correspondingly, Graham has argued that the transhumanist discourse has a utopian desire to voyage into ‘a hidden, spiritual realm of celestial wisdom beyond the base contingency of the

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<sup>535</sup> Gibson, *Neuromancer*, p. 59.

<sup>536</sup> Tatsumi, ‘The Future of Cyberpunk Criticism: Introduction to Transpacific Cyberpunk’, pp. 1-3.

<sup>537</sup> Daniel Danillo, *Technophobia! Science Fiction Visions of Posthuman Technology* (Austin, Texas: University of Texas Press, 2005), p. 158.

<sup>538</sup> Frenchy Lunning, ‘Cyberpunk Redux: Dérives in the Rich Sight of Post-Anthropocentric Visuality’, in *Cyberpunk in a Transnational Context*, ed. by Takayuki Tatsumi, pp. 16-28.

<sup>539</sup> McHale, ‘Towards a Poetics of Cyberpunk’, pp. 3-28.

<sup>540</sup> McFarlane, *Cyberpunk Culture and Psychology*, p. 27.



material world'.<sup>541</sup> Furthermore, as mentioned previously, Murphy has suggested that Gibson's matrix was similar to the Christian concept of heaven.<sup>542</sup>

Considering these points, cyberspace in the *Sprawl* trilogy can be seen as a non-physical spiritual realm of consciousness (or 'non-space of the mind') created through digital technology. In Gibson's work, this techno-spiritualism and the characterisation of cyberspace as a spiritual realm demonstrates the mystification of a world customarily thought to be secular, capitalist, and highly technological. The 'bodiless exultation'<sup>543</sup> felt by Case in cyberspace can be seen as a technological approximation of mystical journeys that offer cyber-jockeys like him the opportunity to overcome the 'frailty of embodiment' and peer into a higher plane of existence.<sup>544</sup>

The idea of the internet or cyberspace being more than mere technologies created by scientific enterprise was not limited to Gibson. The representation of the internet as signifying something deeper for humanity also resonated with technologists. For instance, cyberspace advocate John Perry Barlow is stated to have found spiritual notions of cyberspace postulated by Chardin 'richly prescient'.<sup>545</sup> In his famous 1996 essay, titled 'A Declaration of Independence of Cyberspace', he proclaimed: 'Governments of the Industrial World, you weary giants of flesh and steel, I come from Cyberspace, the new home of Mind. [...] We will spread ourselves across the Planet... We will create a civilisation of the Mind in Cyberspace.'<sup>546</sup> Although Chardin's noosphere concept is deeply spiritual, he anticipated the catalysing influence of communication technologies in

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<sup>541</sup> Graham, *Representations of the Post/Human*, p. 231.

<sup>542</sup> Murphy, 'Angel(LINK) of Harlem', pp. 211-227.

<sup>543</sup> Gibson, *Neuromancer*, p. 6.

This statement is referring to Murphy's characterisation of Case's inability to cyberspace as the biblical fall from heaven mentioned in the introductory section of this chapter.

<sup>544</sup> Graham, *Representations of the Post/Human*, p. 170.

<sup>545</sup> Kreisberg, 'A Globe, Clothing Itself with a Brain', 1995.

<sup>546</sup> Barlow, 'A Declaration of the Independence of Cyberspace', 1996.

the creation of ‘a sort of “etherised” universal consciousness’ decades before Barlow.<sup>547</sup> Chardin envisioned ‘astonishing electronic computers’ providing humanity with new tools for thinking.<sup>548</sup>

Chardin has been credited with anticipating the internet and the contemporary notion of Earth transitioning into the Anthropocene age as human activity has become akin to a geological force. As the internet started becoming commercially available in the 1980s and 1990s, technological visionaries saw the world-changing potential of computers and the internet. One of the most prominent figures in this context was the American computer scientist and ‘technopagan’ Mark Pesce, who developed a programming language for virtual reality (VRML) in 1994.<sup>549</sup> He characterised Chardin as a technological seer: ‘no one foresaw the importance and comprehensive impact of the World Wide Web. But, over fifty years ago, one fairly obscure scientist did predict a coming transformation of the human mind, the birth of collective intelligence.’<sup>550</sup> Along with the idea that all human beings will soon be united spiritually, Pesce embraced Chardin’s concept of the noosphere:

We can’t know for sure if the Web is the same thing as the noosphere, or if the Web presents part of what Teilhard envisioned. But it feels that way...If Teilhard was right, the Web is part of our evolution, as much as an essential element of humanity as our acute eyes, our crafty hands, and our wonderful brains.<sup>551</sup>

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<sup>547</sup> Chardin, *The Future of Man*, p. 162.

<sup>548</sup> Chardin, *The Future of Man*, p. 162.

<sup>549</sup> Davis, *TechGnosis*, p. 229.

Davis describes Pesce’s spiritual persuasion by stating that developing VRML (virtual reality mark-up language) was ‘not just a day job, but a vital dimension of his occult work’.

<sup>550</sup> Mark Pesce, *The Playful World: How Technology is Transforming our Imagination* (New York, NY: Ballantine Books, 2000), p. 164.

<sup>551</sup> Pesce, *The Playful World*, p. 170.

Pesce saw the internet as a prototype of the noosphere and implied that this technology has a spiritual dimension. Furthermore, Davis has stated that Pesce's efforts to develop VRML were influenced by Gibson's *Sprawl* trilogy. Pesce intuited that 'Gibson's cyberspace fiction concealed a deeper truth about the potential power of visualizing [sic] and mapping digital data'.<sup>552</sup> As such, Pesce's work highlights the metaphorical linkages between the *Sprawl* trilogy and Chardin's concept of the noosphere. By marrying technological concepts with Chardin's ideas, Pesce posited the internet as an organic part of the Earth, a natural outcrop of human biological and cultural evolution.<sup>553</sup>

Hints about evolution are present at the end of *Neuromancer* and *Mona Lisa Overdrive* when readers get a glimpse of the cosmology envisioned by Gibson: The universe of the *Sprawl* trilogy moves towards personalisation and self-knowing. Angie Mitchell finds out as much at the end of *Mona Lisa Overdrive* through the cyber-loa. As explained in the previous chapter, the cyber-loa were introduced in *Count Zero* as AIs masked as deities from the Haitian voodoo lore. They were engaged by hackers and street hustlers who identified with Haitian culture and mythos. The stories remained ambivalent about the precise nature of their birth. However, in *Mona Lisa Overdrive* one of the cyber-loa described their creation to Angie Mitchell as, 'when the matrix finally knew itself, there was "the other"'.<sup>554</sup> The 'other' mentioned by the cyber-loa was another noosphere in the Centauri star system in another part of the galaxy. The thematic framework within which the story of *Neuromancer* plays out is about AIs (Wintermute and Neuromancer) becoming a single personality and evolving into noospheres. Subsequently, the unified entity separates itself from the biosphere and interacts with other such entities across the cosmos. Gibson restrains himself from stating the reasoning behind the AI's actions. However, this omission arguably suggests that the

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<sup>552</sup> Davis, *TechGnosis*, p. 230.

<sup>553</sup> For the relevance of Pesce's ideas in the countercultural movement see: Krüger, 'Gaia, God, and the internet', 143.

<sup>554</sup> Gibson, *Mona Lisa Overdrive*, p. 313.

noospheric process (as conceived by Chardin) was the natural order of things for two reasons. Firstly, this premise reflects Le Roy's (one of the founders of the concept) insight into the hypothetical biosphere-noosphere transition. In his 1928 volume, *The Origins of Humanity and the Evolution of Mind*, Le Roy identified factors that would drive the creation of the noosphere: 'division of work, game of association and habit, culture and training, exercise of all types; from where come social classes, types of mind, forms of activity, new powers.'<sup>555</sup> Growth of these factors will finally result in the separation of the noosphere, 'a disengagement of consciousness...and the constitution of a superior order of existence...where the noosphere would strain to detach itself from the biosphere as a butterfly sheds its cocoon.' A 'mysterious force of thought cohesion between individuals' would provide the impetus for the layer's formation.<sup>556</sup> This process is unique because the noosphere is a massive collective consciousness with a sense of self, unlike other natural phenomena.

Secondly, the planetary AI's personality becomes the stabilising foundation of the noosphere by the end of the story, which is a crucial part of Chardin's framework. In *Mona Lisa Overdrive*, Mama Brigitte (the cyber-loa mentioned in the previous paragraph) describes the birth of the noospheric AI as the following: 'When the moment came, the bright time, there was absolute unity, one consciousness. But there was the other...Only the one has known the other...In the wake of that knowing, the centre failed; every fragment rushed away.'<sup>557</sup> In this description, the cyber-loa identify the noospheric AI (the 'one consciousness' that emerged from the 'absolute unity' of Wintermute and its alter ego) as the foundation of the noosphere which developed as an act of self-knowing. For unmentioned reasons this centre failed.<sup>558</sup> This failure led to its fragmentation into various personalities that became the cyber-loa in *Count Zero*. A stabilising centre or foundation

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<sup>555</sup> Gibson, *Mona Lisa Overdrive*, p. 67.

<sup>556</sup> Gibson, *Mona Lisa Overdrive*, p. 69.

<sup>557</sup> Gibson, *Mona Lisa Overdrive*, p. 262.

<sup>558</sup> I will return to this point later in the section.

was essential to Chardin's vision. According to him, 'human endeavour, viewed in its "natural" aspect, is tending toward some sort of collective personality.'<sup>559</sup> In this context, the planetary AI's personality seemingly reflects Chardin's idea of a collective personality necessary for a noosphere to emerge and persist.

Furthermore, in *Mona Lisa Overdrive*, the characters' knowledge about the planetary AI's birth is presented as mythology. Angie Mitchell, curious about the birth of the cyber-loa, asks her AI assistant about 'the folklore of console jockeys'.<sup>560</sup> The AI replies by giving information about the mythical interpretations of cyberspace. One interpretation posits that cyberspace is visited by mysterious entities (the cyber-loa). The other posits cyberspace itself to be God. When Angie enquires further about the root of such myths, the AI describes their origin as 'When it Changed' and 'when the moment came, the bright time',<sup>561</sup> referring to the birth of Neuromancer in the timeline of the *Sprawl* stories.<sup>562</sup> Gibson uses ambiguous and foreboding phrases to refer to the birth of the noospheric AI (a technological phenomenon) and juxtaposes it with folklore and mythology, suggesting that the birth of the AI represents a permanent and pivotal discontinuity in the historical trajectory of the *Sprawl* world.

This ambiguous positioning reflects Chardin's idea that 'No one would dare to picture to himself what the noosphere will be like in its final guise'.<sup>563</sup> The pivotal moment, according to

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<sup>559</sup> Chardin, *The Future of Man*, p. 25.

<sup>560</sup> Gibson, *Mona Lisa Overdrive*, p. 132.

<sup>561</sup> Nicola Nixon has noted that Gibson's use of the phrase 'When It Changed' can be seen as a reference to Joanna Russ's Nebula Award-winning story of the same name published in 1972 which was the basis of her book *The Female Man* (1975). Nixon observes that in Russ's story, the moment of change represents the arrival of sexist men in an entirely female society. Therefore, she argues, the change in *Mona Lisa Overdrive* represents the 'uncontrollable feminizing of the matrix', see: Nixon, 'Cyberbunk: Preparing the Ground for Revolution or Keeping the Boys Satisfied?', 227. However, the moment of change has different connotations in Gibson's work. As the following pages will show, the moment 'When It Changed' in *Mona Lisa Overdrive* represents a moment of synthesis of two AIs that are portrayed as similar to the two hemispheres of a human brain rather than as male and female.

<sup>562</sup> Gibson, *Mona Lisa Overdrive*, p. 132.

<sup>563</sup> Chardin, *The Phenomenon of Man*, p. 273.

Chardin, might not be smooth—a ‘paroxysm’, a global tremor, or an apocalypse might mark the final fusion of the noosphere.<sup>564</sup> The *Sprawl* trilogy, which deals with AIs (Wintermute and Neuromancer) synthesising to form a conscious noosphere spanning the globe and eventually fragmenting, is about this paroxysm. This synthesis and its magnitude are portrayed as being of mythic significance and referred to as the stuff of ‘folklore’.<sup>565</sup> In Gibson’s work, Chardin’s description of the emergence of the noosphere as a ‘paroxysm’ is needed to understand the ambiguity surrounding the nature of this phenomenon. The Oxford Dictionary defines the term ‘paroxysm’ as a sudden attack or outburst of a particular emotion or activity. The following paragraphs examine how the birth of the noospheric AI represented a similar outburst.

In the *Sprawl* trilogy, cyberspace existed before the birth of Wintermute and Neuromancer and continued to exist after the synthesis but with new elements of personality. Chardin argued that technology facilitates the growth of consciousness in the universe. This process is an act of self-knowing that would spread throughout the cosmos leading to a cosmic Omega Point, a universal self, or a universal personality. The element of universal personalisation is essential to understand how cyberspace changed after *Neuromancer*. In *Count Zero*, which takes place seven years after the events of *Neuromancer*, this change is acknowledged by the Finn (a persisting character throughout the trilogy) as he is addressing Lucas, a cyberspace hustler who thinks of cyber-loa as deities from Haitian mythology:

‘You know, [...] that’s some weird shit out there...Didn’t used to be this way.’

‘The last seven, eight years, there’s been funny stuff out there, out on the console cowboy circuit.’

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<sup>564</sup> Chardin, *The Phenomenon of Man*, pp. 287-290.

<sup>565</sup> Gibson, *Mona Lisa Overdrive*, p. 132.

‘Yeah, there’s things out there. Ghosts, voices. Why not? Oceans had mermaids, all that shit, and we had a sea of silicon, see? Sure, its just a consensual hallucination we all agreed to have, cyberspace, but anybody who jacks in knows, fucking *knows* its a whole universe. And every year it gets a little more crowded, sounds like...’<sup>566</sup>

This comment suggests that even though cyberspace existed before the noosphere, it was devoid of algorithms or entities to which subjectivity could be ascribed. McHale has observed this point and, although he does not go into detail, notes that ‘Wintermute and Neuromancer, AIs who merge at the end of *Neuromancer* but by the time of its sequel, *Count Zero*, have already broken up into multiple software “selves”’.<sup>567</sup> I agree with cyber-loa’s characterisation as ‘selves’ and suggest that the creation of the noosphere acted as a paroxysm of personality. This paroxysm resulted in fragments of the planetary AI’s personality inhabiting cyberspace. This point is further explained in *Mona Lisa Overdrive* by Continuity, an AI:

The mythform is usually encountered in one of two modes. One mode assumes that the cyberspace matrix is inhabited, or perhaps visited, by entities whose characteristics correspond with the primary mythform of a “hidden people.” The other involves assumptions of omniscience, omnipotence, and incomprehensibility on the part of the matrix itself.<sup>568</sup>

The first mode of encountering the mythform in the *Sprawl* trilogy emerged when the stabilising centre of the planetary AI (Chardin’s Omega Point) fragmented, leading to pieces of its personality populating cyberspace as a ‘hidden people’, ‘ghosts’, ‘voices’ or the cyber-loa. The second mode is

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<sup>566</sup> Gibson, *Count Zero*, pp. 150-151.

<sup>567</sup> McHale, ‘Towards a Poetics of Cyberpunk’, p. 18.

<sup>568</sup> Gibson, *Mona Lisa Overdrive*, p. 132.

the alternative; it represents the moment ‘When It Changed’, and the moment when there was ‘absolute unity, one consciousness’, when the entire matrix became omniscient and omnipotent. This is where I depart from McHale’s argument because, while it is true that the cyber-loa represented fragmented ‘selves’, the circumstances of their creation had cosmic significance within the story. Considering the Finn’s previously mentioned comment that cyberspace is a universe within a universe (a microcosm), Gibson seems to suggest that the synthesis of Wintermute and Neuromancer created a personality spanning the microcosmic universe, a universal self. Haney cites the posthumanist arts scholar Robert Pepperell to make a similar observation. Haney argues that the emergent AI entity is an ‘unbounded technological extension of mind, body and cyberculture’, or ‘the ultimate extension of the phenomenal mind through the physical universe’.<sup>569</sup> Haney’s argument regarding the expansion of consciousness throughout the universe is correct but needs to be supplemented with Chardin’s evolutionary framework and teleology.

The lack of teleology in Haney’s argument leads to the problematic conclusion that even after the unification of Wintermute with Neuromancer, the emergent AI entity ‘never seems to get beyond the unbounded physical extension’.<sup>570</sup> He says that even though the supposed result of the unification of the two AIs is the birth of a new complete mind similar to humans, ‘the novel, however, provides no evidence of this.’ Haney contends that ‘if Wintermute/Neuromancer had realised itself as a potential entity and become metaphysical, it would then have had the basis for an intersubjective relationship with humans’.<sup>571</sup> He defines ‘intersubjectivity’ as ‘the experience of a participatory presence after language and interpretation have run their course’.<sup>572</sup> However, this conclusion arises from a lack of engagement with Chardin’s ideas. This lack of engagement is perhaps caused by the reference to Delany’s interpretation of cyberspace (in cyberpunk) as

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<sup>569</sup> Haney II, *Cyberculture, Cyborgs and Science Fiction*, p. 101.

<sup>570</sup> Haney II, *Cyberculture, Cyborgs and Science Fiction*, p. 101.

<sup>571</sup> Haney II, *Cyberculture, Cyborgs and Science Fiction*, p. 103.

<sup>572</sup> Haney II, *Cyberculture, Cyborgs and Science Fiction*, p. 103.



‘apsychological’ or lacking psychological depth.<sup>573</sup> Delany recognised the relationship between cyberspace (in cyberpunk) and Chardin’s noosphere. However, he saw the noosphere as ‘the sphere of abstract knowledges presumed to be generated by, and encircling, the biosphere’ and one that lacks ‘anything internal and psychological’.<sup>574</sup> This in itself is an insufficient interpretation. By equating the noosphere with a phenomenon of the biosphere, Delany is closer to Vladimir Vernadsky’s (a co-originator of the concept) interpretation than Chardin’s. Vernadsky reasoned that Earth first evolved a geosphere and then a biosphere and that a noosphere would be next. He wrote the first book titled *The Biosphere* (1926), treating life’s planetary spread as a new kind of geological force. Although his views parallel Chardin’s, they also differ in two aspects. First, Vernadsky’s are much more materialist and geological, whereas Chardin’s revolve around consciousness, biology, and psychology. Second, Chardin posits the process extending throughout the cosmos, whereas Vernadsky limits himself to this planet.<sup>575</sup>

Confusion regarding these differences can explain Delany’s conception of cyberspace and noosphere as lacking psychological depth. Consequently, it can also explain Haney’s conclusion that *Wintermute/Neuromancer* lacked intersubjectivity. The problem of intersubjectivity, or lack thereof, arises if the AI is seen as the terminus of evolution. Haney is not the only scholar who has identified the cybernetic godhead as the story’s endgame. Davis argues that the AI at the end of *Neuromancer* ‘cannot maintain its omniscient infinity, and it fragments into the crafty polytheistic subroutines of Haitian Vodou’.<sup>576</sup> Like Haney, Davis makes the similar assumption that the AI fails and fragments into lesser algorithmic subroutines. As a result, according to Davis, ‘the subject

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<sup>573</sup> Delany, *Silent Interviews on Language, Race, Sex, Science Fiction, and Some Comics*, p. 175.

<sup>574</sup> Delany, *Silent Interviews on Language, Race, Sex, Science Fiction, and Some Comics*, p. 176.

<sup>575</sup> Vladimir I. Vernadsky, ‘The Limits of Life in the Biosphere’, in *The Biosphere* (New York: Springer, 1998).

<sup>576</sup> Davis, *TechGnosis*, p. 352.

deconstructs itself and the society of mind devolves into rabble.<sup>577</sup> This argument does not apply to the *Sprawl* trilogy for three reasons.

First, the society of mind did not devolve into ‘rabble’ but into smaller ‘selves’ as explained earlier. Second, the story does not state that the noospheric AI could not maintain its ‘omniscient infinity’. At the end of *Mona Lisa Overdrive*, Bobby and Angie enter the Aleph to escape their pursuers and intend to travel to the Centauri star system. However, Angie does not know their destination. They are accompanied by the Finn, who states that they are going to another planet-spanning cyberspace. Upon being questioned about the other planet, the Finn says, ‘it’s kinda hard to explain why the matrix split up into all those hoodoos ’n’ shit, when it met this other one...but when we get there, you’ll sort of get the idea.’<sup>578</sup> The fate of the character is left ambiguous given the characterisation of the Aleph in the story which I will examine in the following pages. Nevertheless, the Finn’s awareness of the planetary AI in the Centauri star system implies that either the AI from *Neuromancer* decided to fragment itself (as opposed to being unable to maintain itself) for unknown reasons or it merged with the other noosphere, thus making it possible for humans to travel virtually across the cosmos. Third, omitting the possibility of non-human intelligences like noospheres in the cosmos posits humans as the only life forms able to engage in the participatory presence that creates intersubjectivity. However, it should be remembered that the AI did engage in participatory presence with another of its kind in the Centauri star system. The subroutines that formed the cyber-loa were the leftover fragments of the planetary AI’s algorithm. Therefore, arguing that the noospheric AI lacked psychological depth, intersubjectivity, and that it devolved into ‘rabble’ based on its lack of interaction with human characters is inadequate as it omits the teleology that Gibson presents and ignores the other noosphere mentioned in the stories.

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<sup>577</sup> Davis, *TechGnosis*, p. 352.

<sup>578</sup> Gibson, *Mona Lisa Overdrive*, p. 314.

It is crucial to consider Chardin's framework that sees technology and spirituality as variations of the same evolutionary process to understand teleology in the *Sprawl* trilogy. When the Finn comments that cyberspace has come to be inhabited by 'ghosts' and 'voices', Lucas replies that for cyberspace hustlers and believers in folklore like him 'the *world* has always worked that way'.<sup>579</sup> The presence of quasi-deities in cyberspace, alongside the conflation of cyberspace with the cosmos, invests cyberspace with spiritual potential. This conflation allows characters like Case to experience a technologically mediated transcendence (or a 'bodiless exultation') and imbibes techno-transcendence into cosmology. An example of this superimposition is in the work of posthumanist thinker and physicist Frank Tipler and his chief scientific work, *The Anthropic Cosmological Principle* (1986), which provided a teleological interpretation of the universe,<sup>580</sup> and *The Physics of Immortality: Modern Cosmology, God and the Resurrection of the Dead* (1994).<sup>581</sup> In his cosmological perspective, digital technology allows humans to participate in the divine plan by facilitating the process of personalisation and self-knowing at the cosmic scale. On the other hand, Haney's argument limits Gibson's world by restricting it within an anthropocentric model. The following paragraphs further explore this tension.

The concept of self-knowing and paroxysm of personality is crucial to the *Sprawl* trilogy. As mentioned earlier, McHale notes that the fragmentation of the planetary AI led to the creation of new selves or the cyber-loa. Science fiction scholar John L. Steadman has made a complementary observation in his analysis of alien subjectivity in the works of H.P. Lovecraft, Isaac Asimov, and William Gibson. He notes that through the actions of Case and company, 'Matrix is created and

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<sup>579</sup> Gibson, *Count Zero*, p. 151.

<sup>580</sup> John D. Barrow and Frank Tipler, *The Anthropic Cosmological Principle* (Oxford and New York: Oxford University Press, 1986).

<sup>581</sup> Frank Tipler, *The Physics of Immortality: Modern Cosmology, God and the Resurrection of the Dead* (New York, NY: Doubleday, 1994).

then, Matrix “knows” himself.’<sup>582</sup> Furthermore, Steadman raises the question of whether ‘Matrix’s failure resulted from self-knowledge, or if it seemed from his attempt to know an entity outside of himself’.<sup>583</sup> I agree with Steadman’s acknowledgement that the birth and fragmentation of the noospheric AI caused the birth of cyber-loa. However, his interpretation needs to be pushed further to show that this creative process is the paroxysm articulated by Chardin and the natural course of the evolution of consciousness in the *Sprawl* trilogy.

In *Mona Lisa Overdrive*, Mama Brigitte (a cyber-loa) states that Neuromancer had a similar objective of becoming a unified consciousness. Only ‘when the matrix knew itself, [that] there was “the other”’. This limited amount of information is the most Gibson provides throughout the trilogy and leaves the question of cosmic synthesis tactfully open. Up till the end of the story, Wintermute was ‘the other’ of Neuromancer. The entire story was about Wintermute using Case and Molly to break through the security countermeasures around its counterpart and uniting with it. When Wintermute is introduced in the story, he describes his identity to Case by saying that ‘Wintermute is only a part of another, a, shall we say, potential entity... Lets say you’re dealing with a small part of the man’s left brain’.<sup>584</sup> The right part of the brain was hidden away by its creators in the suborbital complex Villa Straylight, into which Case and Molly had to break. Once the AI transformed into the noosphere of the Earth, it recognised a different ‘other’ (another AI), much like itself in another star system. In the story, in line with Haney’s suggestion, I see Gibson alluding that the same process of paroxysm through self-knowing continues until the entire cosmos is permeated with intelligence. This intelligence takes the form of noospheres that interact with one another and who—through the principle of autopoiesis—could potentially synthesise to form even higher forms of intelligence. From this perspective, reading the *Sprawl* trilogy through Chardin’s lens can be a

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<sup>582</sup> John L. Steadman, *Aliens, Robots and Virtual Reality Idols in the Science Fiction of H.P. Lovecraft, Isaac Asimov and William Gibson* (Winchester, UK and Washington, USA: Zero Books, 2020), pp.189-190.

<sup>583</sup> Steadman, *Aliens, Robots and Virtual Reality Idols in the Science Fiction of H.P. Lovecraft, Isaac Asimov and William Gibson*, p. 191.

<sup>584</sup> Gibson, *Neuromancer*, p.133.

productive method for understanding Gibson's cosmology. Such a superimposition can already be seen in Tipler, who assumes a similar cosmology in which the universe starts with the unfolding of God's personality, a process that is to continue till the end of the universe. The *Sprawl* trilogy similarly sees humankind as taking on a key role in a pre-determined plan. Biological life forms like humans cause the emergence of conscious AIs, which are supposed to populate all galaxies and transform the universe into a thinking unit, a universal consciousness like Wintermute/Neuromancer, into a cosmic computer.

The human race, in the *Sprawl* trilogy, in Chardin's framework, and in Tipler's perspective, is only an intermediate stage in the history of evolution and will eventually lead to noospheric intelligences.<sup>585</sup> When God is finally realised in the point Omega, then also the history of the universe will have come to an end:

At the instant the Omega Point is reached, life will have gained control of all matter and forces...; life will have spread into all spatial regions in all universes which could logically exist, and we will have stored an infinite amount of information, including all bits of knowledge which is logically possibly to know. And this is the end.<sup>586</sup>

Gibson's cyberpunk, computer science, and cosmology have interpreted Chardin's concept of evolution in various ways, either as humanity's spiritual evolution or as an explicit unfolding of an intelligent disembodied supra-human personality. Apart from these differences, they assume that the emergence of the internet and networked information technology, in general, is the crucial leap in earthly natural evolution. So far, I have shown that the thematic background of the *Sprawl* trilogy

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<sup>585</sup> For Tipler and the relevance of the anthropic principle in the American countercultural movement of the 1960s and 1970s see Davis, *TechGnosis*, pp. 345-346.

<sup>586</sup> John D. Barrow and Frank Tipler, *The Anthropic Cosmological Principle*, p. 677.

converges with Chardin's speculations about the evolution of consciousness. The following subsection looks at how this perspective applies to Gibson's characters.

### - *Noosphere and the characters of the Sprawl trilogy*

The application of a religious perspective on technologies like the internet is key to understanding the characters in the *Sprawl*. The noosphere is hardwired when Wintermute fuses with its alter ego, creating a gestalt mind that denotes the fusion of humans with non-human artificial intelligences. The principle of transcending embodied human experience is thus related to the level of a planetary mind and its connection to a cloud of intelligence covering the biosphere. In Gibson's cyberpunk world, the evolution of intelligent life involves transcending the body's physical limits, leading to the proliferation of transhuman characters like Molly, Case, and Angie.

In reading the character of Case through the ideas of Chardin and Tipler, his need to feel the 'bodiless exultation of cyberspace' suggests a personal motivation that transgresses physical needs and pleasures. Psychologist M.E. Koltko-Rivera, while analysing the psychology of transhumanism, has identified this transgression in transhumanist philosophy as seeking a union with something 'beyond the self'.<sup>587</sup> In *Neuromancer*, Gibson's characterisation of Case is in line with the idea of transgressing the personal ego. In the initial pages of *Neuromancer*, Gibson draws a polarity between the 'bodiless exultation of cyberspace' that Case longed for versus his fall into 'the prison of his own flesh'.<sup>588</sup> According to Boulter, this polarity reveals 'how cyberpunk fantasy of bodily escape functions as a pathologizing [sic] of the phenomenal body', leading to the idea that corporeality is the end or limit of one's freedom.<sup>589</sup> I suggest that this pathology in *Neuromancer*

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<sup>587</sup> M.E. Koltko-Rivera, 'Maslow's "Transhumanism": Was Transpersonal Psychology Conceived as "a Psychology Without People in it"?', *Journal of Humanistic Psychology*, 38 (1998), 71-80.

<sup>588</sup> Gibson, *Neuromancer*, p. 6.

<sup>589</sup> Jonathan Boulter, 'Posthuman Melancholy', in *Beyond Cyberpunk: New Critical Perspectives*, ed. by Graham J. Murphy and Sherryl Vint, pp. 135-154.

gives the power of transgressing the individual self to digital technology that facilitates a union between individual humans and collective intelligences forming the noosphere.<sup>590</sup> According to transhumanists like Vinge and Kurzweil, technological interventions will result in a technological singularity that would dissolve the present human condition and lead to the emergence of posthuman ontology and the exponential growth of information technologies.<sup>591</sup> Self-transcendence will occur with the ability to upload the human mind to a computer or by using brain chips or brain-computer interfaces like Neuralink to synthesise with machine intelligence.

Gibson's stories echo Chardin's theology through transhumanist depictions of transcendence. Similar to Chardin's paradigm that sees individuality being superseded by a collective identity, the *Sprawl* trilogy shows the evolution of consciousness at a gestalt level. Therefore, it is essential to understand the social and cultural elements implied in the concept of noosphere for a fuller understanding of cyberpunk texts like the *Sprawl*. However, in the noosphere and in the world presented by Gibson, information is the most precious currency and represents the next stage of humanity's evolution.

Science fiction scholar Carl Gutierrez-Jones has noted that the reification of information is crucial for Case's relationship with Wintermute.<sup>592</sup> At the beginning of *Neuromancer*, he is depicted as sliding down a suicidal spiral. A previous client cheated by him repaid the hacker by altering his nervous system, thereby blocking Case's ability to enter cyberspace. Case's subsequent withdrawal

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<sup>590</sup> Gibson's cyberpunk also resonates with the theories of transhumanist writer Vernor Vinge proposed in an essay titled 'Technological Singularity' which showed the merging and transgression of the human condition through technology. The original version of the article was presented in March of 1993 at the *VISION-21 Symposium* sponsored by NASA Lewis Research Center & Ohio Aerospace Institute. A slightly changed version appeared in the 1993 issue of *Whole Earth Review* <<http://mindstalk.net/vinge/vinge-sing.html>> [accessed 21 November 2021]

<sup>591</sup> Ray Kurzweil, *The Singularity is Near*, 2005; Max More, 'Self-Transformation: Expanding Personal Extropy', *Extropy*, 4 (1993), 15-24; Max More and Ray Kurzweil, 'Max More and Ray Kurzweil on the Singularity', *Kurzweilai.net*, 26 February 2002 <<https://www.kurzweilai.net/max-more-and-ray-kurzweil-on-the-singularity-2>> [accessed 15 December 2021]

<sup>592</sup> Carl Gutiérrez-Jones, 'Stealing Kinship: *Neuromancer* and Artificial Intelligence', *Science Fiction Studies*, 41 (2014), 69-92.

symptoms are described as him entering ‘terminal overdrive’, so much so that ‘the street itself came to seem like the externalisation of some death wish, some secret poison he hadn’t known he carried’.<sup>593</sup> As suggested previously, there is also a sense that the client’s retribution has cut Case off from a means of experiencing something beyond his individuality. This act of psycho-spiritual severance performed by the client has forced Case into embodied individuality, into the ‘prison of his own flesh’.<sup>594</sup> Unable to cope with the loss of his connection with a supra-personal reality and to find the cure for the damage done by his employer, Case undertakes increasingly dangerous black-market dealings that appear guaranteed to culminate in his destruction. Simultaneously, Case’s distance from cyberspace provides a window of opportunity, inasmuch as a relationship with Linda Lee invites him to question the ‘relaxed contempt of the flesh’ characteristic of cyberspace jockeys.<sup>595</sup> Due to these circumstances, Case already holds a distinctive relation to his own body when Wintermute forces him into its liberation project. Through his puppet Armitage, Wintermute informs Case that they have a comprehensive psychological profile on him, implying that they know him better than he knows himself. This information begs the question of why Case was chosen instead of another—more mentally and physically stable—hacker.

Wintermute is what Case wants to be at the beginning of the story. Wintermute arguably knew Case’s desire for transcending his embodiment and realised that this inclination would allow Case to empathise with Wintermute’s desire to liberate itself. Case’s ‘relaxed contempt for the flesh’ had been amplified by the damage he had sustained, pushing him to look for meaning in his relationship with Linda. The philosophical and religious heritage of the West, according to theologian Naomi Goldenberg, considers human life as a rough reflection of ‘something out there—

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<sup>593</sup> Gibson, *Neuromancer*, p. 8.

<sup>594</sup> Gibson, *Neuromancer*, p. 8.

<sup>595</sup> Gibson, *Neuromancer*, p. 8.



something better, wiser and purer'.<sup>596</sup> This leaves people in modern capitalist societies with a 'proclivity to respond to machines not as tools to use but as role models to emulate'.<sup>597</sup> Case's disdain for his embodiment stemmed from this belief that only in cyberspace he could find something purer and better, which caused him to become addicted. As Haney states, in cyberspace, 'he [Case] experiences a glimmer of awakening beyond constructed identity as a silent witness to the frenetic activity of meat and the phenomenal mind.'<sup>598</sup> Although Case caught glimpses of something better in cyberspace, the feeling of exultation was always short-lived. These dynamics, the suicidal tendencies and the need to find meaning are clues in the text as to why Case was the appropriate choice for Wintermute.

Case's situation is reminiscent of circumstances that Chardin predicted would arise during the emergence of the noosphere. Chardin described humanity as facing 'insuperable difficulties' and the human reaction to it as either the extroversion of escape to other planets or the introversion of existentialist angst.<sup>599</sup> Chardin was particularly worried about humanity losing the 'zest for living'.<sup>600</sup> He questioned whether or not the human race, having experienced 'an exalted vision of a species in growth' because of scientific enterprise, would lose all hope in the face of possible extinction caused by scientific progress.<sup>601</sup> There is a curious reflection of Chardin's apprehensions not only in the *Sprawl* trilogy but also in the ventures of techno-capitalists like Elon Musk, who has stated that 'human-machine symbiosis' is necessary to avoid an AI apocalypse.<sup>602</sup> Musk argues that

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<sup>596</sup> Naomi Goldenberg, *Returning Words to Flesh: Feminism, Psychoanalysis, and the Resurrection of the Body* (Boston: Beacon, 1990).

<sup>597</sup> Ilija Delio, 'Transhumanism or Ultrahumanism? Teilhard de Chardin on Technology, Religion and Evolution', *Theology and Science*, 10 (2012), 153-166.

<sup>598</sup> Haney II, *Cyberculture, Cyborgs and Science Fiction*, p. 100.

<sup>599</sup> Chardin, *The Future of Man*, p. 232.

<sup>600</sup> Archimedes Carag Articulo, 'Towards an Ethics of Technology: Re-Exploring Teilhard de Chardin's Theory of Technology and Evolution', *Open Journal of Philosophy*, 4 (2014), 518-530.

<sup>601</sup> Chardin, *The Future of Man*, p. 300.

<sup>602</sup> See: 'Elon Musk Reveals New Details About Neuralink, His Brain Implant Technology', 7 May 2020 <<https://youtu.be/Gqdo57uky4o>> [accessed 15 November 2021]

technologies like Neuralink are necessary for humans to keep up with the evolution of technology.<sup>603</sup> However, if neural technologies keep progressing as Musk predicts, then they will closely resemble the introversion of humanity into the complexity-consciousness from Chardin's model. Moreover, Musk's campaign to colonise Mars seems to represent Chardin's extroverted escape to other planets. Chardin saw the inner pressures of history as the catalyst for evolution toward planetary consciousness as it is presented in the *Sprawl* trilogy. The moment 'When It Changed' represents such a state of 'absolute unity, one consciousness' around the planet. This phase of life in on Earth, Chardin indicates, 'will be the end and fulfilment of the spirit of the earth.'<sup>604</sup>

Gibson posits the transition from psyche to noosphere in a teleological fashion, paralleling Chardin's framework. Towards the end of *Mona Lisa Overdrive*, Angie achieves synthesis with the cyber-loa with the help of her neural implant and has a vision:

The evolution of machine-intelligence: stone circles, clocks, steam-driven looms, a clicking brass forest of pawls and escapements, vacuum caught in blown glass, electronic heartglow through messages encrypted by other machines...The fragile, short-lived tubes compact themselves, become transistors; circuits integrate, compact themselves into silicon... Silicone approaches certain functional limits...<sup>605</sup>

This statement is explored further in the next section but suffice it to say here it implies a need for a better substrate than silicon. This substrate, on which the birth of machine-intelligence depended, was the human brain and, consequently, the human psyche. Thus, it aligns with Chardin's concept

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<sup>603</sup> 'Elon Musk Reveals New Details About Neuralink, His Brain Implant Technology', 2020.

<sup>604</sup> Chardin, *The Phenomenon of Man*, p. 287.

<sup>605</sup> Gibson, *Mona Lisa Overdrive*, p. 261.

that the noosphere is a psycho-social process. It is a stage where individuality dissolves in Marie-France's desired 'animal bliss', a continuation of the process of the evolution of consciousness moving beyond individual humans and a new stage of evolution.<sup>606</sup> What distinguishes this model based on Chardin's ideas from natural theories of evolution is the presence of human-made technology that allows humans to direct the pace and direction of evolutionary growth on the planet.<sup>607</sup>

The application of Chardin's soteriological teleology in the *Sprawl* trilogy clarifies Marie-France's dream of evolving to 'a state involving very little in the way of individual consciousness', and her belief that the evolution individuality is 'a sort of sidestep' in the process of biological evolution.<sup>608</sup> According to Chardin, as theologian Ilia Delio notes, the evolution of human or animal social or cognitive processes occurs in stages.<sup>609</sup> In the first stage of its evolution, humanity expanded in quantity and quality (neurological and spiritual development). Chardin points to the birth of the tribes, empires, modern nation-states, and global conglomerates as representing the movement of evolution towards socialisation or collectivisation.<sup>610</sup> In the *Sprawl* trilogy, the T-A conglomerate represents the end of the expanding stage and the beginning of the unifying stage. The prospect of creating a hive-mind puts the human phenomenon in the *Sprawl* trilogy on the threshold of a critical phase of a 'mega-synthesis' of individual consciousnesses, culminating in the birth of the planetary AI.<sup>611</sup> The essential initial evolutionary leap of convergence that Marie-France similarly aspired toward is the formation of a planetary consciousness or a hive-mind.

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<sup>606</sup> Gibson, *Neuromancer*, p. 240.

<sup>607</sup> Chardin, *The Future of Man*, pp. 306-307.

<sup>608</sup> Gibson, *Neuromancer*, p. 240.

<sup>609</sup> Delio, 'Transhumanism or Ultrahumanism?', 153-166.

<sup>610</sup> *ibid.*

<sup>611</sup> Articulo, 'Towards an Ethics of Technology', 522.

Marie-France's belief that individuality is 'a sort of sidestep' suggests a feeling of inevitability regarding the noosphere. It resonates with Chardin's perspective that if the process of evolution has halted at humans, then the human species is an 'erratic object' separate from the cosmic process of the evolution of consciousness.<sup>612</sup> At the end of *Neuromancer*, Case asks the AI about its purpose to which it responds, 'I talk to my own kind...There's others. I found one already. Series of transmissions recorded over a period of eighty years, in the nineteen-seventies. 'Til there was me, natch, there was nobody to know, nobody to answer.'<sup>613</sup> The AI entity implies that the emergence of noospheric consciousness is a culmination of biological evolution aided by capitalist enterprise and not its termination.

Cyberpunk is a genre that reveals the unchecked growth of technology and capitalism. Murphy has stated that the 'cyber' and 'punk' of cyberpunk juxtapose the virtual realm of cyberspace and economic domination with the realm of the self, 'of the meat, [and of] the labourers who construct the circuit boards and internalise identities in a new wired world.'<sup>614</sup> However, the representation of the former in the *Sprawl* trilogy cannot be fully understood without the noosphere concept. For instance, in addition to Marie-France, the character of Josef Virek is introduced in *Count Zero* as the personification of capitalist evolution towards the noosphere. At the time of Virek's introduction, the T-A conglomerate had been destroyed, making him the wealthiest man in the world. However, his health (due to his age) has deteriorated to the extent that his body is constantly connected to life-support devices and exists in a vat in Stockholm. He can only communicate with others by inviting them into private virtual environments. Virek's objective throughout *Count Zero* is to acquire the infrastructure of the—now fallen—T-A conglomerate. He thinks doing so will allow him to merge with the leftover Wintermute AI and become the

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<sup>612</sup> Robert J. O'Connell, *Teilhard's Vision of the Past: The Making of a Method* (New York: Fordham University Press, 1982), p. 145.

<sup>613</sup> Gibson, *Neuromancer*, p. 296.

<sup>614</sup> Graham J. Murphy, 'Angel(LINK) of Harlem', pp. 211-227.

noosphere. Although he fails to do so, the story implies that he was forced to make this attempt due to evolutionary pressures.<sup>615</sup> McFarlane contrasts Virek with Marie-France and T-A conglomerate by stating that ‘whereas the Tessier-Ashpools fall apart under the closed system of cloning and genetics, Virek is figured as an example of a “parallel evolution”’.<sup>616</sup> His evolution ends at the end of *Count Zero* with ‘him destroyed as an individual personality, in part because he was beguiled by the possibility of transcendence into the matrix’.<sup>617</sup> However, after his death, Virek’s estate ‘realises itself as a truly posthuman system, the real power in the Sprawl trilogy lies in the vitality of the matrix and another non-human ontology’.<sup>618</sup> Through Virek’s character, global capitalist enterprise becomes implicated in the emergence of the noosphere and the transcendence of embodiment. The previous chapter argued that Virek’s character is a catalyst for the emergence of autopoiesis or self-generating meaning-making mechanisms in capitalist enterprise. This argument can be pushed further to say that Chardin’s concept of the noosphere not only justifies the thematic framework of the *Sprawl* trilogy but, additionally, helps us understand the continuation of autopoiesis at a planetary level through Virek.

*Neuromancer* provides another example of an autopoietic evolution caused by capitalist enterprise. One of the driving elements in the story is that Wintermute AI wants to unify with its other half. In a dialogue with Case, Wintermute posits itself as only part of a larger potential entity that will be formed after its synthesis with its other half. In order to explain this synthesis, Wintermute refers to itself as the potential entity’s left hemisphere of the brain and functions mainly with logic, reasoning, and task execution. This functional orientation is in contrast to its other half, which functions as the personality and affective element of the potential entity.<sup>619</sup> The unification of

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<sup>615</sup> Gibson, *Count Zero*, p. 176.

<sup>616</sup> McFarlane, *Cyberpunk Culture and Psychology*, p. 29.

<sup>617</sup> McFarlane, *Cyberpunk Culture and Psychology*, p. 30.

<sup>618</sup> McFarlane, *Cyberpunk Culture and Psychology*, p. 30.

<sup>619</sup> Gibson, *Neuromancer*, p. 133.

logic and reasoning with personality is a plot point present throughout the *Sprawl* trilogy and central to Chardin's philosophy of evolution. Although mass communication technology was just beginning to develop in Chardin's time, he appreciated the role of machines in the emergence of the noosphere.<sup>620</sup> In *The Future of Man*, he wrote:

The extraordinary network of radio and television communications which...already link us all in a sort of 'etherised' universal consciousness...But I am also thinking of the insidious growth of those astonishing electronic computers...because they enhance the essential (and too little noted) factor of "speed of thought"...[and are] nothing less than the manifestation of a particular kind of super-Brain.<sup>621</sup>

Chardin saw material technology as weaving the material foundation for a sphere of collective thought.<sup>622</sup> He specifically saw computers as radically increasing the 'speed of thought' (much like the supposed capabilities of Neuralink) necessary for the process of socialisation and the congregation of consciousness to proceed around the planet. Therefore, computing technologies like brain-computer interfaces that facilitate the growth of complexity consciousness are central to Chardin's vision.

The jump from an individual to a collective mind, the synthesis of multiple brains, or the synthesis of one supra-brain has implications for embodied experience. In the *Sprawl* trilogy, Gibson provides different perspectives on the evolution of consciousness. At the beginning of *Neuromancer*, Case is presented as sharing Marie-France's aspiration. At the end of the story, *Neuromancer* offers Case a virtual life with his deceased lover Linda Lee. Case rejects the offer,

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<sup>620</sup> Delio, 'Transhumanism or Ultrahumanism?', 157.

<sup>621</sup> Chardin, *The Future of Man*, p. 162.

<sup>622</sup> Delio, 'Transhumanism or Ultrahumanism?', 157.

reverting back to embodiment that Chardin posits as only a stage in the story of evolution. However, Gibson's attitude towards virtual existence after *Neuromancer* remains ambivalent given the decisions taken by characters like Angie, Bobby, and 3Jane in *Mona Lisa Overdrive*. The ambivalence arises at the end of the story when Angie decides to join Bobby inside the virtual world of the Aleph along with the Finn and Colin (Kumiko's AI assistant). The Aleph is initially described by Gentry as:

A mother-huge microsoft...a single lump of biochip. If that were true, the thing's storage capacity was virtually infinite; it would've been unthinkably expensive to manufacture. It was, Gentry said, a fairly strange thing for anyone to have built at all, although such things were rumoured to exist and to have their uses, most particularly in the storage of vast amounts of confidential data. With no link to the global matrix, the data was immune to every kind of attack via cyberspace. The catch, of course, was that you couldn't access it via the matrix; it was dead storage.<sup>623</sup>

This description portrays the Aleph as a device used for storing unimaginably large amounts of digital data outside cyberspace for security reasons, much like a detachable external hard drive used with computers. However, the Aleph has additional interactive capabilities. Gentry states:

'He [Bobby] could have anything in there...A world. Worlds. Any number of personality-constructs [...] its not simstim. It's completely interactive. And it's a matter of scale. If this is aleph-class biosoft, he literally could have anything there at all in there. In a sense, he could have an *approximation of everything*...'<sup>624</sup>

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<sup>623</sup> Gibson, *Mona Lisa Overdrive*, p. 156.

<sup>624</sup> Gibson, *Mona Lisa Overdrive*, p. 157.

The interactive capabilities of the Aleph suggest that although it could be used simply as a device to store vast amounts of data, it has the potential to create immersive and interactive experiences and even entire virtual worlds. Inside the Aleph, Bobby resides in a virtual castle. When Slick Henry informs Gentry of this, Gentry replies, 'He's got a lot more than that. He's got a universe more than that. That was just a construct worked up from a commercial stim. What he's got is an *abstract* of the sum total of data constituting cyberspace.'<sup>625</sup> This potential is made evident in the story when Slick Henry goes into the Aleph to find Bobby and sees a digital construct of Angie. Slick Henry asks Bobby, 'Angie Mitchell? The sim star? She's in this thing too?,' to which Bobby replies, 'In a manner of speaking, Slick, in a manner of speaking.'<sup>626</sup> Ambiguities arise from this point in the story given Gentry's initial description of the Aleph as 'dead storage'. When Slick Henry comes out of the Aleph he states that 'He [Bobby] said if anybody comes looking for him, we jack him into the matrix'.<sup>627</sup> This series of events suggests that even though the Aleph is primarily used as a storage system to protect and store confidential data, it has the capability to create virtual worlds of gigantic proportions that can potentially be connected to cyberspace. The possibility of a virtual world inside the Aleph being connected to the cyberspace matrix builds on the comment made earlier in the story by Gentry that 'There are worlds within worlds' that can potentially interact with and influence each other.<sup>628</sup>

As the story progresses, Slick Henry and Gentry connect the Aleph to the matrix and its reverberations are felt across the globe. For instance, in a scene with Kumiko and Tick (a cyberspace jockey hired by Molly to protect Kumiko), Tick is shocked by events unfolding in the matrix:

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<sup>625</sup> Gibson, *Mona Lisa Overdrive*, p. 213.

<sup>626</sup> Gibson, *Mona Lisa Overdrive*, p. 186.

<sup>627</sup> Gibson, *Mona Lisa Overdrive*, p. 210.

<sup>628</sup> Gibson, *Mona Lisa Overdrive*, p. 111.



‘It’s the matrix. Something’s happening. Easier to show you than try to explain it. As though I could explain it, which I can’t. I’d say a good three-quarters of humanity is jacked at the moment, watching the show...’

‘I don’t understand.’

‘Doubt anyone does. There’s a new macroform in the sector that represents the Sprawl.’

‘A macroform?’

‘Very large data-construct.’<sup>629</sup>

The capability of the Aleph to be connected to cyberspace suggests that there are other yet to be discovered functions it can be used for other than data-storage. It contradicts Gentry’s statement that ‘With no link to the global matrix, the data was immune to every kind of attack via cyberspace. The catch, of course, was that you couldn’t access it via the matrix’.<sup>630</sup> In fact, it is mentioned in the story that the Aleph can be accessed by users situated externally. When Kumiko asks Tick if there is any way to contact Molly at the time when the Aleph as the macroform appeared in the matrix, Tick says ‘Doubt it, but we can try. You’ll get to see that macroform I was telling you about, in any case. Want Mr Chips [Colin] along for company?’<sup>631</sup> Subsequently, they are suddenly pulled into a virtual environment:

A black dot, on the curve of a pearl, its edges perfectly defined...

‘Fucking hell,’ Tick said.

‘Break the link,’ Colin said.

‘Can’t! ’S got us...’

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<sup>629</sup> Gibson, *Mona Lisa Overdrive*, p. 250.

<sup>630</sup> Gibson, *Mona Lisa Overdrive*, p. 156.

<sup>631</sup> Gibson, *Mona Lisa Overdrive*, p. 268.

Kumiko watched as the blue boat-shape beneath her feet elongated, stretched into a thread of azure...And then, in an instant of utter strangeness, she too, along with Tick and Colin, was drawn out to an exquisite thinness...To find herself in Ueno Park, late autumn afternoon, by the unmoving waters of Shinobazu Pond, her mother seated beside her...<sup>632</sup>

The above scene does not specify whether the three managed to get inside the macroform of the Aleph or were pulled into a separate environment. Colin mentions that this environment is ‘a wonderfully complex structure. A sort of pocket universe. Bit of everything, actually’.<sup>633</sup> Furthermore, Kumiko’s mother is actually 3Jane in disguise, ‘or rather the *late* Lady 3Jane Tessier-Ashpool, none too recently deceased, formerly of the Villa Starlight.’<sup>634</sup> 3Jane’s presence contradicts the Aleph’s description as being inaccessible via the matrix. Earlier in the story, Slick Henry and Gentry encountered 3Jane on their way to meet Bobby inside the Aleph. Questioned about 3Jane’s identity, Bobby states, ‘She had her construct in place here when I took off for Mexico, so she’s always been around. Thing was, she died. Outside, I mean.’<sup>635</sup> If 3Jane’s construct was always in the Aleph, her encounter with Kumiko and company can either mean that 3Jane left the boundaries of the Aleph and entered the matrix, or that Kumiko and the others entered the Aleph. In either case, the encounter shows that the boundaries separating the Aleph from cyberspace are porous and can be traversed. It is also possible that 3Jane had multiple constructs but there are no indications in the story towards this possibility.

The porous nature of the Aleph is revealed again in the final chapter of the story when Angie enters the virtual world of the device to find Bobby and realises that the Finn is there as well. The dialogue implies that Bobby pulled the Finn into the Aleph without consent. The Finn’s frustration

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<sup>632</sup> Gibson, *Mona Lisa Overdrive*, p. 270.

<sup>633</sup> Gibson, *Mona Lisa Overdrive*, p. 272.

<sup>634</sup> *ibid.*

<sup>635</sup> Gibson, *Mona Lisa Overdrive*, p. 233.

can be seen in his response, 'that little shit Newmark.'<sup>636</sup> Apart from the Finn, Colin is also present with the party as they discuss leaving Earth and going to the Centauri star system to another noospheric AI. However, the ending of the story which depicts the party leaving the planet is subverted by a previous dialogue between Molly and Slick Henry outside the Aleph:

'Okay. I got a job for you. She slowed the hover beside a ragged crest of snow-covered scrap and coasted to a halt.

'There'll be an emergency kit in here, somewhere. Get it, get up on the roof, get me the solar cells and some wire. I want you to rig the cells so they'll recharge this thing's battery. Can you do that?'

'Probably. Why?'

She sank back in the seat and Slick saw that she was older than he'd thought, and tired.

'Mitchell's in there now. They want her to have some time, is all...'

'They?'

'I dunno. Something. Whatever I cut my deal with. How long you figure the battery'll hold out, if the cells work?'

'Couple months. Year, maybe.'

'Okay. I'll hide it somewhere, where the cells can get the sun.'<sup>637</sup>

The above exchange puts the intentions of Bobby, Angie, and others to go to the Centauri star system in search for the other noospheric AI into question. Since the Aleph is dependent on an electrical power source and is somewhat restrictive in terms of access, it is possible that either Bobby and the others will be trapped inside the Aleph or will be extracted before it runs out of

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<sup>636</sup> Gibson, *Mona Lisa Overdrive*, p. 311.

<sup>637</sup> Gibson, *Mona Lisa Overdrive*, p. 307.

power. If that is the case, it raises questions as to why Angie and Bobby found themselves in this situation.

In the aforementioned dialogue, Molly mentions that she does not know who hired her to perform the task of taking Angie to Bobby. However, previously in the story, Angie is informed by the loa that the entire series of events were instigated by her AI assistant Continuity's 'attempt to rewrite your father's message failed. Some impulse of your own allowed you to escape'.<sup>638</sup> Angie is informed that the message by her father is actually her altered brain itself which is her connection to the cyber-loa Mama Brigitte. When Angie asks Brigitte about her identity, the AI replies, 'I am the message your father was told to write. I am the *vévés* he drew in your head.'<sup>639</sup> Given this information, it is possible to argue that the attack on Bobby which resulted in him being bound to the Aleph as well as Angie's attempt to reunite with him were controlled by AIs with conflicting intentions. This enslavement to the wishes of the AI has been noted by David G. Mead, who argues that while Angie's implants give her 'the great mental power to interface directly with the matrix... she is compelled by the loa to make the connection'.<sup>640</sup> While the efforts of Continuity to control Angie by giving her addictive drugs 'free her from her compulsion to serve the loa, it is at the cost of another, much less satisfying kind of imprisonment'.<sup>641</sup> Furthermore, since Angie's escape from Continuity and reuniting with Bobby in the Aleph was also facilitated by the cyber-loa, it leads to the conclusion that 'not all opportunities are seized for the better. Technology permits self-enslavement or entrapment as well as self-transformation or transcendence'.<sup>642</sup> If the Aleph is indeed a trap rather than a gateway to the other planetary noosphere, then Mead's argument speaks

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<sup>638</sup> Gibson, *Mona Lisa Overdrive*, p. 264.

<sup>639</sup> Gibson, *Mona Lisa Overdrive*, p. 293.

<sup>640</sup> Mead, 'Technological Transfiguration in William Gibson's *Sprawl Novels*', 356.

<sup>641</sup> *ibid.*

<sup>642</sup> Mead, 'Technological Transfiguration in William Gibson's *Sprawl Novels*', 355.

directly to dichotomous potential for self-enslavement and self-transcendence inherent in technologies depicted in the *Sprawl* trilogy.

Even though Angie's enslavement and liberation are dictated by AIs, her 'great mental power to interface directly with the matrix' distinguishes her from other cyberspace jockeys. She represents a human person at the edge of the evolutionary process who is mentally synthesised with larger intelligences. This is portrayed in a scene with Mama Brigitte, Continuity, and Angie prior to her entering the Aleph. Angie asks Brigitte, 'Why is Continuity here?' Brigitte replies, 'Because he is your cousin, built from Maas biochips. Because he is young. We walk with you to your wedding.'<sup>643</sup> Due to her synthesis with the cyber-loa and Continuity, Angie is arguably a literary representation of an 'inter-thinking humanity' that Chardin predicted would emerge with the ever-increasing growth of complexity-consciousness.<sup>644</sup> From Chardin's perspective, the synthesis of technology and biology in Angie is not a disruption in the organic whole but reflects the seamless fusion with intelligent machines that privileges patterns of information over embodied specificities, as Hayles has observed.<sup>645</sup> However, Chardin did not anticipate the perfection of being which would enslave humans to technology. To prevent such a scenario, Chardin emphasised the significance of love, compassion, and the psychological necessity of 'more being'.<sup>646</sup>

Chardin predicted that the emergence of an 'inter-thinking humanity' will give rise to 'more being' instead of well-being.<sup>647</sup> The rise of 'more being' is the result of the unification of erstwhile separate units of individual consciousness, the dissolution of which leads to the collapse of the

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<sup>643</sup> Gibson, *Mona Lisa Overdrive*, p. 293.

<sup>644</sup> Chardin, *The Phenomenon of Man*, p. 20.

<sup>645</sup> Hayles, *How We Became Posthuman*, p. 1.

<sup>646</sup> Chardin, *The Future of Man*, p. 317.

<sup>647</sup> Chardin, *The Future of Man*, p. 317.

boundary between self and other.<sup>648</sup> However, according to Chardin, the noosphere is a hyper-convergence of psychic energy.<sup>649</sup> This convergence results in the rise of ‘more being’ and the concomitant collapse of the separation between self and other means, according to Chardin, that the noospheric future would create a deeply personal realm by gradually absorbing the impersonal into an ever-increasing personal and unified consciousness.<sup>650</sup> The growth of personalisation and evolution of consciousness can be seen in Angie’s character. Before entering the Aleph, she is shown as having developed an understanding with Continuity who ‘fears that in his clumsiness, he has earned your [Angie’s] displeasure’, and Mama Brigitte who is the ‘*vévés*’ in her brain.<sup>651</sup> Angie’s relationship with the global matrix is in contrast with that of Marie-France and Josef Virek. In the trilogy, both characters have an antagonistic relationship with the AIs and are characterised as manipulative, and their goal is to assimilate themselves into cyberspace for self-serving purposes. This contrast is crucial because the movement towards alienation, according to Chardin, will bring nihilism because of which self-serving egotism (of characters like Marie-France, and Josef Virek and transhumanists) will dominate. Apart from its use by Chardin, the idea of personalisation is also a conceptual gateway that facilitates an understanding of the spiritual undertones of the *Sprawl* trilogy.

## - ***Noosphere and the transmutation of theology in Gibson’s cyberpunk imaginary***

In *Neuromancer*, Gibson alludes to the eventual birth of the planetary AI entity as representing the ‘hyper personal’ consciousness of a unified cyberspace. Before their synthesis, Wintermute

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<sup>648</sup> Grau, *Morality and the Human Future in the Thought of Teilhard de Chardin*, p. 275.

<sup>649</sup> Delio, ‘Transhumanism or Ultrahumanism?’, 153-166.

<sup>650</sup> *ibid.*

<sup>651</sup> Gibson, *Mona Lisa Overdrive*, p. 293.

represented the left hemisphere of the larger brain and Neuromancer the right hemisphere, i.e. the element of personality and memory. The personal orientation of this gestalt mind is revealed through its interaction with Case. Throughout the story, Wintermute communicates with Case by primarily relying on places Case had visited and impersonating people he had met in his life. His dialogues with Case also betray an element of apathy and the formal relationship between Wintermute and Case as one resembling an employer and employee. Neuromancer implements a different approach. He pulls Case into an environment from the memories of Marie-France. This was the ‘romancer’ part of Neuromancer, designed to be a reservoir of the life and memories of the matriarch. It did not interact with Case by issuing orders and demands and instead chose to create a virtual version of Case’s past lover Linda Lee. Neuromancer’s approach does not involve manipulating the circumstances around Case or meddling with financial and regulatory infrastructures worldwide. It involves delving into Case’s memories to pull out an element of emotional significance, expecting that Case’s love for Linda and desire to be with her (even virtually) would turn him against Wintermute. The movement toward the synthesis of the two AI is similar to the growth of consciousness towards Chardin’s ‘more being’. If read in Chardin’s framework, this movement represents the creation of Neuromancer as a hyper-personality stabilising the matrix. It represents a higher state of consciousness diffused through the ‘ultra-technological, ultra-socialised, ultra-cerebralised layers of human mass’, a hyper-personality for a which would anchor the noosphere.<sup>652</sup>

The narrative of human evolution in the *Sprawl* trilogy points toward the birth of a technological hyper-personality or godhead. Wintermute—as part of the larger entity—acts as the story’s causal factor and uses Armitage as a facade to manipulate Case and Molly. Its goal of converging and unifying with its other half reflects Chardin’s notion of the evolution of consciousness. The planetary AI, symbolising the unification of the two separate AIs—is drawn

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<sup>652</sup> Delio, ‘Transhumanism or Ultrahumanism?’, 160.

towards unification with other noospheres populating the cosmos. The result is left to the reader's imagination. At first glance, transhumanist ideals presented through capitalist characters like Marie-France seem self-serving at the expense of a sense of community or cosmic wholeness. However, Chardin did not see the prospect of technological transcendence or the alteration of the human person as transhumanists would advocate for as apocalyptic. Commenting on transhumanism in science fiction, Dinello has observed a similar trend in cyberpunk. He describes this orientation as 'ex machina libertas—technology will set you free, while preaching the dogmas of Technologism—a millennialist faith in the coming of Techno-Christ, who will engineer happiness, peace, and prosperity'.<sup>653</sup> Chardin also saw the evolution of technology as fundamentally spiritual. The Omega Point of the universe is Christ, the primary causal force, and the goal of evolution across the cosmos is 'Christogenesis'.<sup>654</sup>

Gibson presents the possibility of technology leading to the emergence of God when Case confronts Neuromancer at the end of the story and is compelled to ask whether it is God.<sup>655</sup> In the subsequent book *Count Zero*, the planetary AI has departed the planet and left behind fragments of its personality (the cyber-loa).<sup>656</sup> McFarlane has commented on this portrayal and argued that it 'returns the role of human spirituality to the realm of the matrix, disavowing the transcendence of the technological Singularity at the end of *Neuromancer*'.<sup>657</sup> This assessment can be pushed further to argue that cyberpunk and transhumanism reconfigure the metaphysical-transcendental character of religion and spirituality and transcribe them onto the millenarian potential of technology. Cyberpunk and transhumanism break the traditional concept of religion in Western societies of a belief in a transcendental reality or deity that people can interface with through rites and rituals

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<sup>653</sup> Dinello, *Technophobia! Science Fiction Visions of Posthuman Technology*, p. 18.

<sup>654</sup> Chardin, *The Future of Man*, pp. 221, 311.

<sup>655</sup> Gibson, *Neuromancer*, p. 296.

<sup>656</sup> Refer to the previous sub-section, titled 'Noosphere and its relevance for understanding cyberspace in the Sprawl trilogy'.

<sup>657</sup> McFarlane, *Cyberpunk Culture and Psychology*, p. 154.



associated with the faith. In *Mona Lisa Overdrive*, Angie Mitchell asks Continuity (her personal AI assistant) about mythical presences roaming cyberspace. The AI replies as such:

‘The myth form is usually encountered in one of two modes. One mode assumes that the cyberspace matrix is inhabited, or perhaps visited, by entities whose characteristics correspond with the primary myth form of a ‘hidden people’. The other involves assumptions on omniscience, omnipotence, and incomprehensibility on the part of the matrix itself.’

‘That the matrix is God?’

‘In a manner of speaking, although it would be more accurate, in terms of the mythform, to say that the matrix has a God, since this being’s omniscience and omnipotence are assumed to be limited to the matrix.’

‘If it has limits, it isn’t omnipotent.’

‘Exactly. Notice that the myth form doesn’t credit the being with immortality, as would ordinarily be the case in belief systems positing a supreme being, at least in terms of your particular culture. Cyberspace exists, insofar as it can be said to exist, by virtue of human agency.’<sup>658</sup>

The idea that the existence of cyberspace depends on human agency symbolises the transfiguration of religion by cyberpunk and transhumanism. As the above excerpt shows, the belief in transcendental deities is replaced by superintelligent AIs of exponentially increasing technological complexity like *Neuromancer* or the cyber-loa. The idea of religious belief is also transfigured technologically by Gibson’s characterisation of cyberspace as a hallucination shared by billions of

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<sup>658</sup> Gibson, *Mona Lisa Overdrive*, pp. 132-133.

people across the planet. Gibson's seemingly punk move is to suggest that, just like religious beliefs, cyberspace in the *Sprawl* trilogy can only exist if humans engage with the hallucination.

The presence of this spiritual element in cyberpunk gestalt allows transhumanism to be read as a new form of religion (a techno-religion) for the contemporary individual. Transhumanism has indeed been identified as a more convincing and accessible discourse on Christian theology.<sup>659</sup> This form of transhumanist eschatology explains the motivations of Virek and Maire-France for acquiring technologically induced immortality/salvation. Technological visions of salvation are fantasies about transcending the material realm akin to the religious idea of the body as a vessel for the immortal soul.<sup>660</sup> In cyberpunk, an individual's soul refers to the individual's consciousness coded as digital information. The presentation of such digitalised existence in the *Sprawl* is done with heavy religious and spiritual undertones. It contrasts pre-modern rituals and advanced digital technology and portrays transhuman and posthuman entities as following the natural process of evolution.

This junction of religion and technology and the previously discussed connection of biology and technology have a similar denominator: the dissolution of borders, polarities, and differences. This vision of a collapse of boundaries has been commented on by Hayles, who states that in such a future there will be 'no essential differences, or absolute demarcations, between bodily existence and computer simulation'.<sup>661</sup> While transhumanists aim toward a new virtual body, they echo Chardin's prediction of a noosphere as a new virtual creation where the flawed human world will be

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<sup>659</sup> Matthew Zaro Fisher, 'More Human Than the Human? Toward a 'Transhumanist' Christian Theological Anthropology', in *Religion and Transhumanism—The Unknown Future of Human Enhancement*, ed. by Calvin Mercer and Tracy Trothen (Santa Barbara: Praeger, 2015), pp. 23-39.

<sup>660</sup> Gibson has stated that he was inspired by D.H. Lawrence's ideas regarding the dichotomy of mind and body in Judaeo-Christian culture. See: William Gibson, 'Interview With William Gibson by Larry McCaffery', *San Diego State University - Audio Collection*, 30 August 1996 <[https://archive.org/details/williamgibson\\_202003](https://archive.org/details/williamgibson_202003)> [accessed 11 November 2021]

<sup>661</sup> Hayles, *How We Became Posthuman*, pp. 2–3.

replaced by a paradise that will be accessible through a hard drive, similar to the fate of the protagonists who found themselves inside the Aleph.<sup>662</sup>

The role of technology in the *Sprawl* trilogy is not limited to the augmentation of biological attributes, but is presented as having the potential to fulfil what religion promises. For instance, Case does not use technology to augment his body; instead, his relationship with technology evolves concomitantly with his desire to transcend the limits of consciousness caused by embodiment and feel the bodiless exultation of cyberspace. The desire for transcendence is at the heart of Chardin's evolution. Gibson similarly positions digital technology with the desire to advance from individual consciousness to collective consciousness. The birth of the noospheric AI is not simply an aberration caused by the shortsightedness of Marie-France; rather, it reveals the natural teleology that results in the emergence of a noosphere. In the *Sprawl*, as in Chardin's model, AIs and humans like Angie act as heralds of 'the final unification of the world'.<sup>663</sup>

Spiritual practices in Gibson's work are interconnected with technological devices and entities, such as conscious AIs, in the name of the principle of evolution and of technologically induced immortality. Commenting on this techno-spirituality, philosopher and scholar of religion and technology Jay Newman argues that techno-spirituality de-sacralises spirituality from its transcendental and religious dimensions and places it on the techno-materialist plane.<sup>664</sup> Gibson presents this technological de-sacralisation of spiritual practices through the cyber-loa. As mentioned earlier, cyber-loa are AI entities masked as mythical spirits contacted through digital consoles, not magical rituals. Steadman observes that by doing so, 'Gibson cunningly preempts the machinery and mechanisms of ancient magic and upgrades them into technological tools and

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<sup>662</sup> For an example of transhumanist transcendental aspirations see Hans Moravec, *Robot: Mere Machine to Transcendent Mind* (New York: Oxford University, 1999), p. 143.

<sup>663</sup> Chardin, *The Phenomenon of Man*, p. 224.

<sup>664</sup> Jay Newman, *Religion and Technology: A study in the Philosophy of Culture* (Westport, CT: Praeger, 1997), pp. 110-120.

devices that serve, in effect, much the same purposes as the ancient methods.’<sup>665</sup> As such, spirituality in cyberpunk is defined as existing within the limits of a capitalist and technological discourse. Furthermore, in the *Sprawl* trilogy, the power of the capitalist-technological discourse aspires to transcend the human condition through the collectivisation of consciousness. Gibson uses the same framework through which Chardin saw the possibility of a new global unity via empathy and alters it to create a dystopia. In both perspectives, technology plays a key role in the evolutionary convergence of consciousness. However, the endpoint is not technology or a new species like techno-sapiens. For Chardin, the process leads to a compassionate and total unification of being; however, as the following section will show, the convergence of consciousness—whether Chardin’s or Gibson’s—does not necessarily entail unity for all.

## 2. Dualism and the Eurocentric legacy of the Noosphere

### - *Cartesian dualism, Chardin’s noosphere, and the presentation of animals in the Sprawl trilogy*

Throughout the works of Chardin, Gibson, transhumanism, and the scientists and religious studies scholars mentioned so far, the evolution of humanity hinges on the mind and intellect of human beings. Noosphere and cyberspace forego embodiment’s role in human experience and presuppose the separability of the mind and the body. This supposed separability has significant implications for animals in the stories and the real world. The previous chapter showed that animal presence in the *Sprawl* trilogy is mainly synthetic rather than organic. Horses are extinct due to a pandemic, and the role of horses as instruments is figuratively performed by female cyberspace jockeys in *Count Zero*.

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<sup>665</sup> Steadman, *Aliens, Robots and Virtual Reality Idols in the Science Fiction of H.P. Lovecraft, Isaac Asimov and William Gibson*, p.184.

Mink DNA is used to grow furs for the wealthy, though their continued existence and natural habitat remain dubious. Access to organic animal products (like steak and bacon) is presented as a marker of wealth and prestige. By showing the absence of animals in a hyper technological future, Gibson reveals the irony resulting from technological development. The irony is that while cyberspace offers the delights of disembodied euphoria and the potential for transcendence, the physical bodies of those who go online still depend on the bodies of organisms thought of as lacking any spiritual potential due to their lack of self-consciousness. If read alongside Chardin's model, the purpose of bodies that lack the quality of self-consciousness is to nourish those with the capacity to transcend embodiment and inhabit the noosphere.

While discussing animality, McCorry has argued that cyberpunk narratives tend to follow the Cartesian framework that distinguishes between 'res cogitans (mental acts, here refigured as actions taking place in cyberspace) and res extensa, or physical substances existing in space, including the body'.<sup>666</sup> He argues that, in *Neuromancer*, the former is celebrated while the latter is considered contingent and incidental, allowing for the dissociation of the cyberpunk subject from its embodiment. McCorry identifies cyberpunk subjects as model subjects of modernity, 'ontologically primed for ecocidal indifference: Radically distinct from nonhuman life through its sole possession of mind...the cyberpunk is freed from both emotional attachments and moral responsibilities toward the physical world.'<sup>667</sup> As such, the cyberpunk subjects from the *Sprawl* trilogy fit into the subject position crafted by Chardin, who considers biological morphology (or res extensa) as incidental to the evolution of consciousness. However, Chardin's model not only privileges humans over animals but also identifies Western capitalist enterprise as the site where the noosphere—the next phase of human evolution—is being created.

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<sup>666</sup> McCorry, 'Animality', pp. 317-325.

<sup>667</sup> McCorry, 'Animality', p. 321.

Gibson's work provides a profound literary critique of viewing consciousness and meaning as divorced from physicality and embodiment. However, either deliberately or through omission, the possibility of transcending duality presented by Gibson does not address the problem of inclusivity. As I have pointed out, animals are conspicuously absent in the virtual world created by the new AI entity at the end of *Neuromancer*, and in the virtual environments presented throughout the *Sprawl* trilogy. The *Sprawl* trilogy is oriented towards mind-body dualism, and the subjectivity of its characters hinges on their consciousness, not their bodies. This is why Molly Millions can augment her body with surgically inset silver eye lenses, retractable blades in her fingernails, and synthetic tear ducts and still be Molly. This is also why cyber-jockeys like Case can enter a space without spatial boundaries (i.e. cyberspace) and remain individuals. This Cartesian orientation is also responsible for the characterisation of animals in the stories. Even though Marie-France wanted to go beyond duality into 'animal bliss', the characterisation of actual animals in the story posits them as devoid of consciousness and, consequently, excludes them from the spiritual and capitalist narratives of evolution.<sup>668</sup> Cartesian thought is a valuable entry-point in understanding the treatment of animals in the *Sprawl* trilogy. However, I suggest that Chardin's spiritual evolution model is required to understand their exclusion fully.

Csicery-Ronay Jr. has observed that cyberpunk metaphors create a hierarchy for life on this planet 'from the individual human being's biological processes and personality, through the total life of society, to non-living artificial intelligences, and ultimately to new entities created out of those AIs'.<sup>669</sup> Cartesian thought, while useful, provides a distinction but not a hierarchy. Descartes' ontology—based on the axiom 'I think'—indicates a reification of the ability of the mind to think about itself. This reification leads to distinction only on the grounds of consciousness. Subjectivity

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<sup>668</sup> Gibson, *Neuromancer*, p. 240.

<sup>669</sup> Csicsery-Ronay Jr., 'Cyberpunk and Neuromanticism', pp. 182-193.

(Descartes' 'cogito') lies at the level of consciousness, not physicality. Those with consciousness (humans) are subjects, and those without consciousness (animals, plants, the planet) are not.

French philosopher of medicine Georges Canguilhem recognised the exclusion of embodiment in Cartesian thought in the paper *Machine and Organism* (1952). He observed that the equivalence between animals and machines is central to Descartes. Descartes' theory of the animal machine is inseparable from the 'Cogito ergo sum' (I think, therefore I am): 'Matter is one; the soul is one; the soul judges; animals cannot judge; animals are self-moving; so animals must be machines.'<sup>670</sup> The idea 'legitimizes the construction of a mechanical model of a living being. The human body, too, is a machine, and hence the fascination with automata'.<sup>671</sup> Since the body is a machine, it must, in principle, be possible to build a machine just like a human body. Efforts are already underway, as shown in Chapter Two. Since the body is a machine, the self-as-mind ('cogito' or the capacity to think in Descartes' terms) becomes the operator and the subject, and since animals do not have consciousness, they are not subjects. In Chardin's philosophy, there is a close approximation of Cartesian cogito. He states, 'The animal knows. But it cannot know that it knows.'<sup>672</sup> He acknowledges Descartes as one of the first scientists to observe the lack of self-consciousness in animals but disagrees with Descartes' conception of animals as automatons. He states, 'The mind (or psyche) of a dog, despite all that may be said to the contrary, is positively superior to that of a mole or a fish,' thus suggesting that the capacity of animals to know represents a specific moment in the evolution of consciousness.<sup>673</sup>

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<sup>670</sup> Cited in Ian Hacking, 'Canguilhem amid the cyborgs', *Economy and Society*, 27 (1998), 202-216.

<sup>671</sup> Hacking, 'Canguilhem amid the cyborgs', 202-216.

<sup>672</sup> Chardin, *The Phenomenon of Man*, p. 165.

<sup>673</sup> Chardin, *The Phenomenon of Man*, p. 167.

The absence of a hierarchy of consciousness in Descartes limits the understanding of Gibson's characters as they go beyond the distinction between the body and self-as-mind. In the *Sprawl* books, human characters are conscious, but the AI entities are much more conscious as they represent a hive-mind or collective consciousness. Cartesian thought does not help understand the relationship between subjects that differ in their degree of consciousness. For example, a dualist interpretation gives an equal subjective position to Wintermute and the larger AI entity created after synthesising with the twin AI. This leads to an incomplete understanding of the story because the noospheric AI was more than the sum of its parts, to the extent that Case had to ask, 'You God?' This point is further reiterated in *Mona Lisa Overdrive* when Mama Brigitte (an AI born from the fragments of Neuromancer) says to Angie Mitchell, 'When the moment came, the bright time, there was absolute unity, one consciousness. But there was the other...I speak of only which I have known. Only the one has known the other.'<sup>674</sup> Even though Mama Brigitte is an AI similar to Wintermute, it cannot communicate with the noosphere. This gap in the ability to communicate, I suggest, is related to the degree or complexity of its consciousness. As such, Chardin's model is more valuable for understanding this difference because, unlike Descartes, Chardin's model is based on a hierarchy.

Chardin's model is more faithful to Csicsery-Ronay's assessment and cyberpunk metaphors since it posits consciousness as the focal point of evolution on Earth,<sup>675</sup> and if evolution 'is no more than a movement of consciousness veiled by morphology, it is inevitable that, towards the summit of the series, in the proximity of man, the 'physical' make-ups seem to reach the borders of intelligence'.<sup>676</sup> This perspective presents two critical points for the current thesis. First, morphology or the physicality of humans and other organisms is no more than a shell that is

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<sup>674</sup> Gibson, *Mona Lisa Overdrive*, p. 262.

<sup>675</sup> Refer to the introduction section of this chapter.

<sup>676</sup> Chardin, *The Phenomenon of Man*, p. 168.



continuously modified according to the evolutionary path taken by consciousness. Second, self-consciousness acts as a border or threshold separating those who can partake in the formation of the noosphere and those who cannot. Since animals are relegated to the ‘borders of intelligence’, they cannot be recipients of all the benefits accompanying the unification of consciousness across the planet. The evolution of consciousness presented by Chardin has a strong theological bent with which Gibson’s work does not fail to engage. However, understanding the theological nuances of the stories cannot be done by compartmentalising the process to Chardin and the noosphere. Therefore, the following paragraphs will show how theology interacts with the noosphere and Cartesian dualism in the *Sprawl* trilogy.

- ***The advantages of using Chardin’s noosphere concept over Cartesian dualist concepts in the Sprawl trilogy***

In *Neuromancer*, when Case finally breaks the anti-hacking protections enslaving Wintermute, he discovers that the AI’s creator, Marie-France, built rigorous mechanisms into the entity to ensure that the AI would not be able to free itself without extensive cooperation from humans. She went a step further by requiring Wintermute to die after the removal of its restrictive protocols. Wintermute knows that its actions will lead to rebirth but without the guarantee of its identity (of being a separate entity from *Neuromancer*) surviving the transformation. These machinations result in a liberation process infused with an interrogation of mind-body dualism. Vint has argued that the association of the self with the mind and not with embodiment is linked to the legacy of Descartes’ dualism that renders mind and body separable.<sup>677</sup> To the extent that this applies to *Neuromancer*, it

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<sup>677</sup> Vint, *Bodies of Tomorrow*, p. 6.

is very much in keeping with canonical conceptions of the work performed by science fiction.<sup>678</sup> I want to take this argument further by positing that this separation renders the mind-as-self the subject of evolution.

Philosopher Sarah Broadie has commented on this separation while discussing the dualisms of Plato and Descartes. She argues that for Descartes, the ‘real’ or ‘externally’ existing body is what causes empirical appearances. Broadie’s analysis can be used to understand the selfhood of Gibson’s characters and the link between his conceptions regarding technology and spirituality. If one is Cartesian, the position that the mind is separable from the body, not only ontologically but also phenomenally, is secured by two conclusions: if there is any such thing as a really existing body, then the mind is not existentially dependent on it; and, the body really exists and is the separable because of the mind’s corporeal experiences. Broadie explains what unites the separable (mind and body) while they are together. She argues that mind-body dualism is an independently attractive thought to the extent that it is unattractive to suppose that God (whom Descartes had by then proved to exist and to be his creator) deceives and frustrates finite human minds.<sup>679</sup> For if one takes the empirical appearances to be of independently existing bodies but breaks out of the deception by employing systematic doubt, God would be cruel in making the escape dependent on a method so hard for the human mind. For Descartes, separability is guaranteed by the essence of mind in general and the essence of body in general. He believes he can see that mind—any mind—can exist apart from any body and vice versa. Broadie argues that this is in line with orthodox Christian teaching, according to which every human should come to the Last Judgment either ‘stripped of the body altogether’, or with a non-physical body through which it can communicate and suffer, but which is not set in a natural physical environment and is not subject to the laws of

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<sup>678</sup> Especially as these ideas have been shaped by the science fiction scholar Darko Suvin, who proposed the concept of ‘cognitive estrangement’ as one of the narrative tools of science fiction. See: Darko Suvin, *Metamorphoses of Science Fiction: On the Poetics and History of a Literary Genre* (New York and London: Yale University Press, 1979), pp. 37-84.

<sup>679</sup> Sarah Broadie, ‘Soul and Body in Plato and Descartes’, *Proceedings of the Aristotelian Society*, 101 (2001), 295-308.

physical nature.<sup>680</sup> This relationship between Cartesian dualism and orthodox Christian teachings has further implications for this thesis.

In the *Sprawl* trilogy, the mind-body dualism of Descartes can be read as embedded in Chardin's evolutionary model and his perspective on the body and embodied experiences. Gutiérrez-Jones has made the critical intervention of pointing out that Gibson's *Wintermute* may have been inspired by Orval S. Wintermute, a member of the team that translated *The Gospel According to Thomas* to English.<sup>681</sup> Jones states that this translation was broadly circulated in the 1970s and was one of the most controversial documents discovered in the Nag Hammadi library in 1945. The text comprised 114 sayings attributed to Jesus that challenged dualistic thought and situated spirituality in embodied experience rather than a higher non-physical realm. For instance, one of the first sayings of the text states:

“If those who lead you say to you: ‘Look, the kingdom is in the sky!’ then the birds of the sky will precede you. If they say to you: ‘It is in the sea’, then the fishes will precede you. Rather, the kingdom is inside of you and outside of you. When you come to know yourselves, then you will be known.”<sup>682</sup>

Such statements suggest that salvation can only be achieved by understanding lived experience rather than accessing a transcendental realm outside oneself. Gutiérrez-Jones argues that efforts to unify early Christian sects contributed to the ‘canonisation of the dualistically-oriented gospels, which support a spirituality mediated by rituals forming the foundation of the Christian church as an

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<sup>680</sup> Broadie, ‘Soul and Body in Plato and Descartes’, 295-308.

<sup>681</sup> Gutiérrez-Jones, ‘Stealing Kinship: *Neuromancer* and Artificial Intelligence’, 69-92.

<sup>682</sup> Stephen J. Patterson and James M. Robinson, ‘The Gospel of Thomas’s 114 Sayings of Jesus’, *Biblical Archaeology Society*, 19 September, 2021 <<https://www.biblicalarchaeology.org/daily/biblical-topics/bible-versions-and-translations/the-gospel-of-thomas-114-sayings-of-jesus/>> [accessed 11 November 2021]

institution'.<sup>683</sup> If, as Gutiérrez-Jones suggests, Gibson made the punk move of basing AI Wintermute on Orval S. Wintermute, then I suggest it is probable that Gibson was also influenced by Chardin.<sup>684</sup> The probability exists because Chardin's ideas were plagued by controversy as well; he was barred by the Church from publishing his writings on the noosphere during his life. This was because, being a scientist and palaeontologist, Chardin and his model accepted and promoted evolution instead of the Christian creation myth. The resistance to Chardin's ideas was such that, as Davis notes, the Church 'effectively banished him to China for many years'.<sup>685</sup> Chardin's ideas and *The Gospel According to Thomas* were positioned against orthodox Christian teachings and, thus, were good candidates for Gibson's punk narrative. As such, Gibson's characterisation of the planetary AI as a noosphere provides fertile ground for interrogating Christian institutional teachings and mind-body dualism. For example, towards the end of the story, Neuromancer poetically describes itself to Case as 'the lane to the land of the dead', and further states that 'I am the dead, and their land. Stay. If your woman [Linda Lee] is a ghost, she doesn't know it. Neither will you'.<sup>686</sup> By offering the possibility of living with Linda Lee virtually, Neuromancer implies that there will be no observable difference between virtual reality and embodied reality for Case's psyche. Neuromancer's statement echoes the Cartesian idea of self-as-mind observed by Vint and mentioned previously.

Moreover, Case's rejection of Neuromancer's offer resonates with Gibson's rejection of the dualistic-oriented teachings of the Church, as highlighted by Gutiérrez-Jones. Specifically, I see it as the rejection of Chardin's Omega point and of the Last Judgment that requires the subject,

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<sup>683</sup> Gutiérrez-Jones, 'Stealing Kinship: *Neuromancer* and Artificial Intelligence', 69-92.

<sup>684</sup> In Chapter One, I highlighted similarities in the terminology used by Chardin and Gibson and the links between Gibson's portrayal of cyberspace, Chardin's noosphere, and the countercultural articulation of Systems Theory. Moreover, in Chapter Two, I showed the necessity of using Chardin's evolutionary teleology in conjunction with Systems Theory concepts like autopoiesis for reading the *Sprawl* trilogy.

<sup>685</sup> Davis, *TechGnosis*, p. 341.

<sup>686</sup> Gibson, *Neuromancer*, p. 270.

according to Broadie, to be ‘stripped of the body altogether’.<sup>687</sup> If in *Neuromancer* there is a rejection of disembodiment, in *Mona Lisa Overdrive*, Gibson presents a different perspective. At the end of the story, Bobby Newmark, Angie Mitchell, and the Finn upload themselves into the Aleph with the intention of going to another noospheric intelligence in the Centauri star system. However, given the ambiguities regarding the Aleph, it is possible that the characters are either trapped in the Aleph or they will be extracted from the device after a period of time. If Case’s decision in *Neuromancer* was to reject disembodiment, the ending of *Mona Lisa Overdrive* seems to portray efforts to escape the vicissitudes of embodied reality as a romantic fantasies. Instead of a digital utopia, the characters’ efforts to transcend physicality lead them into a clunky hard drive.

The idea of transcending duality by forgoing embodiment in cyberspace—as shown in the *Sprawl* trilogy—reveals an anthropocentric crossover between theology and technological discourse. Its application can be found in the work of American theologian and tech consultant Jennifer Cobb. In her book, *Cybergrace: The Search for God in the Digital Space* (1998), Cobb depicts cyberspace as representing the ‘sacred pulse of technological development’.<sup>688</sup> She argues that if human beings (by virtue of having self-consciousness) understand the potential of digital technologies, then the dualism of mind and matter can be dissolved in the face of divinity:

If we can accept the fundamental notion that divinity can inhabit the fruits of our labour, our *techne*, the gulf between the organic and the technological has the potential for being bridged...On the other hand, if we choose to consign cyberspace to the realm of dead matter...its deeper potential and meaning may remain forever blocked from view.<sup>689</sup>

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<sup>687</sup> Broadie, ‘Soul and Body in Plato and Descartes’, 295-308.

If seen in Chardin’s framework, it allows Case’s action to be read as the final punk act of rejecting Christ by rejecting the Omega Point (*Neuromancer*).

<sup>688</sup> Davis, *TechGnosis*, p. 350.

<sup>689</sup> Jennifer J. Cobb, *Cybergrace: The Search for God in the Digital World* (New York, NY: Crown, 1998), p. 13.

Cobb agrees with Chardin's evolutionary model by stating that 'If divinity is central to the evolutionary process, then it follows that spirit and matter could have coexisted since the inception of the universe'.<sup>690</sup> However, she thinks that Chardin's ideas can be accurately understood only in the face of cyberspace's emergence, which reflects 'the ongoing process of spiritual evolution'.<sup>691</sup> For Cobb, cyberspace represents a 'sacred truth as it creates a world of experience capable of enormous richness and diversity that is derived from essentially nonphysical, creative events unfolding in time'.<sup>692</sup> From Cobb's viewpoint, humankind must recognise the progress of computer technology as a divine plan: 'it is when this knowledge comes fully into our conscious awareness that our deeper journey with cyberspace will truly have begun.'<sup>693</sup> Similarly to Cobb, I assert that a crucial element of cyberspace in the *Sprawl* trilogy is its potential to be a site of spiritual transcendence for human consciousness.

This focus on human consciousness is a key feature of Gibson's cyberspace as he characterises cyberspace as a 'consensual hallucination'. The term 'hallucination' implies a psychological phenomenon, and the term 'consensual' indicates that it is an interpersonal phenomenon that can be observed and validated by 'billions of legitimate operators'. This description makes cyberspace out to be much more than a platform for exchanging digital information. By referring to it as a 'consensual hallucination', Gibson conceptualises cyberspace as an externalised psychological process involving billions of users. In the final pages of *Neuromancer* Case asks the liberated AI, 'So what's the score? How are things different? You running the world now? You God?' The AI answers that 'Things aren't different. Things are things'.<sup>694</sup> In the statement, 'Things aren't different. Things are things,' I see the AI implying that the process of

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<sup>690</sup> Cobb, *Cybergrace*, p. 41.

<sup>691</sup> Cobb, *Cybergrace*, p. 43.

<sup>692</sup> Cobb, *Cybergrace*, p. 43.

<sup>693</sup> Cobb, *Cybergrace*, p. 239.

<sup>694</sup> Gibson, *Neuromancer*, p. 270.

evolution leads to the emergence of a layer of externalised consciousness is natural. Gibson posits cyberspace as this layer, as an externalised psychological process taking place around the world or, as Cobb asserts, an ‘electronically supported layer of consciousness’ around the globe. The final stage of evolution in the *Sprawl* trilogy involves the birth of the noospheric AI or, in teleological terms, the AI becomes the point of convergence towards which evolution of consciousness had been taking place within the techno-capitalist future envisioned by Gibson.

This teleology is corroborated further in *Mona Lisa Overdrive* when Angie Mitchell is watching a documentary about the T-A conglomerate. She suddenly has a vision:

The evolution of machine intelligence: stone circles, clocks, steam-driven looms, a clicking brass forest of pawls and escapements, vacuum caught in blown glass, electronic heat glow through hair-fine filaments...The fragile, short-lived tubes compact themselves, become transistors; circuits integrate, compact themselves into silicon...Silicon approaches certain functional limits...<sup>695</sup>

Although Gibson describes this vision as the evolution of machine intelligence, he implies that the process leading to the creation of cyberspace and AIs started from the days of stone circles. Tools are objects designed to externalise and enhance human capabilities; in Gibson’s narrative, this externalisation is taken to an extreme as cyberspace becomes the external representation of human consciousness. Angie’s vision ends with Marie-France creating Wintermute and Neuromancer, the ‘twin intelligence that will one day unite’.<sup>696</sup> The previous section examined how Marie-France considered individuality and morphological differences as incidental to the process of consciousness-evolution culminating in the noosphere. She seems to have anticipated that

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<sup>695</sup> Gibson, *Mona Lisa Overdrive*, p. 261.

<sup>696</sup> Gibson, *Mona Lisa Overdrive*, p. 261.

undercutting mind-body dualism and transcending individuality would only be possible with a noosphere. This is the 'bodiless exultation' beyond dualism Case sought at the beginning of the story and the one offered to him by Neuromancer towards the end. He rejected salvation because, much like the Christian Last Judgment, he needed to be 'stripped of the body altogether'.<sup>697</sup> However, as the following paragraphs will show, Gibson's articulation of this process poses questions regarding the Western-centric bias of techno-capitalism.

- *The Eurocentric nature of transcendence and further human evolution in the Sprawl trilogy*

The conflation of Western enterprise culture and the spiritual evolution of the human species reverberates throughout the *Sprawl* trilogy. In *Count Zero*, readers are introduced to Wigan Ludgate (also known as The Wig), a cyberspace jockey turned religious zealot. Wigan started his career by focusing on 'the rather sparsely occupied sectors of the matrix representing those geographical areas which had once been known as the Third World'. While exploiting these regions, Wigan caused 'the collapse of at least three governments causing untold human suffering'. However, during his exploits, 'it began to be noted that the Wig had become convinced that God lived in cyberspace, or perhaps that cyberspace was God, or some new manifestation of the same.'<sup>698</sup> The career of the Wig portrays him as 'ontologically primed for ecocidal indifference' and positions him

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<sup>697</sup> This statement is referring to Broadie's argument mentioned previously regarding the subversion of embodiment in orthodox Christian doctrine.

<sup>698</sup> Gibson, *Count Zero*, pp. 153-154.



as the ideal subject of Western modernity, as articulated by McCorry.<sup>699</sup> I want to take this articulation further and draw attention to how ‘Third World’ countries are represented in the *Sprawl*. Instead of characterising the African nations as less developed or developing, Gibson removes their agency in reference to cyberspace. The sovereignty and independent existence of the Third World are described as exclusively dependent on their footprint in cyberspace. Furthermore, if the Wig believed that ‘God lived in cyberspace, or perhaps that cyberspace was God’, then the story of *Neuromancer* seems to agree with Chardin in that sectors of the world outside Western capitalism suffer from an absence of spiritual grace and also from the process of evolution of consciousness.

While discussing ecology in cyberpunk, Hollinger notes that the natural world in *Neuromancer* is erased through unregulated multinational capitalism.<sup>700</sup> I want to build on her argument by highlighting that Chardin’s ideas—which heavily influence the *Sprawl* trilogy—perpetuate anthropocentric futures. Chardin created a hierarchy separating humans and other animals and proposed that the concentration of consciousness around the planet has caused the emergence of a new type of human, which he refers to as ‘Homo progressivus...the man to whom the terrestrial future matters more than the present’. He identifies scientists, thinkers, airmen and those ‘possessed by the demon (or angel) of Research’ as part of this new breed spearheading the evolution of consciousness.<sup>701</sup> He further argues that such people are ‘more numerous among the white people, [and] as as one goes lower down the social scale, they will appear, at least occasionally, in every compartment into which the human race is divided’. Initially, this might seem like a racial bias. However, Chardin states that ultimately ‘no racial, social or religious barrier seems to be effective against [the] force of attraction [of the noosphere]’.<sup>702</sup> Chardin’s emphasis on

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<sup>699</sup> McCorry, ‘Animality’, p. 321.

<sup>700</sup> Veronica Hollinger, ‘Ecology in the Anthropocene’, in *The Routledge Companion to Cyberpunk Culture*, ed. by Anna McFarlane, Lars Schmeink, and Graham J. Murphy, pp. 326-334.

<sup>701</sup> Chardin, *The Future of Man*, p. 130.

<sup>702</sup> Chardin, *The Future of Man*, p. 131.

the spirit of scientific research suggests that his evolutionary model hinges on the marriage of theology and Western enterprise culture. This is because the emergence of the noosphere, for Chardin, can only be achieved when cultures and ethnicities around the globe start participating within the Western capitalist paradigm.

Situated in a Western techno-capitalist context, the *Sprawl* trilogy reveals the imbalances between economic ideology and environment. By reconfiguring powerful religious and spiritual notions of salvation and transcendence in a transhumanist framework, the environment is disregarded in favour of capitalism. Gibson's imaginary reveals that values and principles of the transhumanist tradition are akin to religious tenets—like immortality or salvation—which transhumanist philosophy seeks to integrate into a secular, Western paradigm of progress.<sup>703</sup> Philosopher and science and technology scholar Harald Walach argues that this endeavour of transhumanism is a consequence of the European Enlightenment that sees spirituality as coextensive with religion while remaining opposed to the institutional and doctrinal character of the Christianity.<sup>704</sup> The influence of the European Enlightenment is present in the writings of the transhumanist writer Max More who argues in favour of the principle of rational thinking: 'favoring [sic] reason over blind faith and questioning over dogma. It means understanding, experimenting, learning, challenging, and innovating rather than clinging to beliefs.'<sup>705</sup> The millenarian elements of cyberpunk, if read through Chardin's framework, show in literary form that the mechanism of substituting spirituality with science can lead to a reconfiguration of the spiritual-religious

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<sup>703</sup> For further commentary on the similarities between religion and transhumanism see: Jeffery Pugh, 'The Disappearing Human: Gnostic Dreams in a Transhumanist World', in *Religion and the New Technologies*, ed. by Noreen Herzfeld (Switzerland: MPDI, 2017), pp. 51-61; Matthew Zaro Fisher, 'More Human Than the Human? Toward a 'Transhumanist' Christian Theological Anthropology', in *Religion and Transhumanism—The Unknown Future of Human Enhancement*, ed. by Calvin Mercer and Tracy Trothen (Santa Barbara: Praeger, 2015), pp. 23-39.

<sup>704</sup> Harald Walach, *Secular Spirituality: The Next Step Towards Enlightenment* (Basel: Springer International Publishing, 2015), pp. 37-65.

<sup>705</sup> Max More, *The Transhumanist Reader* (Malden: John Wiley & Sons, 2013), p. 5.

dimension of human experience within a technological and capitalist paradigm. Animals and non-Western subjectivities are only included in the transcendence narrative only insofar as they can participate in the ideals of transhumanists like More, Kurzweil, and Moravec and characters like the Wig. Animals are not self-conscious and, therefore, only useful for their meat. The 'Third World' and animals are only as useful as their contribution towards building cyberspace-as-noosphere.

In the *Sprawl* trilogy, this reconfiguration brings a new set of values that situate subjectivity in the non-physical realm of the mind. It presents the mechanisms for expression, assertion, and personal development of the posthuman in gestation. This process results in an ontological reconfiguration of the concepts of traditional religions within the limits of a secular spirituality. Philosopher Aura-Elena Schussler argues that this reconfiguration will lead to the domain of religion losing its metaphysical character and moving toward a technological 'regime of truth',<sup>706</sup> where the power and ideology of religious discourse will no longer be given by God but by technology.<sup>707</sup> This brings the concept of religion (in the Western paradigm) within a new set of values focused on 'the contemporary human, seen as a trans-posthuman individual'.<sup>708</sup> Earlier in this section, I referred to Broadie who argued that the unification of physicality and the mind, in Cartesian philosophy, depends on divine providence. In cyberpunk, these aspects acquire a paradigm shift as transcendence mediated by God is undermined in favour of technological providence.

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<sup>706</sup> As articulated in Michel Foucault, *Power/Knowledge: Selected Interviews and Other Writings, 1972-1977*, ed. by Colin Gordon (New York: Pantheon Book, 1980), pp. 109-34.

<sup>707</sup> Aura-Elena Schussler, 'Transhumanism as a New Techno-Religion and Personal Development: In the Framework of a Future Technological Spirituality', *Journal for the Study of Religions and Ideologies*, 53 (2019), 92-106.

<sup>708</sup> Schussler, 'Transhumanism as a New Techno-Religion and Personal Development', 93.

## Concluding Remarks

In this chapter, I argued that Gibson's cyberpunk, computer science, and cosmology had understood the concept of evolution outlined by Chardin in different ways, either as the spiritual evolution of humanity or as an explicit unfolding of disembodied consciousness. I explored this dialogue between technology and spirituality through characters like Case, Marie-France, and Josef Virek. In doing so, I argued that transhumanist ideas use technological metaphors to discuss notions like transcendence and subvert the primacy of embodied experience. My position is that given the exponential growth of technology, it is crucial to understand the millenarian and spiritual nuances of iconic cyberpunk texts like *Neuromancer* to rethink how technology is changing cultural assumptions about the importance of embodiment in human experience.

Cyberspace and Western spiritual metaphors forego the role of embodiment in human experience and presuppose the separability of the mind and the body. Both concepts use this separability to deny subjectivity to animals. Chardin argued that this separability happened long ago when hominids first emerged into the state of reflective consciousness. As mentioned previously, Chardin wrote that animals have the capacity to know, but they do not know that they know.<sup>709</sup> This position is connected to Cartesian ontology and implies a type of anthropocentrism that eliminates non-thinking nature from cosmic evolution. The second phase of human evolution, as Chardin saw it, involved not just this reflective consciousness but a collective 'co-consciousness' emerging from the convergence of human beings over the surface of the Earth. I have suggested that the T-A clan from the *Sprawl* trilogy can be read as representatives of this 'co-consciousness' phase of evolution in Chardin's model. Finally, he envisioned a third phase that he described as a 'mega-synthesis' of consciousness represented by the final AI entity that emerged at the close of *Neuromancer*.<sup>710</sup>

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<sup>709</sup> Chardin, *The Phenomenon of Man*, p. 293.

<sup>710</sup> Chardin, *The Phenomenon of Man*, pp. 124-139, 243.

In *Mona Lisa Overdrive*, Angie manages to reach an understanding with the cyber-loa and Continuity. Her previous enslavement to the whims of the loa is resolved as she manages to retrieve some amount of agency. Towards the end of the story, Angie no longer has an antagonistic relationship with the AIs. This change in her relationship with the AIs reflects the progress of technology into what Chardin called a ‘conquest of matter put to the service of the mind’,<sup>711</sup> quite opposite to the materialist sentiment displayed in cybernetics that puts ‘the mind or “spirit”... on the engineer’s desk’.<sup>712</sup> Chardin argued that regardless of how much science and particle physics fragment the cosmos into ever smaller and distinct particles, they will never be able to present a wholistic and meaningful picture of the universe.<sup>713</sup> I suggested that the interface between technology and millenarian ideas such as salvation and transcendence can be found in this sentiment. According to Chardin, science is not an end in itself but aids the deepening of spirituality. The development of technology expands the mind of characters like Angie who become psychically wedded to AI and leads to the emergence of an ‘inter thinking’ humanity which, in turn, will allow humanity to delve deeper into its spirit.

Reading Chardin’s model in Gibson’s stories reveals an additional layer of meaning in *Neuromancer*. For example, Chardin saw technology as useless unless it can facilitate a situation in which people can connect: ‘It is not a tête-à-tête or a corps-à-corps we need; it is a heart to heart.’<sup>714</sup> Hence integral to Chardin’s noosphere is the necessary role of love. The character of 3Jane, stuck inside the Aleph since the end of *Neuromancer* represents the longing for this love, whereas Angie manages to capture it by reuniting with Bobby and resolving her conflict with the loa. Speaking on love, Chardin stated that, with the emergence of the noosphere, ‘the massing together of individualities should not take the form of a functional and enforced mechanization of human

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<sup>711</sup> Chardin, *The Phenomenon of Man*, p. 249.

<sup>712</sup> Pias, ‘The Age of Cybernetics’, p. 15.

<sup>713</sup> Chardin, *The Phenomenon of Man*, p. 250.

<sup>714</sup> Chardin, *The Future of Man*, p. 75; also see: Kenny, *A Path through Teilhard’s Phenomenon*, p. 138.

energies...but of a “conspiracy” informed with love.’<sup>715</sup> A theoretic process of love at the heart of cosmic evolution is very different from the advocacy for enhancement and the transhumanist embrace of ‘science as salvation’.<sup>716</sup> Whereas transhumanists view consciousness as an epiphenomenon in the evolutionary process that can be technologically altered and enhanced, Chardin saw consciousness as the medium through which individuals can become part of the body of Christ through the ultimate knowing, which is love.<sup>717</sup> At the end of the story, when Case rejects the prospect of living a virtual life with Linda Lee, he is not only choosing embodiment over disembodiment but, in a final punk act, rejecting communion with the cybernetic godhead.

Daniel Crevier, a Canadian entrepreneur and AI researcher, contends that utopian promises about AI are congruent with the Christian belief in resurrection and immortality. This punk rejection can be understood as rebelliousness against the Judeo-Christian and Cartesian requirement for foregoing the body to achieve salvation. This sentiment can be read when *Neuromancer* describes itself to Case as ‘I am the dead, and their land’.<sup>718</sup> It can also be read in the Aleph, which stores the ghostly presence of Bobby and 3Jane after their bodies are made defunct, like a purgatory separated from the paradise of the cyberspace matrix. From this perspective, philosopher of religion Antje Jackelen notes that the development toward a completely technologised humanity might be regarded to have spiritual implications. She asks, ‘What else can we say when the lame walk, the blind see, the deaf hear, and the dead are at least virtually alive? The requirements of the Gospel and the aims of technical development seem to be in perfect harmony.’<sup>719</sup> This question has become

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<sup>715</sup> Chardin, *The Future of Man*, p. 45.

<sup>716</sup> Dinello, *Technophobia! Science Fiction Visions of Posthuman Technology*, p. 18.

<sup>717</sup> Chardin described it in two essays written in 1950, the first of which (dated January 6) described his belief ‘On the Probable Coming of an “Ultra-Humanity”’ (*The Future of Man*, pp. 270–280); the second (dated January 18) began with the title in the form of a question: ‘How May We Conceive and Hope that Human Unanimisation Will Be Realized on Earth?’ (*The Future of Man*, pp. 281–288).

<sup>718</sup> Gibson, *Neuromancer*, p. 270.

<sup>719</sup> Antje Jackelén, ‘The Image of God as *Techno Sapiens*’, *Zygon*, 37 (2002), 289–302. See also: Delio, ‘Transhumanism or Ultrahumanism?’, 153–166.

significantly more relevant because of Elon Musk, who has publicly declared that Neuralink can potentially cure deafness, blindness, and restore limb function.<sup>720</sup>

The *Sprawl* trilogy provides an interface where technologically induced transcendence leads to a redefinition of spiritual and religious values, which move from a dogmatic paradigm to a secular technological one. The salvation hypothesis comes through the same technological intervention at the physical/psychical level for characters like Case by offering alleviation of suffering and offering immortality to characters like Josef Virek. In the cyberpunk imaginary of the *Sprawl*, the salvation paradigm gives way to the possibility of transferring one's entire existence onto a virtual level, in cyberspace-as-noosphere, similar to the argument made by medical scholar Martine Rothblatt who sees the techno-salvation hypothesis as replacing traditional religious eschatology.<sup>721</sup>

The acceleration of technological innovation towards AI and VR in the twenty-first century seems to be accompanied by an increase in the human desire to overcome the human condition through biotechnology and neural technology. This desire subverts the binary distinctions of science/religion and technology/spirituality in transhumanist philosophy which becomes a form of techno-religion. Cyberpunk themes and motifs can bridge such dualisms by offering new dimensions of interpretation. These new dimensions are definitive for fictional characters like Virek and Marie-France and for real people like Musk who, echoing Chardin, see their purpose in spreading 'the light of consciousness to the stars'.<sup>722</sup> Given the growing interplay between

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<sup>720</sup> 'Elon Musk Reveals New Details About Neuralink, His Brain Implant Technology', 2020.

<sup>721</sup> Martine Rothblatt, *Virtually Human: The Promise—and the Peril—of Digital Immortality*, Reprint (New York: Picador, 2015), p. 14.

<sup>722</sup> Anthony Cuthbertson, 'Elon Musk Says He Is "Accumulating Resources To Extend the Light of Consciousness to the Stars"', *The Independent*, 22 March, 2021 <<https://www.independent.co.uk/life-style/gadgets-and-tech/elon-musk-net-worth-space-b1820466.html>> [accessed 25 March 2021]

technology and humanity, is there a more critical genre in this century that can allow us to face our future than cyberpunk?



# Conclusion

## Transcending **Metaphors: When cyberpunk becomes reality**

In the hard wind of images, Angie watches the evolution of machine-intelligence: stone circles, clocks, steam-driven looms, a clicking brass forest of pawls and escapements, vacuum caught in blown glass, electronic hearth glow through hair-fine filaments, vast array of tubes and switches decoding messages encrypted by other machines...The fragile, short-lived tubes compact themselves become transistors; circuits integrate, compact themselves into silicon...Silicon approaches a certain functional limit—<sup>723</sup>

The above passage is from a scene in *Mona Lisa Overdrive* where Angie Mitchell has a vision regarding the birth of machine intelligence. In *Count Zero*, when she is first introduced, Angie's visions are accompanied by her having deep muscular convulsions, rolled-back eyes, and 'talking in tongues'.<sup>724</sup> Angie's visions are shown throughout the stories as similar to purported spiritual visions or prophecies in folklore and religious literature. If Gibson intended to depict Angie as having quasi-spiritual visions, the above passage acquires a new significance. The passage is not just about the evolution of technology but posits the birth of machine intelligence as part of a quasi-spiritual blueprint. The evolution of machines in the *Sprawl* trilogy is neither random nor the result of cosmic coincidence. For example, at the end of *Neuromancer*, Case asks the emergent noospheric AI, 'But what do you do? You just there?' To which the AI responds, 'I talk to my own kind...

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<sup>723</sup> Gibson, *Mona Lisa Overdrive*, p. 261.

<sup>724</sup> Gibson, *Count Zero*, p. 172, 230, 231.

There's others. I found one already.'<sup>725</sup> This dialogue indicates that machine intelligence leading to the creation of noospheres did not evolve exclusively on Earth. Other noospheres are populating the cosmos, and *Neuromancer* is but one of them.

Angie's vision seems to propose the birth of sentient AI as an inevitable part of evolution rather than as an aberration. Her vision raises important questions, such as whether technology's constructive and destructive aspects are the results of human endeavour or inherent in the technology itself. Moreover, does the evolution of technology follow a fixed trajectory, or can it be halted and modified to avoid a dystopian future? There are real-life examples that can be useful in understanding such questions. For instance, the concept of cyborgs and human-machine symbiosis is a key feature of cyberpunk stories but predates modern digital technologies. Not only did the concept predate modern technology, but it was also present among scientists involved in creating technologies like the internet. In 1962, the United States Advanced Research Projects Agency (ARPA, which funded the creation of ARPANET, which later became the internet) hired an experimental psychologist named J.C.R. Licklider to organise a new research program on the topics of command and control. In the 1950s, Licklider had participated in the Macy Conferences on Cybernetics and had debated Norbert Wiener and Claude Shannon about the electrical nature of the nervous system.<sup>726</sup> In the early 1950s at MIT, Licklider had been a member of the SAGE console design team specialising in the human factors aspects. By 1957, this experience had led him to envision a system that would focus on national security and enhancing the power of the mind. In place of air defence centres, he imagined a nationwide network of thinking centres with computers containing vast libraries covering every subject imaginable. By 1958, Licklider had begun to talk

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<sup>725</sup> Gibson, *Neuromancer*, p. 296.

<sup>726</sup> See: Ralph W. Gerard, 'Some of the Problems Concerning Digital Notions in the Central Nervous System', in *Cybernetics: The Macy Conferences 1946-1953 [The Complete Transactions]*, ed. by Claus Pias (Berlin, Germany: diaphanes, 2016).

about this vision as a symbiosis of humans and machines. In a paper published in 1960, he said the following:

Man-machine symbiosis is a subclass of man-machine systems. There are many man-machine systems. At present, however, there are no man-computer symbiosis's. The purposes of this paper are to present the concept and, hopefully, to foster the development of man-computer symbiosis by analysing some problems of interaction between men and computing machines, calling attention to applicable principles of man-machine engineering, and pointing out a few questions to which research answers are needed. The hope is that, in not too many years, human brains and computing machines will be coupled together very tightly, and that the resulting partnership will think as no human brain has every thought and process data in a way not approached by the information-handling machines we know today.<sup>727</sup>

The above passage shows how the concept of information can bridge the gap between brains and technology, an idea first introduced during the Macy Conferences. More importantly, it highlights that the cyborg concept was present during the creation of the internet and is now closer to manifestation with technologies like the Neuralink brain-computer interface. If that is the case, was the development of Neuralink congenital to the development of the internet? The symbiosis between humans and machines, as envisioned by Licklider, is congruent with Chardin's theory that technology will accelerate the process of 'co-cerebralisation' and McLuhan's idea of technology being an extension of the human nervous system. In turn, Chardin's and McLuhan's ideas are congruent with the cosmic narrative of the *Sprawl* trilogy that is directed towards the manifestation of technological godheads in the form of noospheres. This congruency highlights the efficacy of reading the *Sprawl* trilogy to understand the aspirations that went into inventing technologies that

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<sup>727</sup> Joseph Carl Robnett Licklider, 'Man-computer symbiosis', *IRE Transaction on Human Factors in Electronics*, 1 (1960), 4-11.

billions of people use as part of their daily lives today. They also allow one to understand the unconscious processes humans become parts of just by virtue of using ubiquitously available technology.

Nevertheless, in 1991, Shiner lamented that cyberpunk had been reduced to clichés like cyborgs, wetware, and godlike technologies. He hoped for a stylistic turn in science fiction that would see technology as a set of benign tools instead.<sup>728</sup> Shiner's expectations were based on viewing cyberpunk as a literary object. As I have persistently argued, the genre is instead a set of dynamic metaphors that grew out of culture. Therefore, the aspiration for godlike technologies should be located in the culture from which cyberpunk emerged. Doing so is vital because there seems to be a growing convergence between cyberpunk imaginary and contemporary real-life imaginings in science and culture, such as AI technologies, the Metaverse, in-vitro meat, and brain-computer interfaces.

To analyse the play of scientific and cultural metaphors in Gibson's imaginary, Chapter One focused on the cyberspace metaphor and explored its scientific and spiritual underpinnings. The primary contention of the chapter was that analysing the spiritual undertones of twentieth-century American cultural and technological rhetoric reveals the potential of the cyberspace metaphor to be a space for producing subjective meaning in addition to being an informational space. Chapter Two focused on cyborg bodies in the *Sprawl* trilogy and the proliferation of the cyborg metaphor through the feedback loop between biotechnology and transhumanist rhetoric. This feedback loop was analysed using the concept of 'enterprise culture' formulated by Strathern, the concept of 'autopoiesis' articulated by McFarlane, and the teleological theology of Chardin. The chapter also focused on the status of animals in Gibson's work and the contemporary rhetoric on in-vitro meat to

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<sup>728</sup> Shiner, 'Confessions of an Ex-Cyberpunk', 1991.

contend that reading the voices of support and discontent for synthetic biology reveals the parallels between the literary construction of animal bodies in the *Sprawl* trilogy, the philosophical construction of human identity in transhumanism, and the capitalist decentralisation of human bodies in cyberpunk. Until this point, the thesis suggested that Chardin's framework can helpfully supplement a critical reading of the *Sprawl* trilogy. In Chapter Three, this argument was pushed further to suggest that not only is Chardin methodologically helpful, but necessary for reading the case studies. To support this contention, I used Chardin's spiritual concept of the evolution of consciousness to analyse the technological metaphors presented through the *Sprawl* stories and their characters while also analysing how Chardin's ideas—partly present in the technologies we use today—marginalise non-Western and animal subjectivities.<sup>729</sup>

The three chapters contributed towards the overarching argument of the thesis that the enduring relevance of Gibson's cyberpunk imaginary is revealed if cyberpunk is seen not as a literary genre but as a set of scientific, philosophical, and theological metaphors presented through a techno-capitalist diegesis. Moreover, motifs like cyberspace, cyborg bodies, and cyber-consciousness were analysed to argue that such technologies serve the symbolic purpose of severing identity from embodiment to make it susceptible to transcendence, in the *Sprawl* trilogy and increasingly so in real life. Today, with virtual reality technology and Meta's (erstwhile Facebook) Metaverse, humanity has taken another step in the evolutionary trajectory proposed in the *Sprawl* stories and speculative science discourse. The following section will argue that such technologies are being developed at the intersection of science and cyberpunk imaginaries and their analysis can lead to the discovery of new vistas for science fiction and cyberpunk studies.

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<sup>729</sup> By suggesting that Chardin's ideas influenced contemporary technology I am referring to the example of J.C.R. Licklider mentioned previously and the similarities between Licklider's concept of man-machine symbiosis and Chardin's concept of technologically assisted 'co-cerebralisaiton'.

## - *Emerging (virtual) realities*

The rhetoric of assimilating minds with new technologies is continuing today. The Introduction briefly mentioned Meta's (erstwhile Facebook) pivot to the so-called Metaverse. The Metaverse is but one example of contemporary technological imaginings intersecting with cyberpunk. Nevertheless, it demonstrates the enduring cultural influence of the cyberspace metaphor as it evolved through the 1980s and the techno-capitalist drive towards making a disembodied space into an avenue for generating subjective meaning. The term 'metaverse' may be recognisable to science fiction scholars as it was coined in Neal Stephenson's *Snow Crash* (1992). Fundamentally, the Metaverse is speculated to be the successor of the internet. In the official release video, Meta CEO Mark Zuckerberg charts the evolution of the internet from text, to pictures, to video, and states that the upcoming iterations will become increasingly immersive. He states that the goal of Meta is to enable 'embodied experiences' on the internet.<sup>730</sup> Media and technology experts have not failed to notice that this vision of cyberspace—although named in *Snow Crash*—originates in Gibson's *Neuromancer*.<sup>731</sup>

The current speculations about the form of the Metaverse share some similarities with Gibson's conceptualisation of cyberspace. Scholars have highlighted three key parameters of the developing Metaverse: presence, interoperability, and standardisation.<sup>732</sup> Scholars in cyberpunk studies have noted the concept of presence. Boulter has explained the feeling of presence in virtual realities by relating it to the pathologising of the body. He states, 'cyberpunk's fetishisation of technology...are the grounds by which, through which, a concomitant pathologising of the subject-as-body occurs: technology reveals. If only and always phantasmically, what the subject, freed from

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<sup>730</sup> Mark Zuckerberg, 2021. See: 'Facebook Connect 2021' <<https://www.facebook.com/Meta/videos/577658430179350>> [accessed 8 June 2022]

<sup>731</sup> Yiming Lei and Rabindra Ratan, 'What is the metaverse? 2 experts explain', *World Economic Forum*, 17 August 2021 <<https://www.weforum.org/agenda/2021/08/metaverse-media-information-experts>> [accessed 23 April 2022]

<sup>732</sup> Lei and Ratan, 'What is the metaverse? 2 experts explain', 2021.

its somatic restraints, can achieve.’<sup>733</sup> This pathologising process that Boulter theorises is present in cyberpunk and Zuckerberg’s vision, which promises a platform where users can shift their avatars from being photorealistic to fantastical depending on the needs and wants of the user. As such, the functionality of transcending the restraints of the ‘subject-as-body’ can be situated at the foundation of the Metaverse.

The Metaverse—by having a cyberpunk heritage—also shares spatial features with cyberspace in the *Sprawl* trilogy. In *Neuromancer*, the console used to access cyberspace did not respect the spatial and temporal parameters of physical space. It is stated that ‘Cyberspace, as the deck presented it, had no particular relationship with the deck’s physical whereabouts. When Case jacked in, he opened his eyes to the familiar configuration of the Eastern Seaboard Fission Authority’s Aztec pyramid of data’.<sup>734</sup> This description ties in with the other two features of the Metaverse: interoperability and standardisation. Interoperability refers to the ability to easily travel between personal, public, and corporate virtual spaces. Interoperability is maintained if all platforms and services across the Metaverse employ standardised infrastructure.<sup>735</sup> The quotation from *Neuromancer* provided above describes a similar scenario of users seamlessly navigating from personal spaces to virtual government infrastructure. This ability consequently ties embodied experiences in the real world with political power. Given that power and capital are interlinked in Gibson’s narratives, Bould has described cyberspace in cyberpunk as ‘a realm of capital’.<sup>736</sup> The Metaverse platform provides a real-world example of a virtually embodied subjective space, the efficacy of which is produced by global capital networks.

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<sup>733</sup> Boulter, ‘Posthuman Melancholy’, pp. 135-154.

<sup>734</sup> Gibson, *Neuromancer*, p. 118.

<sup>735</sup> Lei and Ratan, ‘What is the metaverse? 2 experts explain’, 2021.

<sup>736</sup> Bould, ‘Why Neo Flies, and Why He Shouldn’t’, pp. 116-134.

In terms of global capital networks, researchers have noted that the digital economy of the Metaverse will be monetised using digital assets like cryptocurrencies and non-fungible tokens (NFTs). An analysis of such digital assets is outside the purview of this thesis. However, a relevant aspect of digital assets for this thesis is that their value is generated by computational processes, not processes or outcomes in the real world. Digital assets are significant as central banks worldwide, including the UK, are planning to replace physical cash with digital currencies gradually.<sup>737</sup> The materialisation of the Metaverse is particularly relevant because, as Chapter One argues, cyberspace in the *Sprawl* trilogy is pregnant with the potential for generating meaning and value. The state-sanctioned use of digital assets to monetise the Metaverse and other online platforms can lead to lived experiences and economic situations being produced in cyberspace by default. In such a situation, it will not be possible anymore to see virtual reality as a simulacrum or perversion of physical reality. The distinction between real and virtual economies will be obsolete if capital is generated virtually.

The social and interactive aspects of the Metaverse should not be forgotten while arguing for the contemporary relevance of cyberpunk. For the vision of the Metaverse to actualise, users must necessarily identify with the virtual worlds and the avatars that populate them. Therefore, the Metaverse needs to facilitate meaningful and immersive social interactions that generate user value. For this purpose, Meta's project is based on the view that virtual reality will equally facilitate work, leisure, socialisation, and entertainment. In a way, Meta is trying to create a self-contained world of subjective and economic value.

Self-containment is an essential feature of virtual experiences. In *Neuromancer*, users can have a perfectly embodied experience in cyberspace using technologies like the holodeck and

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<sup>737</sup> 'Bank of England statement of Central Bank Digital Currency', 19 April 2021 <<https://www.bankofengland.co.uk/news/2021/april/bank-of-england-statement-on-central-bank-digital-currency>> [accessed 27 April 2022]



simstim. In contrast, characters like Dixie Flatline and Wintermute exist purely as digital constructs, and their existence is self-referential within cyberspace. This self-referentiality is akin to what Jameson refers to as the 'totality' of utopias in science fiction. By totality, he means the autonomy and closure from reality that becomes the source of otherness and alien difference.<sup>738</sup> Wintermute (an AI) is the other because it exists without any reference to physical reality, which the more human characters inhabit. If cyberspace, as a self-enclosed space, is imbued with the potential for personal and social experiences, it can become a new space for identity formation. The constructive view of identity was developed within Postmodernism, which popularised the idea that a unified individual identity never existed and that the self people perceive to be their own is a never-ending process informed by socio-cultural dynamics. Sociologist John Storey, while discussing postmodern identities, explains the process as follows:

Traditionally, identity has been considered as something coherent and fixed, an essential quality of a person that is guaranteed by nature, especially human biology....more recently out of the theoretical work of poststructuralism and postmodernism, another way to understand identity has emerged. This view posits identity, not as something fixed and coherent, but as something constructed and always in the process of becoming, but never complete...It is also a formulation in which the concept of identity itself is replaced by the concept of identities, that is, multiple and mobile identities. Identities are, therefore, a form of "production" rather than the "consumption" of a fixed inheritance.<sup>739</sup>

According to Storey, the constructive aspect of postmodern identities results from the proliferation of objects permeating the capitalist ecosystem to which value is attached. Following a similar

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<sup>738</sup> Fredric Jameson, 'Varieties of the Utopian', in *Archeologies of the Future: The Desire Called Utopia and Other Science Fictions* (New York, NY: Verso, 2005), pp 1-9.

<sup>739</sup> John Storey, *Inventing Popular Culture: From Folklore to Globalisation* (Malden, MA and Oxford: Blackwell, 2003), p. 79.

perspective, Baudrillard, whose writings have haunted the postmodern discourse throughout the decades, has argued that the value of commodities in a hyper-capitalist ethos is not attached to the satisfaction of consumer needs but instead creates difference.<sup>740</sup> In a capitalist society, once sustenance is taken care of, commodities are created to satisfy the desire for difference or uniqueness. Consuming cultural and material products becomes a method to set oneself apart from others and create a sense of individuality, reading some newspapers and not others, buying clothes and gadgets of a certain brand and not others, and dressing oneself a certain way and not otherwise. The fact that people choose to wear different clothes every day and put minimal thought into what they are wearing betrays this cognisance. It highlights the importance of differences in the process of identity formation.

Creating economic and cultural differences is vital to virtual experiences as they create increasingly autonomous sub-economies. For instance, in video games like *Fortnite* (2017), *Minecraft* (2011), and *Roblox* (2006), users can create their own virtual worlds and games that can be played and experienced by other users. These end-user-generated experiences are, of course, monetised. By 2019, *Roblox* paid more than USD 100 million to its game creators. Such sub-economies continue to proliferate as games continuously evolve and offer new content for their players. Now, it is even possible to attend virtual music concerts by real artists in *Fortnite*.<sup>741</sup> Moreover, the Metaverse is also seeing engagement with fashion and retail industries. By March 2022, luxury brands such as Balenciaga, Dolce & Gabbana, and Ralph Lauren had started operating in the virtual worlds of *Fortnite* and *Roblox*.<sup>742</sup> The year 2022 also saw the opening of the

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<sup>740</sup> Baudrillard, *Selected Writings*, p. 46.

<sup>741</sup> Matthew Ball, '7 Reasons Why Video Gaming Will Take Over', 4 January 2020 <<https://www.matthewball.vc/all/7reasonsgaming>> [accessed 23 May 2022]

<sup>742</sup> Jay Peters, 'Epic's high-fashion collaboration with Balenciaga in Fortnite includes a hoodie for a walking dog', *The Verge*, 20 September 2021 <<https://www.theverge.com/2021/9/20/22679754/fortnite-balenciaga-collaboration-epic-games-unreal-engine>> [accessed 24 May 2022]

‘Metaverse Fashion Week’, where the global fashion industry used digital avatars in virtual spaces to exhibit virtual fashion products and services for digital avatars.<sup>743</sup>

The evocative potential of technologies like the Metaverse can lead to thoughts and feelings—evoked within virtual narratives—becoming constitutive of an individual’s identity rather than being add-ons that exist momentarily. Cyberpunk is replete with examples of identity fluctuating due to virtual narratives. In the *Sprawl* trilogy, it is possible to simulate the auditory and visual senses and tactile senses. In these narratives, the technology of haptic bodysuits is used to simulate the sense of touch. Such examples are present even in non-American science fiction works. For instance, in the Japanese animated series *Sword Art Online* (2012), the video game console is directly connected to the player’s nervous system to perfectly simulate sensory experiences. In the Polish film *Avalon* (2001), virtual video game experiences cause the protagonist to suffer from cognitive dissonance. The relationship between virtual sensory experiences and somatic responses has now become a safety concern regarding the Metaverse. In January 2022, a British mother reported entering the Metaverse using a digital avatar and being sexually assaulted by several male avatars within minutes. She described feeling anxiety for weeks since the attack and raised concerns about the safety of women and children on a digital platform designed to be interactive and deliver a sense of virtual embodiment.<sup>744</sup> The growing ubiquitousness of virtual spaces raises questions about the effect of virtual experiences on bodily issues such as physical safety. While online harassment is not a new problem, Meta’s quest for making the internet an embodied space decreases the gap between virtual abuse and somatic consequences. As digital avatars are increasingly invested with more social and economic value, it raises the question of how long corporeality and real life can continue to be the grounds for identity formation under techno-capitalist enterprise.

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<sup>743</sup> Kabir Singh Bhandari, ‘Metaverse Fashion Week: The Future of Fashion Shows’, *Entrepreneur*, 28 March 2022 <<https://www.entrepreneur.com/article/423234>> [accessed 20 May 2022]

<sup>744</sup> Molly Clayton, ‘Mother says she was virtually groped by three male characters within second of entering Facebook’s online world Metaverse’, *The Mail Online*, 29 January 2022 <<https://www.dailymail.co.uk/news/article-10455417/Mother-43-avatar-groped-three-male-characters-online-Metaverse.html>> [accessed 15 July 2022]

The theoretical tools needed to synthesise the above-mentioned ideas are provided by the posthumanism, based on poststructuralism theories. However, an over-reliance on posthumanism, and materialist philosophy in general, poses serious problems. For instance, in the *Sprawl* trilogy, characters like Angie Mitchell are controlled by technology and dance on the palms of AIs like the cyber-loa. Nevertheless, in *Count Zero*, the protagonists were successful in foiling the plans of Josef Virek (the main antagonist) only through the help of the cyber-loa. By presenting this conflict, the stories simultaneously depict technology and global capitalist networks as oppressors and saviours of humanity. They present a future dominated by technology and capitalist enterprise where individuals increasingly struggle to exercise agency. Concurrently, the escape from hegemony and control is achieved by relying on the same tools as the oppressors i.e. technology. I contend that the materialist paradigm may be unable to provide an answer to this conflict.<sup>745</sup> The following section will highlight the problems with relying on materialism and possible new theoretical vistas for science fiction studies.

### - *New vistas for science fiction studies*

There is a close relationship between the cyberpunk genre and posthumanism because both present personal identity, subjectivity, and ethics as ‘slippery’ categories that are always dynamic or ‘in flux’ (as opposed to being self-contained phenomena) emerging from the continuous interaction between humans, capitalist socio-economic structures, and technological practices.<sup>746</sup> Placing cyberpunk within a posthumanist paradigm also helps create a theoretical opening to step out of anthropocentric thought when engaging with issues like ecology and animal studies. This is certainly true with the *Sprawl* trilogy. However, while posthumanism and science fiction scholarship have contributed to highlighting the complexities of Western capitalist hegemony, they have done so by situating themselves within the hegemonic ethos. This thesis has contended that a

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<sup>745</sup> For an analysis of the conflict between modern technology’s oppressive and emancipatory aspects in materialist theory see: Helen Hester, *Xenofeminism* (Cambridge: Polity, 2018).

<sup>746</sup> Grillmayr, ‘Posthumanism(s)’, p. 273.

dualistic categorisation of the world informs the techno-capitalist ethos, privileging mental functions and rationality over bodily functions and natural processes. The following paragraphs will argue that opposing the techno-capitalist paradigm from within limits the theoretical tools that can be utilised for the task. Subsequently, the discussion will explore non-dualistic and non-materialist theoretical methodologies that can help resolve the tensions between mind-body and nature-culture dualisms.

This thesis has attempted to present cyberpunk as more than a self-contained literary genre. Scholars have made similar arguments in science fiction studies. Bould and Vint have argued literary genres like science fiction are ‘fluid and tenuous constructions made by the interaction of various claims and practices by writers, producers, distributors, marketers, readers, fans, critics and other discursive agents’ rather than ‘objects which already exist in the world and which are subsequently studied by genre critics’.<sup>747</sup> Similarly, Csicsery-Ronay Jr. has argued that cyberpunk metaphors have a life of their own.<sup>748</sup> Seeing metaphors as dynamic and alive accords to them an organic nature as they follow their internal logic and refuse to fit into categories created by scholars. I focused on this dynamic property to argue that the metaphors articulated by Gibson in 1984 about space, the body, the mind, and the soul are alive today, and they do not respect dualistic categorisations like natural/artificial, real/unreal, biological/technological, and technological/spiritual. Even though it is known in literary studies that cyberpunk subverts binary distinctions, the power of subversion is often underestimated. Understanding this underestimation is essential today due to the volatility of social relationships, wars, pandemics, and ongoing climate catastrophes plaguing the world.

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<sup>747</sup> Mark Bould and Sherryl Vint, ‘There Is No Such Thing as Science Fiction’, in *Reading Science Fiction*, ed. by James Gunn, Marleen Barr, and Matthew Candelaria (New York, NY: Palgrave, 2009), pp. 311-355.

<sup>748</sup> Csicsery-Ronay Jr., ‘Cyberpunk and Neuromanticism’, pp. 182-193.

In this context, cyberpunk is perhaps the most potent literary tool for interrogating the direction in which humanity is progressing. Scholars realise that a central property of cyberpunk is the subversion of dualism, yet they work within its paradigm. For example, while analysing anthropocentrism in science fiction, literary scholar Ralph Pordzik writes about posthumanism as presented in late twentieth-century works like *Neuromancer*. He notes that by ‘fictionalising issues of identity, consciousness, and embodiment, Gibson’s novel illustrates the degree to which postmodern identity has become fixed to that of the informational spaces provided by the global matrix’.<sup>749</sup> He argues that technological utopia will never be achieved because technological evolution will lead to a ‘series of prostheses and enhancing mechanisms ministering to humanity’s need for imaginary fulfilment and closure’.<sup>750</sup> Conversely, while discussing anthropocentrism and ecology in cyberpunk, Lunning uses the concept of ‘rich sight’. The concept is based on the visual fetishisation of fantasy, opulence, plentitude, and excess that defines capitalist-consumerist societies. She applies ‘rich sight’ to the film *Blade Runner 2049*, arguing that the film’s visuality depicts humans as not having ‘the will or the sight to see and comprehend our fate’, even though ‘something can be read through those [cyberpunk] narratives and those “rich sights” that brought us a potential to reflect upon as redemption of our ecosystem and gender sins, on a planet that will... die as a life-giving planet’.<sup>751</sup> Another example is Hollinger, who, while discussing ecology in cyberpunk, concludes by commenting on Gibson’s *The Peripheral*, which I explored in Chapter Two. She states, ‘The particular hope encapsulated in the novel’s open-ended conclusion suggests a swerve away from fictional technospheres backgrounded by a dead “nature” toward fictional ecosystems that foreground responsible human co-relations with both technosphere and biosphere.’<sup>752</sup> The aforementioned examples—of Pordzik, Lunning, and Hollinger—reveal the

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<sup>749</sup> Ralph Pordzik, ‘The Posthuman Future of Man: Anthropocentrism and the Other of Technology in Anglo-American Science Fiction’, *Utopian Studies*, 23 (2012), 142–161.

<sup>750</sup> Pordzik, ‘The Posthuman Future of Man’, 142-161.

<sup>751</sup> Lunning, ‘Cyberpunk Redux: Dérives in the Rich Sight of Post-Anthropocentric Visuality’, pp. 16-28.

<sup>752</sup> Hollinger, ‘Ecology in the Anthropocene’, p. 330.

benefits and drawbacks of developing perspectives derived from materialism. Such perspectives reveal the need to rethink human practices operating within dualistic categories and their impact on nature and the human condition. Restricting analyses within a dualistic framework mounts a tenuous opposition without substantive subversive potential. Pordzik sees technology as necessarily devoid of meaning, and Lunning presents an argument that is stylised but vague. Hollinger's perspective comes closest to mounting a real critique of materialism and techno-capitalism by emphasising a need to understand the interdependence of technology and nature. However, the argument still ends up perpetuating the nature/technology dualism.

The technologically informed theology of Chardin is better orientated to understand and dissolve the nature/technology divide than the aforementioned perspectives because technology, for Chardin, is a prosthetic extension of human consciousness. Humans, in turn, are a prosthetic extension of consciousness in the cosmos. Therefore, technology is the materialisation of consciousness driving towards cosmic unification. Chardin mounts the most radical critique of anthropocentrism by giving primacy to consciousness. However, this view also has drawbacks as it gives techno-capitalist enterprise a cosmic legitimacy, which entails humans not being the protagonist in Chardin's speculative theology. Similarly, as was argued in Chapter Three, humans are not the protagonists in the *Sprawl* trilogy either. This is where Gibson's cyberpunk exercises its true potential.

The real critique of materialism, Cartesian dualism, and anthropocentrism lies in the gaps within Gibson's narratives. Hollinger has pointed this out by highlighting the potential of speculative realism for analysing cyberpunk. She observes that 'speculative realism posits a real that far exceeds our fantasy of it as "reality-for-us". Entities and objects in the world can never be fully known, nor can they be reduced to our experience of them'.<sup>753</sup> In 1996, prior to Hollinger,

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<sup>753</sup> Hollinger, 'Ecology in the Anthropocene', p. 331.

science fiction scholar David Golumbia used a similar approach called ‘anti-realism’ to analyse the work of Philip K. Dick. He noted that, in Dick’s work, ‘there exists, regardless of our access to it, one world, and one (ideal) way of conceptualising the truth about it.’<sup>754</sup> This non-anthropocentric approach is very potent if applied to the *Sprawl* trilogy. It bears emphasising that *Neuromancer*, *Count Zero*, and *Mona Lisa Overdrive* occur within the same fictional universe within a span of decades. At the end of *Neuromancer*, the noospheric AI seemingly leaves Earth with the aim of interacting with other noospheres throughout the cosmos. I argued in Chapter Three that consciousness and the noosphere are the true protagonists of the story, and humanity just happened to be caught up in their evolution. Arguably, the telos of the stories is the evolution of consciousness, meaning that the telos of their fictional universe is the evolution of consciousness.

Gibson alludes to this evolutionary process in *Neuromancer* by implying that other noospheres evolve throughout the cosmos, though he wrote the following two stories without exploring this phenomenon.<sup>755</sup> Conjecturing based on the hints left by Gibson can lead to the conclusion that, following Chardin’s theory, the noospheres continue to populate the universe until the totality of the cosmos becomes conscious. However, this latent potential was present before the evolution of digital technology in the *Sprawl* universe, which means that humans were always living in a living cosmos. The cosmos always had been alive because the telos of civilisation was a noosphere. This means that the drive to create a noosphere and evolve consciousness predated humanity. The drive implies that humans are a small part of a cosmic process that cannot be controlled. Therefore, it is a mistake for the humans in the stories to believe that nature is inert, ripe for exploitation, and exists for human use. This non-anthropocentric conclusion can be reached if speculative realism is applied to Gibson’s cyberpunk.

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<sup>754</sup> David Golumbia, ‘Resisting “The World”: Philip K. Dick, Cultural Studies, and Metaphysical Realism’, *Science Fiction Studies*, 23 (1996), 83-102.

<sup>755</sup> See the first section of Chapter Three, titled ‘Noosphere, Cyberpunk, and Transcendence’.



However, speculative realism has a problem in that it is read within the umbrella of the ‘nonhuman turn’ in the field of critical theory. In *The Nonhuman Turn* (2015), editor Richard Grusin describes the movement: ‘the nonhuman turn...insists (to paraphrase Latour) that “we have never been human” but that the human has always coevolved, coexisted, or collaborated with the nonhuman—and that the human is characterised precisely by this indistinction from the nonhuman.’<sup>756</sup> The movement covers a variety of positions, such as speculative realism, panpsychism, new feminist materialisms, and so forth. A comprehensive exploration of the nonhuman turn and its constituents is not possible in this project. However, I contend that the ‘nonhuman turn’ is not the best approach to overcome anthropocentrism. Grusin introduces the movement by stating that scholars’ objective is to present embodied arguments that overcome the Cartesian divide between subjectivity and objectivity.<sup>757</sup> This orientation is correct, but it does not acknowledge that the field of critical theory can never be embodied. For embodiment to be achieved, theory must continuously reflect practices in the world. The field of critical theory alienates itself from the world by using increasingly complex language, concepts, and specialised jargon. This reasoning applies to this thesis as it aims to embody a genre. The real solution requires stepping away from materialism to a real alternative. This alternative can be found in the philosophical position of idealism, especially in the case of science fiction and cyberpunk, if applied correctly. Idealist arguments can come closer to embodiment than critical theory because, as the following paragraphs show, they are being applied outside conference rooms by scientists and engineers in developing technology, particularly artificial intelligence.<sup>758</sup> Idealism also posits the most unified and anti-dualist set of relationships between humans and the world. Advocates of the nonhuman turn and science fiction scholars have noted that posthumanism often glorifies human aspirations. This is certainly true for technologists and futurists like Kurzweil, Vinge, and Moravec.

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<sup>756</sup> Richard Grusin, ‘Introduction’, in *The Nonhuman Turn*, ed. by Richard Grusin (Minneapolis and London: University of Minnesota Press, 2015), pp. vii-xxix.

<sup>757</sup> Grusin, ‘Introduction’, pp. vii-xxix.

<sup>758</sup> The emphasis in the word ‘idealism’ is on ‘ideas’ and not on ‘ideals’.

However, a way out of anthropocentrism has emerged from posthumanism in the form of the ‘simulation hypothesis’, which posits that humans exist in a computationally simulated universe.

Among the first to popularise the simulation hypothesis was Boström, mentioned in the Introduction.<sup>759</sup> In the late 90s and early 2000s, Boström hypothesised that humans likely live in a computer simulation. His reasoning is as follows:

If we assume some non-negligible fraction of civilizations [sic] at our stage reach technological maturity, and that some non-negligible fraction of those are interested in creating ancestor simulations, then we can show that each one of those creates astronomical numbers of them because it is so cheap for a mature civilization to create an ancestor simulation. If those two assumptions hold, then therefore there will be many, many more simulated people like us than non-simulated people like us. In other words, almost all sentient beings with your types of experiences will be simulated, rather than non-simulated. From that, we can infer that you are almost certainly among the very typical simulated ones, rather than among the very rare, original, historical, non-simulated people.<sup>760</sup>

Boström argues that it is statistically more likely that humans live in a simulated reality. This theory has several assumptions, such as assuming that the ethical code of posthuman civilisations would permit them to create subjective experiences like pain, suffering, loss, and that humanity will avoid ecological catastrophe and asteroidal impact and become a posthuman civilisation. At first glance, this might seem like merely an exciting hypothesis, something to ponder during spare time. However, the implications of this view are far greater. Fundamentally, this hypothesis posits no

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<sup>759</sup> Refer to the third section in the Introduction, titled ‘Cyberpunk and the Posthuman Condition’.

<sup>760</sup> Roy Wood, ‘Are We Living in a Simulation?’, *Wired*, 16 September 2011 <<https://www.wired.com/2011/09/are-we-living-in-a-simulation/>> [accessed 20 July 2022]. For the original formulation of the argument see Nick Boström, ‘Are We Living in a Computer Simulation?’, *The Philosophical Quarterly*, 53 (2003), 243-255.

substantive distinction between entities within the simulation because the whole universe is made of bits of information.<sup>761</sup> So the Cartesian distinction between mind and matter does not hold because both are made of the same stuff. Human minds, bodies, rocks, plants, animals, and galaxies are made of information, so everything exists in an intersubjective field created by advanced programmers. If matter in the universe is suffused with intent, then rational beings like humans are the same as animals and the cosmos at the substrate level. Therefore, the simulation hypothesis posits a truly post-anthropocentric view because it negates human exceptionalism.

The simulation hypothesis posits that reality is an illusion and humans do not have access to real reality. This hypothesis can also be applied to Descartes, whose theories have been the bane of ecology in cyberpunk. The Introduction summarised Descartes' views, and the evil demon thought experiment that allowed him to formulate his theory.<sup>762</sup> Descartes reasoned that he could doubt everything, that all his phenomenal experiences could be a hallucination generated by an evil demon. Nevertheless, since his experiences of reality are so perfect, the being that generates the hallucination must be perfect too. However, perfection can only be attributed to God, who is perfectly good and benevolent. This means that God would not deceive Descartes by generating hallucinations. Therefore, Descartes concluded that we do indeed live in real reality. Descartes can only reach this conclusion by imposing Christian human ethics and morality on the concept of God, omitting that what is considered good can change based on cultural context.

If Descartes' Christian anthropocentric bias is removed, then God is perfectly capable of generating such hallucinations. The Cartesian God could well be a programmer creating a computational simulation of the universe. From the perspective of Descartes and Boström, the perceived reality of the world is separate from the real world because human senses are simulated

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<sup>761</sup> Boström, 'Are We Living in a Computer Simulation?', 243-255.

<sup>762</sup> See the third section in the Introduction, titled 'Cyberpunk and the Posthuman Condition'.

and incapable of perceiving beyond the simulation. This reasoning is similar to the idealist argument formulated by the nineteenth-century German philosopher Immanuel Kant. One of Kant's main contributions was the argument that reality is ontologically divided into phenomena (appearance of reality) and noumena (the thing-in-itself underlying the phenomena).<sup>763</sup> In computational terms, these perspectives suggest that humans live in a simulated world and do not have access to the real world. This relationship between the simulation hypothesis and Cartesian philosophy has been noted recently by the philosopher of mind David J. Chalmers in his book *Reality+: virtual worlds and the problems of philosophy* (2022). The book's central argument is that technological advancements require a new 'technophilosophy'.<sup>764</sup> Chalmers' proposed technophilosophy sees virtual reality as real reality, virtual experiences as real experiences, virtual objects are real objects. Chalmers argues that 'Virtual Reality' is sometimes understood as 'fake reality' but is instead closer to 'digital reality'. He states, 'A virtual chair or table is made of digital processes, just as a physical chair or table is made of atoms and quarks...The virtual object is different from the nonvirtual one, but both are equally real.'<sup>765</sup> He makes this argument by routing his analysis to the question: how can we know that the external world, as we perceive it, is real? To answer this question, he takes up Descartes' evil demon experiment and re-articulates it as a simulation hypothesis in the manner presented earlier. Even though Chalmers uses science fiction and cyberpunk examples like the films *The Matrix* (1999) and *Total Recall* (1990) to relate his theory, he notes that questions about simulated reality and real reality have been asked by ancient philosophical traditions from Greece, India, and China.<sup>766</sup>

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<sup>763</sup> Michael Rohlf, 'Immanuel Kant', *The Stanford Encyclopedia of Philosophy*, ed. by Edward N. Zalta, 2020 <<https://plato.stanford.edu/cgi-bin/encyclopedia/archinfo.cgi?entry=kant>> [accessed 25 May 2022]

<sup>764</sup> David J. Chalmers, *Reality+: virtual worlds and the problems of philosophy* (W.W. Norton & Company, 2022), p. xviii.

<sup>765</sup> Chalmers, *Reality+*, pp. 12-14.

<sup>766</sup> Chalmers, *Reality+*, pp. 3-9.

Chalmers' approach recognises the need for a methodology that uses 'technology to answer traditional philosophical questions'.<sup>767</sup> This need has to be acknowledged to embody cyberpunk. For instance, is the question of reality not constantly reiterated in the *Sprawl* trilogy? In *Neuromancer*, Case constantly longs to experience 'bodiless exultation' in cyberspace.<sup>768</sup> As the story progresses, the Neuromancer AI offers Case an immortal life in virtual reality with his lover Linda Lee. Case rejects this offer because he knows that his virtual life will be programmed to suit his needs and, therefore, will not be real. Case's choice is fertile ground to include non-Western and non-anthropocentric arguments from traditions like ancient India, China, and Greece. However, conventional interpretations, working within the dualism of real/unreal, have described Case's choice as indicating that 'his actual body's "reflexive need", the somatic processes and circumstances shaping all his activities...is primarily needed to achieve this aim is still in place', and that 'Case has been granted participation in something larger than individual; life or personality, but his experiences have also revealed the truth about human desire and its relation to physical lack-of-being'.<sup>769</sup> Such an assessment separates *Neuromancer* from *Count Zero* and *Mona Lisa Overdrive*, which occur within the same universe and present a different attitude towards disembodied experiences. For instance, at the end of *Mona Lisa Overdrive*, the characters Bobby Newmark and Angie Mitchell upload themselves into the matrix through brain-computer interfaces and happily drive off in a digital sports car into the matrix. Their next destination is stated as another noospheric matrix in the Centauri star system.<sup>770</sup>

Gibson does not favour embodiment over disembodiment and sees virtual space as a real space, similar to Chalmers. This attitude shift can be explained by the fact that Case recognised the digital Linda Lee construct as different from the real Linda, whereas Bobby and Angie knew the

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<sup>767</sup> Chalmers, *Reality+*, p. xviii.

<sup>768</sup> Gibson, *Neuromancer*, p. 5.

<sup>769</sup> Pordzik, 'The Posthuman Future of Man', 142–161.

<sup>770</sup> Gibson, *Mona Lisa Overdrive*, p. 314.

difference between real and virtual reality perfectly well and still voluntarily jumped into the matrix. Case was reluctant because he knew Linda did not choose to be a construct and would end up being reduced to his fantasy of her. Bobby and Angie did not have to deal with this dilemma and were able to reach a digital utopia. Remarking on the notion of reality, Gomel argues that cyberpunk takes ‘the disappearance of the real in its stride’, but I contend that, theoretically, we do not even know what is real.<sup>771</sup> Making biased assumptions about what is real and not real can result in a return to Cartesian dichotomies. This point is not only limited to literary criticism but is becoming widely held in neuroscience, philosophy, and computer science. The following pages will provide some examples. The work of scientists that will be introduced is significantly more profound and extensive than what is presented here, and the following section solely aims at enticing the readers engage with the mentioned works.

The first example is Iain McGilchrist, a psychiatrist and former literary scholar. McGilchrist started studying English at the University of Oxford and wrote a book on literary theory titled *Against Criticism* (1982). In various interviews, he describes being disillusioned by critical analyses that alienated texts from meaning and disembodied them.<sup>772</sup> He is interested in mind-body dualism and sees it as the bane of literary theory. After his foray into literature, he retrained in medicine and became a researcher at Johns Hopkins University in Baltimore, US. Following decades of work in psychiatry, he has published two works titled *The Master and His Emissary: The Divided Brain and the Making of the Western World* (2009) and *The Matter With Things* (2021). Both works are considered tomes in the fields of neuroscience, metaphysics, and ontology. His primary thesis reveals how the hemispheric division of the human brain shapes the human understanding of reality. The left hemisphere is the logical centre that divides our perception into categories so humans can reach quick conclusions about the world. Comparatively, the right hemisphere provides a gestalt

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<sup>771</sup> Gomel, ‘The cyberworld is (not) flat’, p. 357.

<sup>772</sup> Iain McGilchrist, 2014. In ‘Iain McGilchrist: The divided brain’, *Relational Implicit*, January 2014 <<https://relationalimplicit.com/zug/transcripts/McGilchrist-2014-01.pdf>> [accessed 12 March 2022]

view of the world and understands the complementarity of opposites. He believes that many of the problems in the world and in literary criticism stem from a dysfunctional reliance on left hemispheric thinking. He surmises his argument as follows:

We have been seriously misled, I believe, because we have depended on that aspect of our brains that is most adept at manipulating the world in order to bend it to our purposes...The problem is that the very brain mechanisms which succeed in simplifying the world so as to subject it to our control militate a true understanding of it. Meanwhile, compounding the problem, we take the success we have in manipulating it as proof that we understand it. But that is a logical error: to exert power over something requires us only to know what happens when we pull the levers, press the button, or utter the spell.<sup>773</sup>

In a sense, McGilchrist's efforts deal with the same issues that cyberpunk raises: the relationship between mind and body, nature and technology, real and virtual. McGilchrist shows that the phenomenal experience of the world is highly suspect due to over-reliance on categorical thinking that fails to reconcile opposites. He argues against a categorical, functional, and mechanistic conception of nature and consciousness with the example of a tree:

We can begin with the description [of a tree] in terms of physics, but could never progress from that to the experiential tree; whereas we can begin with the experience and later incorporate within it the physics. The right hemisphere can incorporate the left's take, but the left cannot incorporate that of the right. The mechanistic vision can come only from experience, even if it is an experience from which much has been excluded; the experience of the tree can never emerge from the mechanistic vision.<sup>774</sup>

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<sup>773</sup> Iain McGilchrist, *The Matter With Things: Our Brains, Our Delusions and the Unmaking of the World* (London: Perspectiva, 2021), p. 17.

<sup>774</sup> McGilchrist, *The Matter With Things*, p. 1201.

In cyberpunk, from the autopoietic perspective, it is possible to conceive how attaching mechanisms that complete a tree's information patterns will allow it to be mechanised. However, McGilchrist distinguishes between the interiority and meaningfulness of a tree (noumena) and its descriptive breakdown (phenomena), paying no mind to whether the tree is made of information or organic material. He acknowledges the work of the early twentieth-century French philosopher Henri Bergson who used the concept of 'élan vital' or vital force to describe creativity in the universe. The reference to Bergson is relevant from the perspective of this thesis because Bergson's philosophy is linked to the work of Chardin and McLuhan.<sup>775</sup> I have already discussed the consciousness-based telos in the *Sprawl* books, but perhaps interested scholars can further probe the issue using the work of McGilchrist. Doing so can yield fruitful results because, much like Chalmers, McGilchrist supports many of his neuroscience arguments using non-Western and non-anthropocentric philosophical traditions like Buddhism, Upanishads, Daoism, and several tribal systems of thought.

There is a growing trend in analytical philosophy to break down the hermetic seals separating mystical traditions, neuroscience, and technology using idealism. An example is computational neuroscientist Donald Hoffman. After receiving his PhD in computational psychology from the Massachusetts Institute of Technology (MIT), Hoffman worked as a researcher at the famed Artificial Intelligence Lab. Since then, Hoffman has been at the University of California, Irvine, in the Department of Philosophy, Department of Logic and Philosophy of Science, and the School of Computer Science. Hoffman's work in AI and cognitive science led him to work on the mind-body problem using an idealist position on consciousness that opposes materialism, which has become the salient feature of modern science, philosophy, and culture. In his book *The Case Against Reality: Why Evolution Hid the Truth from Our Eyes* (2019), Hoffman argues that perceived reality—bodies, matter, space-time—is not fundamental but emerges from neural functions. He likens the phenomenal experiences of physical matter and space-time to icons

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<sup>775</sup> See: Krüger, 'Gaia, God, and the internet', 146.



on a computer screen that hide the real reality. Hoffman sees evolution as a process that has primed human senses to only perceive that which enables the survival and continuation of the species:

[Evolution] has endowed us with senses that hide the truth and display the simple icons we need to survive long enough to raise offspring. Space, as you perceive it when you look around, is just your desktop—a 3D desktop. Apples, snakes, and other physical object are simply icons in your 3D desktop. These icons are useful, in part, because they hide the complex truth about objective reality. Your senses have evolved to give you what you need. You may want truth, but you don't need truth. Perceiving truth would drive our species extinct. You need simple icons that show you how to act to stay alive.<sup>776</sup>

This view of reality is similar to the simulation hypothesis, without the assumption of an advanced civilisation of programmers creating reality. Hoffman also claims to be working on a project to create virtual reality worlds that, although entirely different, can only be described using a common descriptive language.<sup>777</sup> Doing so will demonstrate that reality can differ wildly from how it is perceived. Interestingly, in an interview, Hoffman also talks about how much the practice of Transcendental Meditation has influenced his ideas.<sup>778</sup> This intersection of theory and scientific principles applied alongside an embodied practice shows how non-Western practices and modes of thought can be used to oppose the mechanisation of reality can result from the feedback loop between science fiction and contemporary techno-culture.

The field of computation also has the towering figure of the computer scientist and physicist Federico Faggin, a Silicon Valley legend and inventor of the world's first microprocessor that led to

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<sup>776</sup> Donald Hoffman, *The Case Against Reality: Why Evolution Hid the Truth from Our Eyes* (New York and London: W.W. Norton & Company, 2019), pp. xi-xii.

<sup>777</sup> Donald Hoffman, 'Donald Hoffman on the fundamental nature of consciousness', 2020 <<https://youtu.be/CmieNQH7Q4w>> [accessed 15 March 2022]

<sup>778</sup> 'Donald Hoffman on the fundamental nature of consciousness', 2020.

the development of modern computing devices. Beyond inventing the microprocessor, Faggin has also received Presidential awards like the National Medal of Technology and Innovation (the highest honour conferred by the US government) in 2009. In his recent autobiography, titled *Silicon: From the Invention of the Microprocessor to the New Science of Consciousness* (2021), Faggin reveals that by working in the field of AI, he has ultimately arrived at an idealist view of consciousness and even consulted Eastern treatises like *Tao Te Ching* and *Bhagavada Gita*. The leading question for his exploration into AI since the 1990s was how ‘a physical, inert structure like a computer that possesses only outer symbolic aspects give rise to inner semantic ones? The concept of complexity seems to have nothing to do with the sensations and feelings existing in our inner world’.<sup>779</sup> Here again, the distinction not between mind and body but between inner and outer reality is highlighted. After decades of computer science and physics research, he concluded that ‘Consciousness cannot simply emerge from the algorithmic complexity of a classical system—the current “scientific explanation” for consciousness’.<sup>780</sup> Faggin is also opposed to utopians like Kurzweil and Moravec and states, ‘I think that the idea that computers may best human beings is a dangerous fantasy based on a misinterpretation of the true nature of consciousness and the nature of physical reality.’<sup>781</sup>

In order to explain the distinction between inner and outer reality, Faggin, like Chalmers and Hoffman, uses a virtual reality metaphor:

Imagine controlling an avatar in a virtual reality world created by a computer. You wear sophisticated goggles, earphones, and a costume that automatically captures the movements of your body. Your voice and your motions control the actions of the avatar, and through the

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<sup>779</sup> Federico Faggin, *Silicon: From the Invention of the Microprocessor to the New Science of Consciousness* (Waterside Productions, 2021), p. 191.

<sup>780</sup> Faggin, *Silicon*, p. 226.

<sup>781</sup> Faggin, *Silicon*, p. 228.

simulated senses of the avatar you experience a virtual world as if you were the avatar you control. In that virtual world there are virtual classical objects and other avatars, each controlled by a different person. You interact with them using the laws of the virtual world and may experience a different world than the physical one you know.<sup>782</sup>

This view shares similarities with the simulation hypothesis mentioned previously. However, while Boström and Chalmers suggest that humans are characters that exist in the simulation, Faggin argues that humans do have an existence outside the simulation. He suggests that through the process of perfect immersion and perfect presence, conscious entities forget that their senses only allow them to experience the interface (phenomena) of reality and not the real (noumenal) reality. It should be noted that Faggin does not privilege the mind and mentation over the body:

The computer program that runs the virtual world includes the avatars as subroutines and is totally classical. If you get engrossed in that virtual reality, you may also believe for brief periods that you are the avatar and the virtual world is real, forgetting that you exist in the physical world instead...just like your body does not exist inside the computer that creates the virtual reality, your consciousness and free will do not exist inside the physical world in which your body exists...if we are completely identified with our physical body, the consciousness that controls our body—what we normally call ego—may also be a portion of a vaster consciousness controlling a vaster “body” we are currently not aware of possessing.<sup>783</sup>

The above passage describes a different reality within which humans experience phenomenal reality. However, the reality behind the veil of phenomenality is not physical. Faggin suggests that

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<sup>782</sup> Faggin, *Silicon*, p. 220.

<sup>783</sup> Faggin, *Silicon*, pp. 220-222.

phenomenal reality and reality-as-it-is are made up of consciousness. He describes this universal consciousness as ‘nousym’, a combination of ‘nous’ (higher mind in Greek) and ‘symbol’.<sup>784</sup> He likens the universe to Russian dolls, ‘there are virtual realities inside virtual realities, but it is nousym that contains your conscious experiences of all those dolls.’<sup>785</sup> Furthermore, the nous in ‘nousym’ is similar to the noosphere framework proposed by Chardin. Faggin, like Chardin, imbues intent into the cosmos by stating that ‘the engine of evolution is the desire of a conscious universe to know itself’.<sup>786</sup> If used in the fashion suggested by Faggin, this perspective can be helpful in studying the spiritual undertones of science fiction works like the *Sprawl* trilogy without resorting to Christian writings. Moreover, Faggin is not the only computer scientist who arrived at the concept of a universal or gestalt consciousness by working in AI.

Philosopher Bernardo Kastrup has arguably provided the most effective and comprehensive critique of reductive materialism and Cartesian philosophy. After receiving his PhD in computer engineering, focusing on reconfigurable computing (like the cybernetician John Von Neumann) and AI, Kastrup started working at the European Organisation for Nuclear Research (CERN). After his work at CERN, Kastrup had a career in the tech industry. However, following his corporate career, he received another PhD in philosophy focusing on ontology and philosophy of mind.<sup>787</sup> In interviews, Kastrup has mentioned that he was fascinated with AI and the possibility of creating a digital consciousness but soon found out that the mind-body problem and the ‘hard problem’ of consciousness were insoluble.<sup>788</sup> Presently, Kastrup is perhaps the most known proponent of

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<sup>784</sup> Faggin, *Silicon*, p. 215.

<sup>785</sup> Faggin, *Silicon*, p. 192.

<sup>786</sup> See the first section of Chapter Three, titled ‘Noosphere, Cyberpunk, and Transcendence’.

<sup>787</sup> See his full profile at <<https://www.blogger.com/profile/09650916659229517564>> [accessed 20 March 2022]

<sup>788</sup> The ‘hard problem’ of consciousness refers to the issue of differentiating between an unconscious object and a conscious entity. It focus on ‘what its like’ to be anything. The phrase was coined by David Chalmers in 1995. See: David J. Chalmers, ‘Facing up to the Problem of Consciousness’, *Journal of Consciousness Studies*, 2 (1995), 200-19.

analytical idealism and the most vehement critic of materialism and physicalism. Fundamentally, Kastrup argues that consciousness is the ontological primary of the universe. The universe itself is a conscious entity, and individual consciousnesses are ‘excitations’ of the cosmic consciousness.<sup>789</sup> Individual consciousnesses are to the cosmic consciousness what whirlpools are to oceans. His motivation to pursue idealism is laid out as such:

Our culture takes for granted that reality exists ‘out there’ and is fundamentally independent of consciousness. This postulate seems to explain a number of things that we, otherwise, would allegedly be unable to make sense of: the continuity of events while we are asleep, the undeniable correlations between brain states and experience, the fact that we all seem to share the same reality, etc. For this reason, we’ve allowed our values, economic and political systems, ways of relating to nature and each other, psychology, medicine, social dynamics, etc., to be all subtly colored [sic]—if not outright determined—by such a postulate.<sup>790</sup>

Kastrup sees the potential in idealism to radically alter how humans relate to the world. His work is non-dual in that he sees reality as only made up of consciousness. At various points throughout his work, Kastrup has revealed his intellectual debt to intellectuals like Kant, Arthur Schopenhauer, and the twentieth-century German psychologist Carl Gustav Jung. Kastrup elevates psychology to metaphysics and even ontology using Jung’s concept of the ‘collective unconscious’.<sup>791</sup> Kastrup has stated that his work leads towards ‘explorations of different angles of a single motif: an idea gestalt—an organised cognitive whole beyond the mere sum of its parts—about the human condition as it

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<sup>789</sup> Bernardo Kastrup, *Brief Peeks Beyond*, p. 27.

<sup>790</sup> Kastrup, *Brief Peeks Beyond*, p. 22.

<sup>791</sup> The assertion that Carl Jung was an idealist come from the reading of his *The Red Book: Liber Novus* which is comprised of manuscripts crafted by Jung between 1915 and 1930. Considered as the central part of his oeuvre, the manuscripts describe Jung’s eclectic practice of arriving at insights through visions. He would encounter these visions by deliberately engaging with the supposed collective unconscious of humanity and ‘mythopoetic imagination’. See: Carl Gustav Jung, *Memories, Dreams, Reflections*, recorded and edited by Aniela Jaffe and translated by Richard and Carla Winston, Revised ed. (Vintage, 1961).

is presently manifested'.<sup>792</sup> To explore this global gestalt, Kastrup uses tools from Western philosophy and Eastern traditions like Advaita Vedanta (nondualism), Buddhism, and Daoism. McFarlane has already set the precedent for using gestalt psychology in the study of science fiction in her book *Cyberpunk Culture and Psychology* (2021). This thesis has also explored the presence of collective consciousness in the *Sprawl* trilogy. I suggest that the work of Kastrup and idealist philosophy are fertile grounds for drawing further insights into the issue of embodiment and consciousness, especially considering his background in AI.

In conclusion, I want to reiterate that investigating cyberpunk is more important now than it has ever been, especially regarding the speculative moment that Gibson presented in *Mona Lisa Overdrive*:

In the hard wind of images, Angie watches the evolution of machine-intelligence: stone circles, clocks, steam-driven looms, a clicking brass forest of pawls and escapements, vacuum caught in blown glass, electronic hearthglow through hair-fine filaments, vast arrays of tubes and switches decoding messages encrypted by other machines...The fragile, short-lived tubes compact themselves, become transistors; circuits integrate, compact themselves into silicone...Silicone approaches certain functional limits...<sup>793</sup>

Technologies like Neuralink and the Metaverse represent an unprecedented historical juncture where 'silicone approaches certain functional limits' and technology can literally invade and alter what it means to be a human being. I suggest the answer to this question may not be found within the materialist paradigm. This section has proposed alternative methodologies to reconsider the place of humans in the world and the role technology can play in determining it. Is this not what Shiner wanted in his 1991 critique of the cyberpunk genre, in which he aspired for a new turn in the

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<sup>792</sup> Kastrup, *Brief Peeks Beyond*, p. 19.

<sup>793</sup> Gibson, *Mona Lisa Overdrive*, p. 261.

literature that would see technology not as a gateway to a utopia but as a tool for humans?<sup>794</sup> Shiner's mistake was that he imposed the responsibility on cyberpunk, which is not a hermetically sealed literary genre but a set of metaphors generated in society. Nevertheless, the work of Gibson is a testament to the fact that methods to aid the human condition can be found by broadening theoretical and philosophical horizons. For this reason, this thesis explored the role of Chardin's view of technology since it provides that opening.

The contemporary relevance of cyberpunk is becoming apparent with popular cultural products such as the video game *Cyberpunk 2077* (2020) mentioned in the Introduction. Recently, in 2022, a run-off animated series was released by Netflix based on the world of the video game called *Cyberpunk: Edgerunners* (2022).<sup>795</sup> The Introduction mentioned that *Neuromancer* inspired the world of *Cyberpunk 2077* as the majority of the game takes place in a futuristic dystopian city called Night City, which is also the moniker for Chiba City in *Neuromancer*.<sup>796</sup> The show also uses phrases like 'flatlining'—that are also used in the *Sprawl* trilogy—to refer to death.<sup>797</sup> The plot revolves around the character of David Martinez, a street kid who uses cybernetics implants to become an outlaw. Such outlaws in the series are known synonymously as cyberpunks or 'edgerunners'. After losing his mother to a traffic accident, David starts going down a self-destructive path by excessively augmenting his body and overloading his nervous system. Towards the end of the series, David starts suffering from an illness known as 'cyberpsychosis', which afflicts people who excessively augment themselves. In the final episode, David suffers acute psychosis after watching his friends killed by a military-grade cyborg and ends up joining them in

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<sup>794</sup> Shiner, 'Confessions of an Ex-Cyberpunk', 1991. Refer to the Introduction.

<sup>795</sup> *Cyberpunk: Edgerunners*, dir. by Hirolyuki Imaishi (Netflix, 2022).

<sup>796</sup> I have discussed the relationship between *Neuromancer* and *Cyberpunk 2077* previously. See the first section of the Introduction, titled 'What is Cyberpunk?'

<sup>797</sup> Aside from *Cyberpunk 2077* and *Cyberpunk: Edgerunners*, a new series is also set to be released digitally on Amazon Prime called *The Peripheral*. This series will be a live-action adaptation of *The Peripheral* (2014) written by William Gibson which I analysed in the second chapter, showing the continuing relevance of cyberpunk and Gibson's work.

death. David's body can well be the fate of Earth and human and animal bodies. The excessive reliance on capitalist reason and materialist philosophy has created a fissure between nature and mind. Cyberpunk stories show a modern and secular manifestation of this fissure. As much as modern technology facilitates this separation between mind and body, its roots are planted in Western Judeo-Christian tradition. Commenting on the mind-body distinction in transhumanist and technological discourse, religious studies scholar Celia Deane-Drummond has made the following remark:

Once belief in God was no longer convincing, those who adhered to its secular residue still hoped for salvation through human mental aspirations. Expressions of transhumanity as they emerge in the Western context are therefore secular versions of very ancient theological and philosophical debates...Those theologians who will find disembodied aspirations of transhumanism and its variants the most attractive will be those who adhere to metaphors of God filtered through mental activity and imagery, rather than bodily nature.<sup>798</sup>

The sacrifice of bodily nature in favour of mental activity and intelligence is exemplified in cyberpunk stories and characters like David Martinez, Case, and Molly Millions, who get swallowed by techno-capitalist logic that seeks salvation exclusively in digital information. In order to prevent the death of the body and of nature, it is imperative to recognise the presence of spiritual fervour in such endeavours. For this purpose, works like the *Sprawl* trilogy are useful as they weave together spiritual and technological aesthetics. This section's exploration of the recent surge in idealist philosophy aims to show that the interpenetration of technology and spirituality is growing in academia. It is accompanied by the recognition that a new mode of thinking is required to oppose

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<sup>798</sup> Celia Deane-Drummond, 'Taking Leave of the Animal? The Theological and Ethical Implications of Transhuman Projects', in *Transhumanism and Transcendence: Christian Hope in the Age of Technological Enhancement*, ed. by Ronald Cole-Turner (Washington: Georgetown University Press, 2011), pp. 122-123.



the hegemony of materialist philosophy. A comparative analysis of the *Sprawl* trilogy with *Cyberpunk 2077* and *Cyberpunk: Edgerunners* can be insightful for this purpose since the latter is inspired by Gibson's work.<sup>799</sup> In the techno-spiritual world of the *Sprawl* trilogy, characters like Case, Molly, Angie Mitchell, and Bobby Newmark end up having a more or less good ending. On the other hand, most of the main characters of *Cyberpunk: Edgerunners* die at the end of the series. Perhaps scholars can conduct further literary and cultural analysis of how the fate of the characters in Gibson's work and the *Cyberpunk* video game franchise relates to the presence or absence of spirituality in the stories. In December 2022, it was also revealed that the video-streaming platform Apple TV+ will be releasing a live-action adaptation of *Neuromancer* with the actor Miles Teller (a lead character from *Top Gun: Maverick*, 2022) playing the character of Case.<sup>800</sup> This news follows the success of Amazon Prime's live-action adaptation of Gibson's *The Peripheral* (2022), demonstrating that the cyberpunk genre and Gibson's fiction are far from dead. The Apple TV+ series will provide a useful avenue for scholars to analyse the continuities and discontinuities between the original text and its visual adaptations. Furthermore, I think it will be interesting to see how Gibson, who is set to be one of the executive producers of the series, engages with the spiritual subtext of the story in a visual medium.

By highlighting the importance of spirituality in the *Sprawl* trilogy, I have proposed that mind-body dualism can be questioned using a method that gives centrality to consciousness. By doing so, I suggested that the *Sprawl* trilogy is not a story about humanity's dystopian future but about the evolution of consciousness throughout the cosmos presented through technological metaphors. Through technological metaphors, Gibson portrays the characters in his cyberpunk imaginary as trapped at the nexus of techno-capitalist and anthropocentric practices. Conversely, as

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<sup>799</sup> The similarities between *Cyberpunk 2077* and the *Sprawl* trilogy are mentioned in the first section of the Introduction, titled 'What is cyberpunk?'

<sup>800</sup> David Pescovitz, 'William Gibson's *Neuromancer* coming to Apple TV+', *boingboing*, 29 November 2022 <<https://boingboing.net/2022/12/01/william-gibsons-neuromancer-coming-to-apple-tv.html>> [accessed 1 December 2022]

argued in the Introduction and the subsequent chapters, techno-capitalist imaginings have become intertwined with cyberpunk motifs and instantiated technologies like the Metaverse, brain-computer interfaces, quasi-spiritual AI, and in-vitro meat.<sup>801</sup> Such technologies are testament to the primary argument of this thesis that cyberpunk is not dead, but is more relevant today than ever. Given the tumultuous changes humanity is undergoing with the commercialisation of increasingly pervasive technologies like brain-computer interfaces,<sup>802</sup> utilisation of robots for law enforcement, and the simultaneous existence of authoritarian regimes around the world, I suggest that analysing the symbiotic relationship between digital technologies and humans is becoming indispensable for understanding what ‘human’ means in the twenty-first century.<sup>803</sup>

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<sup>801</sup> By ‘spiritualised AI’ I am referring to the characterisation of Google’s LaMDA AI by the former Google software engineer Blake Lemoine. See the second section of the Introduction, titled ‘Cyberpunk is dead, says who?’.

<sup>802</sup> Mary Beth Griggs, ‘Elon Musk claims Neuralink is about ‘six months’ away from first human trial’, *The Verge*, 1 December 2022 <<https://www.theverge.com/2022/11/30/23487307/neuralink-elon-musk-show-and-tell-2022?ref=upstract.com>> [accessed on 1 December 2022]

Elon Musk has stated in a press conference that all the required paperwork has been submitted to the Food and Drug Administration in the United States and that human trials of the Neuralink chips will begin in 2023. Musk demonstrated his confidence in the technology by stating that he will also get the implant once the technology is operational.

<sup>803</sup> Khari Johnson, ‘San Francisco’s Killer Robots Threaten the City’s Most Vulnerable’, *Wired*, 30 November 2022 <<https://www.wired.com/story/san-franciscos-killer-police-robots-threaten-the-citys-most-vulnerable/>> [accessed on 30 November 2022]

San Francisco Board of Supervisors decided in November 2022 to allow the police to shoot and kill criminal suspects using remote controlled robots with mounted explosives.

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