The Spatialities of Surveillance Capitalism: Shoshana Zuboff's 'new frontier of power'

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Abstract

Digital technologies have come to frame the everyday interactions of our world, meshing together public and private spaces into seamless singular platforms for work, socialisation and leisure. At the centre of these transformations are the market imperatives of companies who trade in predictions based upon behavioural data, utilising a range of surveillance strategies to capture information that helps to craft the most effective interventions into the state of play of our lives. While surveillance technologies, data mining practices and algorithm-based marketing have become increasingly ubiquitous over recent years, the implications of their operations - including how data is used, who has access to it, and how far privacy laws are able to protect against its potential harms - are less clear. Shoshana Zuboff's 2018 book *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power* provides a thorough overview of these issues, constructing a new vocabulary with which to identify the oppressive digital processes which quietly shape behaviour on a colossal scale.

Although the book has experienced a high level of visibility, briefly becoming a bestseller in 2019, recent critical reflections point towards a number of shortcomings in Zuboff's analysis - including her commitment to the argument that the current regime takes the form of a political and economic system 'gone rogue' from the capitalism of history. This dissertation argues that speculative fiction offers a particularly valuable space to test out Zuboff's predictions and conclusions. By identifying the overlapping theoretical strands which converge in *Surveillance Capitalism* and mapping these onto an array of contemporary literary texts, including Dave Eggers' *The Circle*, Lauren Beukes' *Moxyland*, Margaret Atwood's *The Testaments*, Richard K. Morgan's *Altered Carbon* and Alex Garland's film *Ex Machina*, this project seeks to explore spaces beyond the limitations of Zuboff's analysis.

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Introduction

The power struggles between industrial capital and labour in the twentieth century have been transformed by new and insidious market forms. As the future technological landscape of the digital age moves into sharper focus, political mechanisms of democracy and control are perpetually re-shaped in the changing light of information capitalism. Building upon an infrastructure of increased state surveillance under the pretext of national security, widespread CCTV coverage, and the availability of new technologies which facilitate a constantly interconnected digital society, we are witnessing the growth of a thriving ecosystem of data accumulation on a phenomenal scale which intrudes upon every aspect of our social, political, and private lives. The omnipresence of surveillance technologies, alongside the invisibility of their inner mechanisms and processes, has led to a phenomenon where individuals willingly and actively participate in the regulation of their own behaviour and that of others, surrendering privacy as payment for the services which have become necessary for participation in social life. The mediation of reality by virtual modes of communication plays an increasingly important role in the shaping of individual and national identity, whilst existing forms of sociality and subjectivity recede under the emergence of multifarious methods of self-representation. At the turn of this new decade, it is difficult to imagine a future where digital surveillance will not frame the interactions of everyday life.

Science fiction holds a unique capability to express the experiences of oppression under digital modernity and test out otherwise intractable philosophical ideas in an innovative realm, ideally positioning the genre to engage with established and emergent theories of surveillance. This genre is valuable for its ability to foster innovative political imagination, oriented towards the negotiation of unprecedented global crises and the confrontation of exploitation and violence which disproportionately targets marginalised social groups. By understanding the critical theories which shed light upon the architecture of surveillance society, science fiction acts as a particularly effective form of political intervention into contemporary debates about human rights, control, and inequality

through its shared concerns with power and oppression. Jessica Langer proposes that the genre has close links to the objectives of postcolonial studies in this regard:

> The instability of science fiction is not a weakness but rather a strength; it has shown itself capable of including a wide variety of texts and voices, including those characterised by hybridity in genre. [Its] edges have been blurred and smudged, and it has shown itself flexible enough to include the subversion, generic and ideological, that postcolonialism represents.[1]

Science fiction presents opportunities for resistance against assimilation to the imperial centre, as Bill Ashcroft, Gareth Griffiths and Helen Tiffin assert in *The Empire Writes Back*, 'demonstrating the counter-discursive potential of the tools appropriated from the colonisers' and revealing an ability to occupy and undermine binarily opposite, conflicting categories such as Western scientific discourses and indigenous modes of knowledge production.[2] Fredric Jameson's influential book *Archaeologies of the Future* takes an alternative view of dystopian science fiction, suggesting that 'the mass-cultural sub-genre like SF […] can sometimes express realities and dimensions that escape high literature,' and pointing out that although science fiction is typically described as 'an attempt to imagine unimaginable futures, [its] deepest subject may in fact be our own historical present.'[3] Further, Darko Suvin argues for sf to be re-defined as 'the literature of cognitive estrangement', which recognises that the 'imaginative framework' of sf 'has always been wedded to a hope of finding in the unknown the ideal environment,' yet remains 'distinct from […] utopianism.'[4] In the face of interconnected patterns of capitalist- and surveillance-framed power, an exploration of the kinds of cultural work undertaken by texts which fall within the flexible parameters of cognitive estrangement provides insights into our current reality and the political trajectories we may yet create. I will begin by mapping out the key critical debates which have shaped theorisations of surveillance, capitalism, and resistance, and how these have developed over time to arrive at the epoch which is currently

[1] Jessica Langer, *Postcolonialism and Science Fiction* (New York: Palgrave Macmillan, 2011) p. 2.
[2] Bill Ashcroft, Gareth Griffiths and Helen Tiffin, *The Empire Writes Back* (New York: Routledge, 2002) p. 199.
[3] Fredric Jameson, *Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions* (London: Verso, 2005) p. 345.
[4] Darko Suvin, 'On the Poetics of the Science Fiction Genre,' *College English* 34.3 (1972) 372-382 (pp. 372-374).

unfolding.

The most penetrating and sustained analysis of surveillance remains Michel Foucault's widely-cited and profoundly prescient text *Discipline and Punish: The Birth of a Prison*.[5] Foucault appropriates Jeremy Bentham's model of the 'Panopticon', a prison designed around the surveillance of inmates with the goal of influencing self-regulatory behaviour, to develop a broader critique of the movement towards much more subtle and standardised methods of control in the modern nation-state. Bentham himself recognised the panopticon's capacity to influence and coerce populations, defining surveillance as 'a new mode of obtaining power of mind over mind, in a quantity hitherto without example'; Foucault built upon this concept of power to foreground the nuanced forms of control embedded in institutional processes and systems which are deliberately obscured from public view.[6] In *Stopping the Spies*, Jane Duncan credits Foucault's conception of power with 'depart[ing] from monolithic, state-centric conceptions [of power], which fail to explain adequately how social order is maintained in nominally democratic, non-authoritarian societies.'[7] For Duncan, the massive expansion of the scope of surveillance through digital technology means that there is no longer 'one single point where surveillance takes place, but multiple points', opening up new ways to read panoptic power in light of online phenomena like social networking, e-commerce, and virtual reality.[8] Recent scholarship has traced the evolution of the Panopticon metaphor through an increasingly digitised cultural environment from Foucault to today; a ubiquitous example from the past decade can be found in the inner mechanisms of social media websites and apps, such as Facebook's 'Like' button. Superficially, this function is an innocuous method for social media users to engage with shared online content. However, the technology behind the function facilitates surveillance on multiple levels, primarily by performing the deeper purpose of gathering information about the external websites its users are visiting, the online purchases they are making, and the media they are

[5] Michel Foucault, *Discipline and Punish: The Birth of the Prison* (London: Penguin UK, 2019)
[6] Bentham, Jeremy *The Panopticon Writings* ed. Miran Bozovic (London: Verso, 1995) p. 29.
[7] Jane Duncan, *Stopping the Spies: Constructing and Resisting the Surveillance State in South Africa* (Wits University Press: Johannesburg, 2018) p. 23.
[8] Duncan, p. 25.

engaging with. Facebook's algorithms use this data to create a feedback loop, where businesses who have secured advertising space are at liberty to aggressively display promotional content interspersed with social content – a marketing strategy which has come to be described as 'behavioural retargeting'.[9] Crucially, Facebook's users' interactions – social, commercial, and political - are not only repeatedly shown to the user themselves in a bid to increase click-through and conversion rates, but are revealed to their entire Facebook-mediated online community.[10] Matthew Lawrence expands on the ramifications of this trend which combines the economic imperatives of late capitalism with the proliferation of computerised surveillance strategies: 'the argument that neoliberalism is the encoding of all fields of activity within an economic register, that transforms every action into a market action, finds its most complete form (so far) in the fact that almost all digital activities are transformed into an act of profit […] all of society [is] turned into a site for digital labour and an engine of accumulation.'[11] The shift between Foucault's panopticon and Facebook's 'Like' here reveals an extension of the trajectory Foucault envisioned, where power is no longer exerted upon the body through violence but through constant observation. The ability of this kind of power to gradually shape human behaviour through multi-directional flows of data gives way to what Lawrence sees as a 'hyper-Benthian attention-harvesting behavioural-modification Panopticon.],' radically altering both the physical structure of Foucault's model of surveillance and the nature of the spatial zones it percolates into.

Given the significant emphasis this kind of model places upon accumulation of information for profit, we might inquire whether the new economy of data demands a deeper engagement with Karl Marx's interpretations of the operations of knowledge, power, and subjection. Foucault's theory of panoptic power, a movement away from punitive, subjective punishment toward a new model of monitored

[9] Anja Lambrecht and Catherine Tucker, 'When does retargeting work? Information specificity in online advertising', *Journal of Marketing Research* 50.5 (2013) 561-576 (p. 561).
[10] Juan Carlos Perez, *Facebook's Beacon more intrusive than previously thought* <https://www.pcworld.com/article/140182/article.html> [Accessed 12 February 2020]
[11] Matthew Lawrence, *Control under surveillance capitalism: from Bentham's panopticon to Zuckerberg's 'Like'* <http://www.perc.org.uk/project_posts/control-surveillance-capitalism-benthams-panopticon-zuckerbergs-like/> [Accessed 28 January 2020]

rehabilitation, demonstrates an invasive regulation of society according to specific institutional rules and processes, centring upon the reduction of bodies back to productive forces of labour. This bears striking similarities to Marx's critique of the machine and the factory in Chapter 15 of the first volume of *Capital*: the subjective differences between efficiency and skill amongst workpeople is replaced by standardised, scientifically measured mechanical processes, contributing towards a broader de-skilling process in a bid to increase competition between unskilled workers and boost productivity through highly regulated organisational structures. Marx's classic image of the factory presents a convergence of Foucault's concerns with productive power and knowledge formation as the worker is 'subordinated' to the machine's 'alien power', whilst being monitored by human 'overlookers':

> The technical subordination of the workman to the uniform motion of the instruments of labour, and the peculiar composition of the body of workpeople […] give rise to a barrack discipline, which is elaborated into a complete system in the factory, and which fully develops the before mentioned labour of overlooking, thereby dividing the workpeople into operatives and overlookers, into private soldiers and sergeants of an industrial army.[12]

The nullification of intellectual power and individual specialism, combined with the disciplinary and regulatory processes of surveillance which are exerted by human and nonhuman observers, sets up a fraught relationship between workers and technology, recently manifested through the emergence of artificial intelligence and machine learning technologies which threaten to replace living labour. While public perspectives on AI and its impact on the future of work continually shift from optimism to pessimism,[13] the present trend of deploying algorithms to predict customer demand and reduce costs has renewed concerns about the propensity of monopolistic organisations to exploit workers and create greater insecurity in the job market. We have seen from the practices of Uber[14] and Amazon that the optimisation of recruitment and working practices through automation and gamification stand

[12] Karl Marx, *Capital: A Critique of Political Economy - The Process of Capitalist Production* (London: Penguin UK, 2004) p. 463.
[13] Business, Energy and Industrial Strategy Committee, *Automation and the future of work* (House of Commons, 2019) p. 3.
[14] *Uber: Future challenges in the era of AI and ML* (2018) <https://digital.hbs.edu/platform-rctom/submission/uber-future-challenges-in-the-era-of-ai-and-ml/> [Accessed May 15 2020]

to severely detriment their employees.[15] From the perspective of surveillance studies, the exploitative potential of these modern technologies are manifold; computer algorithms access data collected via surveillance, augmenting human learning with the goal of reinforcing and deploying ever more optimised surveillance tactics.

Recent research has expanded our understanding of the ways in which labour-power and subjectivity itself has transformed since the late part of the twentieth century. Jason Read examines the relationship between Marxist and post-structuralist theory to make the case for a new conceptualisation of capitalist production in his text *The Micro-Politics of Capital*. Read writes that due to machinery, 'it is no longer necessary for the worker to know what is going on, [driving] the demand to extract more relative surplus value, to intensify the productivity of labor [and] to reduce the need for labor in the productive process.'[16] Read argues that capitalist production has 'taken on a dimension that could be described as "micro-political", inserting itself into the texture of […] subjectivity itself,' recalibrating the traditional understanding of physical labour power to encompass 'knowledges, affects, and desires'.[17] This 'micro-political dimension' of capital has significant implications for envisioning contemporary panoptic power in the multivalent, fractured structures of modern nation states, where multiple discrete surveillance systems coalesce to collect data from scattered, diverse sources.[18] Kevin Haggerty and Richard Ericson develop this concept further by introducing the concept of the 'surveillant assemblage' to interrogate the blind spots in major features of surveillance, such as the Panopticon and George Orwell's dystopian fiction, revealing how 'both state and non-state institutions are involved in massive efforts to monitor different populations.'[19] 'The Surveillant Assemblage' builds upon the philosophies of Gilles Deleuze and Félix Guattari to

[15] *Amazon ditched AI recruiting tool that favored men for technical jobs* (2018)<https://www.theguardian.com/technology/2018/oct/10/amazon-hiring-ai-gender-bias-recruiting-engine> [Accessed 15 May 2020]
[16] Jason Read, *The Micro-Politics of Capital: Marx and the Prehistory of the Present* (Albany: State University of New York Press, 2003) p. 118.
[17] Read, p. 2
[18] Ibid.
[19] Kevin Haggerty and Richard Ericson, 'The Surveillant Assemblage', *British Journal of Sociology* 51.4 (2000) 605—622 (p. 607).

distinguish between nuanced processes of contemporary data-gathering and and observation, where 'fluid and mobile states become fixed into more or less stable and asymmetrical arrangements' to form a 'rhizomatic' model of expansion and regeneration that is distinct from its predecessors.[20] Surveillance can no longer be imagined as merely a top-down, state-led model undertaken by humans; computers and other forms of technology are now able to automate the operations of surveillance beyond institutional boundaries, opening the phenomenon up to any organisation with vested financial or political interests. Read's vision of 'the powers of the intellect objectified' as a basis of contemporary production,[21] alongside Haggerty and Ericson's conception of the 'distinctively hybrid composition' of the observed body 'reassembled' by data flows, provides a conceptual apparatus with which to understand new theoretical links between Marxism and Foucauldian power within the context of digital modernity.[22]

The convergence of these theoretical strands and images – Marx's factory, Foucault's panoptic power, surveillant assemblages and critiques of capital on a micro-political scale – form a useful site to interrogate the distribution and manifestation of power within modern digital society. However, there are some critical pitfalls to this framework that must be addressed; first of all, the challenges that have been posed to the hybridisation of Marxist and Foucauldian thinking. In *Foucault with Marx*, Jacques Bidet appraises at length the extent to which Foucault and Marx share common ground at different points in their theoretical texts, arguing that whilst 'an essential moment of [Foucault's] work in progress falls within the framework of [Marx's] "historical materialism", which each of them, in diverse ways, pertains to',[23] there is also a tendency to 'dissolve Foucauldian critique and analytics in Marx's conceptuality, [and] Foucault's politics in Marx's'.[24] In Chapter 1, Bidet assesses the Marxist affinities of Foucault's 'disciplinary society', 'class society' and 'governmentality' with the Marxist view of the State, concluding that 'each of these partial theoretical constructions […] awaits the conceptual conditions of a unitary reconstruction'.[25] Despite these limitations, Bidet points out that

[20] Haggerty and Ericson, p. 606.
[21] Read, p. 119.
[22] Haggerty and Ericson, p. 606.
[23] Jacques Bidet, *Foucault with Marx* trans. Steven Corcoran (London: Zed Books, 2016) p. 13.
[24] Bidet, p. 22.
[25] Bidet, p. 25.

the ‘panoptic apparatus’ that is presented in *Discipline and Punish* ‘does not fail [to] refer to Marx’s analyses and concepts’, building upon a ‘“classist” connection between economic exploitation and political domination.’[26] Bidet notes that Foucault highlights ‘an analytical and conceptual renovation with the ability [to] trigger a crisis in, or reset in motion, the heritage of Marx’; with this in mind, I will maintain an awareness of the obstacles and complexities inherent in any analysis which unifies Marxist and Foucauldian theories, and propose that recent developments in data capitalism constitute the suitable ‘conceptual conditions’ to which Bidet refers.[27]

A further issue that must be addressed is the reliance of surveillance theories upon the presumption of a highly individualised subject, and a universal understanding of privacy as a human right. There are several problems within this formulation - while privacy is often understood intuitively and straightforwardly as an everyday condition of private choice, contemporary criticism reveals the term to be far more complex and contested in practice. In *Unpopular Privacy: What Must We Hide?* Anita Allen details ‘physical’, ‘spatial’, ‘informational’, ‘locational’ and ‘proprietary’ privacy as distinct varieties with unique implications, ultimately developing her theory of ‘unpopular’ privacy.[28] Through a feminist critique of the intersections of privacy, gender and democracy, Allen points out that certain kinds of privacy, particularly when government-mandated or enforced under the guise of privacy rights, could easily be used to facilitate and conceal abuse, coercion, and exploitation.[29] Further to this, Duncan points out that under the inequality of capitalist forms of production, ‘the ability to individuate is available to a select few’, calling into question the Marxist-oriented philosophies of privacy activists.[30] Invoking Isaiah Berlin’s conceptual delineation of negative freedom and positive freedom as facets of liberal thought, consolidated in Marxist terms as ‘the freedom primarily of those who own the means of production’ and the ‘freedom [which] comes about through working-class struggles’ respectively, Duncan references Marx’s advocacy for both freedoms in a bid to improve broader social conditions, ‘as the former creates spaces for the latter to be

[26] Bidet, p. 35.
[27] Bidet, p. 71.
[28] Anita Allen, *Unpopular Privacy: What Must We Hide?* (Oxford: Oxford University Press, 2011) p. 4.
[29] Allen, p. 8.
[30] Duncan, p. 34.

advanced.'[31] Applying this to the realm of privacy, Duncan concludes that individual privacy rights should be fought for 'as a negative freedom - that is, as a freedom to protect [individual] spaces' in the interests of society at large.[32] Finally, it is important to consider the presumptions that are made when considering the legal and political dimensions of privacy rights and fair information practices, such as the complex relationship this has with citizenship in the modern nation-state; Giorgio Agamben writes at length on the impact of the 'state of exception', or the potential for the state to suspend its own laws and strip the political rights and protections of specific social groups, subjecting them to increased exploitation based upon existing prejudices. Failures in data protection can facilitate the oppression of vulnerable communities, recently demonstrated by violence in North East Delhi where public access to a government database was reportedly used to target Muslims.[33]

Shoshana Zuboff's recent book *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*, a thorough account of the growth and impact of newly commercialised digital realms which briefly became a bestseller in 2019, acutely addresses these concerns.[34] Extending far beyond the purview of data privacy, Zuboff develops a broad and useful vocabulary with which to begin making sense of the digital mechanisms of economic and political power in the twenty-first century, beginning with 'surveillance capitalism' itself. This term is used to refer to a malignant capitalist regime sustained by large-scale, invasive digital surveillance and a logic of data accumulation – crucially, a logic that has different processes and consequences to traditional models of industrial capitalism.[35] Zuboff outlines the duality of this new market form: outwardly, technological corporations present their data-gathering activities as a minor, peripheral element of all online spaces, complementing their effort to deliver ever-more-efficient and personalised 'free' services to users. This strategy obscures the significant value attached to personal data, the manner in which it is subsequently bought and sold on the marketplace, and the potential for behavioural manipulation garnered by a complex aggregation of algorithms and advertising software. Introducing

[31] Ibid.
[32] Ibid.
[33] Sreemoyee Mukherjee, *How Poor Data Protection Can Endanger Communities During Communal Riots* (2020) <https://thewire.in/rights/vahan-database-protection-riots> [Accessed 25 May 2020]
[34] Shoshana Zuboff, *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power* (London: Profile Books Ltd., 2019).
[35] Zuboff, p. 18.

the idea of a proprietary 'behavioural surplus', Zuboff explains that the information which individuals willingly volunteer when they sign user consent policies is in fact only a fraction of the total wealth of data they produce, which is collected and traded 'in a new kind of marketplace for behavioural predictions' to companies with vested interests in the precise anticipation of human activities.[36] In this way, users of networked devices are revealed not to be customers as internet giants would have them believe, nor products in themselves. They are rather the producers of a highly valuable raw material which has emerged into the market through a tripartite of preconditions: the ready availability of vast amounts of data, the infrastructure of data flows through artificially intelligent softwares, and the ubiquity of surveillance culture enabled by liberal exceptionalism.[37] For Zuboff, the potential for this commercial model to give way to tyranny is twofold: it is simultaneously 'unknowable', hidden behind utopian pretences of technological liberation and leisure which mask gross disparities in knowledge, and 'radically indifferent', using impassive machine learning technologies to accelerate growth, no matter the human cost.[38] Developing her argument through multiple accounts and analyses of the rise of the information economy and its impact on sovereignty and human rights to date, Zuboff introduces the concept of 'instrumentarianism', a novel mode of political and economic control which shares ideological roots with totalitarianism but is instead driven by competitive markets under a neoliberal regime, 'in which automated machine processes not only know our behaviour but also shape [it] at scale.'[39] Zuboff argues that for internet giants and the markets they participate within, 'it is no longer enough to automate information flows *about us*; the goal is now to *automate us,*' breaking away from older forms of tyranny as data capitalism offers extraordinarily subtle, invisible and ostensibly non-violent methods of control.[40] Zuboff aims to bring these activities into the light by developing a terminology that exposes the pursuits and end goals of technological corporations, producing a text that not only stands as a chilling account of the capitalist landscape that underpins the 'third modernity' of digitally-augmented neoliberalism and its social order, but provides an

[36] Zuboff, p. 20.
[37] Ibid.
[38] Zuboff, p. 23.
[39] Ibid.
[40] Ibid.

intellectual framework to navigate the complex relationship this will have with an increasingly individualised subject.[41]

Although *Surveillance Capitalism* is still relatively new to the market there is no shortage of critical scholarship which engages with the text, offering diverse insights from the fields of political economy, surveillance studies, feminism, postcolonialism, and others. Evgeny Morozov's meticulous appraisal investigates the origins of *Surveillance Capitalism* across four decades of Zuboff's prior research, which began as a study of information technology within the workplace. Morozov traces major shifts in Zuboff's reasoning since the release of her 1988 book *The Age of the Smart Machine*, in which she proposed that automation and other digital technologies would bode well for 'boosting workers' capacities for abstract and imaginative thinking and reversing the de-skilling process.' Notably, this refutes the contemporary Marxist reflections on the modern workplace under capitalism, and points towards a pivotal shift in Zuboff's perspective around the turn of the millennium associated with the proliferation of internet-based activity.[42] From here, Morozov raises a number of issues with *The Age of Surveillance Capitalism*'s critical position: while Zuboff states that her book undertakes an 'initial mapping of a terra incognita' – a mapping, in other words, of the internal physics of an allegedly 'rogue' mode of capitalist exploitation - she does not engage with the substantial theoretical corpus of both surveillance and capitalism. Consequently, Zuboff's commentary on the specific ways in which the two forces traffic together presupposes that the exploitative socioeconomic and political outcomes of 'instrumentarianism' only manifest within the parameters of the network.[43] Lawrence captures this problem particularly well: 'by seeking to explicate, and denounce, the novel dynamics of surveillance capitalism, Zuboff normalises too much in capitalism itself.'[44] As though corporate manipulation, deception, and indifference were unique to the current technological phase, Zuboff's text curiously resists against the possibility that other historical and philosophical models may be adapted to fit the requirements of a new discourse on

[41] Zuboff, p. 40.
[42] Evgeny Morozov, *Capitalism's New Clothes* <https://thebaffler.com/latest/capitalisms-new-clothes-morozov> [Accessed 17 January 2020]
[43] Zuboff, p. 17.
[44] Lawrence.

power, knowledge, and control - including Foucault's 'governmentality',[45] Antonio Gramsci's theory of cultural hegemony,[46] Deleuze's 'society of control' and others.[47]

This reveals the first major problem with Zuboff's project: lacking a foothold within the much-contested but intellectually and politically engaged literature, she stresses in superlative terms the 'unprecedented', 'unrecognisable', and 'universal' nature of her model,[48] Zuboff denies that the landscape she sees is in fact the 'system working as intended.'[49] Contrasting Silicon Valley developers - described as 'conquistadors', set on a course to colonise the last vestiges of human experience in a virtually lawless online sphere – against the utopian capitalist 'digital dream' which she anticipated in the latter part of the twentieth century, Zuboff reveals that her interpretation of the information economy is not informed by decades of scholarship, which shows a very different picture.[50] This leads us to the most surprising of omissions in Zuboff's commentary: her text only invokes Marx's 'old image of capitalism as a vampire that feeds on labour' as a metaphor to launch her own distinct vision of data capitalism which 'feeds on every aspect of every human's experience.'[51] Blayne Haggart, among others, takes issue with these separate images, asserting that '[behavioural surplus] bears some resemblance to Marx's notion of "surplus labor" — but Zuboff also contends that behavior and human experience are raw material, not labor, without quite explaining the differences'.[52] Zuboff's oblique references to Marx only draw into sharper focus the gaps between *Surveillance Capitalism*'s claim to novelty and the existing critical work that has been done to apply Marx to the contemporary workplace and society at large, which provides useful insights into the shifting parameters of contemporary labour.

[45] Bruce Curtis, 'Foucault on Governmentality and Population: The Impossible Discovery', *The Canadian Journal of Sociology* 27.4 (2002) 505-533 (p. 505).
[46] Adam Morton, *Unravelling Gramsci: Hegemony and Passive Revolution in the Global Political Economy* (London: Pluto Press, 2007).
[47] Nicolae Morar, Thomas Nail and Daniel W. Smith, *Between Deleuze and Foucault* (Edinburgh: Edinburgh University Press, 2016.
[48] Zuboff, p. 41.
[49] Cory Doctorow, *How To Destroy Surveillance Capitalism* (2020) <https://onezero.medium.com/how-to-destroy-surveillance-capitalism-8135e6744d59> [Accessed 27 September 2020]
[50] Ibid.
[51] Zuboff, p. 24.
[52] Blayne Haggart, *Evaluating Scholarship* <https://blaynehaggart.wordpress.com/2019/02/15/evaluating-scholarship-or-why-i-wont-be-teaching-shoshana-zuboffs-the-age-of-surveillance-capitalism/> [Accessed 16 January 2020]

Read identifies the micro-political nature of labour and subjectivity as it is transmuted under the current capitalist mode of production, which goes some way to simplify the complications in Zuboff's work. Read explores the ideas outlined in a discarded draft of *Capital* to understand how the exaggerated continuation of capitalist logic of accumulation has surpassed the boundaries of the workplace, subordinating all social interactions to the operations of Marx's factory:

> Marx argues that as the cooperative and social powers of labor develop, the capitalist mode of production becomes increasingly dependent on social knowledge, cooperation, and communication. Wealth is no longer produced by bodies put to work in the closed spaces of the factory but by knowledge, communication, and interactions throughout society. This simultaneous recognition of subjectivity as pure "subjection" and subjectivity as collective power, combined with the fact that all of this is developed in an abandoned draft, would seem to suggest that we are at a, if not the, "limit" of Karl Marx's thought.[53]

Read's argument points towards a further lacuna in Zuboff's teleological construction of surveillance capitalism: the relevance of concepts such as cognitive capitalism and immaterial labour, arising from a heterodox 'post-workerist' strand of postwar Italian Marxism. Maurizio Lazzarato, a prominent sociologist and philosopher of the *Autonomia Operaia* movement, notes that capitalism 'seeks to involve even the worker's personality and subjectivity within the production of value', drawing emotions and personal dispositions into the same practice of intellectual objectification and compelling workers to 'express oneself, [to] speak, communicate, and so forth' through a 'discourse that is authoritarian'.[54] This assimilation of individuality into the managerial hierarchies of modern organisational structures causes 'the worker's soul to become part of the factory,' positioning Zuboff's 'behavioural surplus' as an extension of established capitalist pursuits facilitated by the surveillant assemblages embedded in digitised life, such as productivity monitoring software, the recording of worker/customer conversations, and so on.[55] Lazzarato also notes that the internal constitution of immaterial labour in technologically advanced workplaces has 'expressed itself as a clash between social classes within the organization of work', revealing the inherent disparities between social groups at differing levels of the factory hierarch, who are impacted by and subjected to operations of

[53] Read, p. 104.
[54] Maurizio Lazzarato, 'Immaterial Labour', *Radical Thought in Italy: A Potential Politics* (1996) 133-148 (p. 136).
[55] Lazzarato, p. 134.

immaterial labour extraction and surveillance more broadly in varying ways.[56] The work of Silvia Federici, Selma James, Mariarosa Dalla Costa, and others advance this conceptual point through the lens of gender, drawing unpaid domestic labour and the performance of specific gender roles for profit into debates on wage labour, launched by the Italian feminist movement *lotta femminista*.[57] 'To have a wage means to be part of a social contract,' writes Federici in *Wages Against Housework*, 'but it has been transformed into a natural attribute of our female physique and personality, an internal need, an aspiration, supposedly coming from the depth of our female character.'[58] This indicates a further body of work left under-examined in Zuboff's construction of behavioural surplus as an entirely unprecedented invention of surveillance capitalists.

The second notable issue in Zuboff's text is the sharp distinction between totalitarian and 'instrumentarian' power. The history of state surveillance is largely ignored here; while Zuboff notes that digital corporations are increasingly coming to resemble tyrannical states, comparing their imperatives for growth to Hannah Arendt's well-known analyses of totalitarianism, she concludes that instrumentarian power is unique because it only originates in the commercial sphere.[59] Setting aside the issue of increasing public/private partnerships, Zuboff goes so far as to blame the societal ignorance of surveillance capitalism on the 'imagined threat' of institutional surveillance, which has increasingly permeated into public discourse over recent decades. However, this does not take into account the origins of some of the most recognisable surveillant features of digital life, including location technologies like Global Positioning Systems (GPS), which developed out of the investment of state actors.[60] Christian Fuchs' useful reflection on the definitional complications of surveillance stresses that the term 'is inextricably bound up with coercion, domination, and (direct or indirect; physical, symbolic, structural, or ideological) violence', raising the question of how far instrumentarian power can be seen to be a departure from either liberal-democratic capitalist or

[56] Lazzarato, p. 135.
[57] Dayna Tortorici, *More Smiles? More Money* <https://nplusonemag.com/issue-17/reviews/more-smiles-more-money/> [Accessed 10 February 2020]
[58] Silvia Federici, *Wages Against Housework* (2010) <https://caringlabor.files.wordpress.com/2010/11/federici-wages-against-housework.pdf> [Accessed 16 May 2020]
[59] Zuboff, p. 265.
[60] Mark Weiser, *The Computer for the 21st Century* <https://www.ics.uci.edu/~corps/phaseii/Weiser-Computer21stCentury-SciAm.pdf> [Accessed 17 January 2020]

totalitarian systems of exploitation.[61] Fuchs points out that in spite of the surfeit of market interests in data collection, both corporations and states continue to constitute 'central surveillance actors', pointing us back towards the continued existence of the traditional, institutional panoptic model's limitless visibility – sharing a fundamental philosophy with the omniscient ambitions of totalitarianism. While Zuboff implies that political and economic surveillance should be thought of as separate phenomena with vested interests in different objectives, the shared foundation of human exploitation means that they are not so easily separated.

The relationship between state and corporate entities is neither wholly cooperative nor straightforwardly separable - drawing attention to the lack of attention *The Age of Surveillance Capitalism* pays to the productive disagreements that have shaped contemporary understandings of totalitarianism and surveillance, such as those present within the field of political economy. Fuchs assesses the normalisation of contemporary surveillance through the positive or neutral definitions theorists ascribe to it, arguing that although surveillance can constitute 'harmless information processes that do not inflict damage on humans', distancing 'new' digital surveillance from existing models of exploitation obstructs effective criticism of it.[62] In a similar way, whilst Zuboff draws upon biopolitical theory, such as Agamben's concept of the 'state of exception' to demonstrate the tactics of liberal 'exceptionalism' which surveillance capitalists exploit in order to operate undetected in the online spaces outside of international law,[63] she deploys the model without reflecting upon the lively critical debates which interrogate Agamben's formulation of the human in his view of 'human rights', and which challenge his notion of exception which does not refer to the inseparable history of colonial exploitation.[64] The relationship between surveillance, human rights and sovereignty in Zuboff's work therefore requires a much more nuanced exploration, rather than a straightforward dismissal of totalitarianism as an outdated, obsolete predecessor to the new iteration of instrumentarian power.

[61] Christian Fuchs, *The Internet & Surveillance* <http://sns3.uti.at/wp-content/uploads/2010/10/The-Internet-Surveillance-Research-Paper-Series-1-Christian-Fuchs-How-Surveillance-Can-Be-Defined.pdf> [Accessed 12 February 2020]
[62] Fuchs.
[63] Zuboff, p. 67.
[64] Simone Bignall and Marcelo Svirsky, 'Introduction' in *Agamben and Colonialism* ed. Simone Bignall and Marcelo Svirsky (Edinburgh: Edinburgh University Press, 2012) p. 3.

This leads to the third shortcoming in *Surveillance Capitalism*: Zuboff's historical analysis is anchored almost exclusively in the global North. At length, she stresses a vision of a 'battle for power and profit as violent as any the world has ever seen […] ready to colonise technical developments for the sake of [capitalist] imperatives and growth.'[65] It is all the more surprising, then, that Zuboff does not pause to consider how the financial exploitation of online space and human experience is modelled upon patterns of colonial occupation and extraction, bent towards the maximisation of profits and disregard for human freedoms. The philosophical mainstay of Zuboff's various assertions relies upon (supposedly) universally egalitarian 'western liberal democracies', therefore its attempts to expose surveillance capitalism as a phenomenon with worldwide ramifications fails to take into account the unevenness of the capitalist global system, and the implications this will have across communities who use information technology in markedly different ways.[66] Rafael Evangelista's review of the text in *Surveillance and Society* notes: 'There is a reason to believe that, just as industrial capitalism has a logic of […] exploitation of determined territories and populations - one for the centres of power and consumption, another for the periphery and production - the same happens with surveillance capitalism.'[67] Zuboff's insistence upon the 'unprecedented' comes apart when held up against a deeper understanding of the role of race in surveillance studies. In *Dark Matters: On the Surveillance of Blackness*, Simone Browne writes that '[s]urveillance is nothing new to black folks. […] Rather than seeing surveillance as something inaugurated by new technologies, such as automated facial recognition or unmanned autonomous vehicles (or drones), to see it as ongoing is to insist that we factor in how racism and anti-blackness undergird and sustain the intersecting surveillances of our present order.'[68] While Zuboff's work powerfully interrogates the movement towards greater inequalities in knowledge and power in specific spaces in the West, its emancipatory potential is seriously curtailed by its lack of an intersectional paradigm which would explore global variances and the condition of subalternity upon theories of surveillance and subordination, expressed

[65] Zuboff, p. 183.
[66] Ibid.
[67] Rafael Evangelista, 'Review of Zuboff, Shoshana. 'The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power' *Surveillance and Society* (2019) 246-251 (p. 246).
[68] Simone Browne, Dark Matters: *On the Surveillance of Blackness* (Durham, North Carolina: Duke University Press, 2015) p. 16.

by Duncan's call to 'emphasise the privacy rights of those at the bottom of the power structure, and [refuse to] allow those who exercise power to conceal themselves.'[69] As we have seen, fictional texts – particularly those which align to different conventions of sf and cognitive estrangement – are particularly well-equipped to represent experiences of exploitation and resistance, gesturing towards an opportunity to experiment with not only Zuboff's text but other philosophical concepts relevant to the digital milieu through a broader frame of reference.

The task of this dissertation is to engage with Zuboff's concept of 'instrumentarianism' and its the associated concepts through a variety of analytical lenses to assess and recalibrate the book's key shortcomings, arriving at an appraisal of Zuboff's conclusions which gesture towards exit routes out of the dystopian trajectory she illustrates. Drawing the text into a productive dialogue with readings of contemporary fictional texts, philosophical and political theories, and relevant areas of literary criticism, I propose that the theoretical infrastructure Zuboff constructs nevertheless provides a useful vantage point from which to reflect on developments in capitalist exploitation, with its limitations gesturing towards the rich potential for future interrogation of these issues which literary studies can facilitate. I will begin by setting out the digital-spatial construction of the overlapping power systems of commercial and institutional surveillance, exploring how technological developments have altered the philosophical spheres of public and private space which established theories ordinarily rest upon. I will explore one representation of this new type of public space in Dave Eggers' novel *The Circle*, examining the operations of immaterial labour within a fictional Silicon Valley and uncovering the unprecedented digital methods of exploitation and control that arise there. Next, I will consider the Zuboff's view of 'novel' instrumentarianism against a biopolitical reading of Lauren Beukes' *Moxyland*, a text that represents a peripheral digital landscape under an advanced form of post-apartheid neoliberal rule. By expanding my topological analysis of public, private, and digital space along the lines of exceptionalism, I will consider the dimensions that exist outside of Zuboff's view of instrumentarianism, which offer opportunities for subversion beyond the oppressive surveillant gaze. After considering Zuboff's conceptual blueprints, in the second half of the dissertation I will turn my

[69] Duncan, p. 35.

focus to the proposals Zuboff makes in her concluding chapters, and consider how far her technologically regressive, liberal framework holds up against the exigencies of financial, political and environmental crisis. Comparing the two speculative worlds imagined in Margaret Atwood's post-apocalyptic novel *The Testaments* and Richard Morgan's futuristic cyberpunk thriller *Altered Carbon*, I will recast Zuboff's argument against current debates on technological accelerationism, determining whether the digital network produced by a neoliberal infrastructure of oppressive market-oriented surveillance may in fact offer the resources with which to undermine and break capitalist relations. Finally, I will consider the implications of AI and posthumanity on the trajectories Zuboff forecasts, exploring how the emergence of new kinds of cognition and networked collective action may impact the growth of surveillance capitalism beyond its current phase.

Chapter 1: Mapping the spaces of surveillance capitalism

In 2016, one of Facebook's most senior executives, Andrew Bosworth, circulated an internal memo assessing the impact of the company's mission to 'connect people', concluding that the benefits of this imperative negated any criticism targeted towards the company's position of neutrality. Titling the memo 'The Ugly', Bosworth wrote:[70]

> We connect people […] Maybe it costs a life by exposing someone to bullies. Maybe someone dies in a terrorist attack coordinated on our tools. And still we connect people. The ugly truth is that we believe in connecting people so deeply that anything that allows us to connect more people more often is de facto good.[71]

The memo arrived within days of the real-time broadcasting of the murder of Facebook user Antonio Perkins. Perkins was using the recently-implemented Facebook Live function, which enables individuals connected within a social network to view a live feed of the user's smartphone camera, to broadcast himself socialising with friends on a roadside in Chicago.[72] Six minutes into the video, gunshots can be heard before the camera falls to the ground; Perkins was pronounced dead later that day. Against the wishes of the victim's family, Facebook refused to remove the video because it was considered not to violate the company's community standards, which only aim to protect against the 'glorification of violence' or 'celebrat[ing] the suffering or humiliation of others.'[73] The video also attracted over one million views in the time it remained publicly available, generating significant traffic to the website.[74] In the absence of industry-wide standards to identify and remove such content, 'The Ugly' reveals Facebook's relentless scaling of an interconnected 'bigger picture' which justifies any means for growth, viewing all human expressions as so many data points which are rendered universally lucrative in the eyes of its investors and advertisers.[75]

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[70] Ryan Mac, Charlie Warzel and Alex Kantrowitz, *Growth At Any Cost: Top Facebook Executive Defended Data Collection in 2016 Memo* (2018) <https://www.buzzfeednews.com/article/ryanmac/growth-at-any-cost-top-facebook-executive-defended-data> [Accessed 29 April 2020]
[71] Ibid.
[72] Peter Nickeas and Tyler Davis, *Police investigate Facebook video that appears to show fatal shooting on West Side* (2016) <https://www.chicagotribune.com/news/breaking/ct-man-s-shooting-death-posted-to-facebook-20160616-story.html> [Accessed 3 May 2020]
[73] Nikhil Sonnad, *Everything bad about Facebook is bad for the same reason* (2018) <https://qz.com/1342757/everything-bad-about-facebook-is-bad-for-the-same-reason/> [Accessed 29 April 2020]
[74] Ibid.
[75] Mac, Warzel and Kantrowitz.

Through Facebook's assimilation of life into a vast information system, Nikhil Sonnad sees connections between the company's apathetic approach to the content it allows to be shared and the facilitation of ethnic and religious violence across the world, writing that 'there are certain things you do not in good conscience do to humans, [but] to data, you can do whatever you like.'[76] Sonnad's description of Facebook's 'bumbling obliviousness to real humans' as a 'banal kind of […] evil' recalls Hannah Arendt's widely-cited expression in her book *Eichmann in Jerusalem*, which assessed the court testimonies and historical evidence provided during the trial of Nazi bureaucrat Adolf Eichmann for his major operational role in carrying out the Holocaust.[77] While it was widely held that the Nazi party's leadership belonged to the depths of a conscious, monstrous form of evil, Arendt found that Eichmann was in fact a profoundly 'average' careerist who was motivated by personal advancement rather than ideology, over-stated his own levels of education, intelligence, and skills, and revealed a fundamental inability to think independently from the 'stock phrases and self-invented clichés' of the regime to which he belonged.[78] According to Arendt, it was Eichmann's lack of judgment and a chasm of difference between his line of reasoning and the reality of his actions – a 'word-and-thought-defying banality' - which laid the foundations for a flagrant normalisation of cruelty, and the 'long course in human wickedness' which ensued.[79] While the Israeli court grappled with the question of 'fulfilling the demands of justice' for war crimes so diabolical and extensive, Arendt developed an approach to the inner contradictions and remorselessness of Eichmann's defence which, for her, fit the seriousness and abnormality of the event.[80] Arendt's incorporation of irony and humour as a 'vehicle of resistance' to the bureaucratic evil committed by Eichmann, in spite of widespread outrage from her readership, proved to be an effective 'platform for passing judgment' which outstripped existing strategies to assess individual culpability for the atrocities of the Third Reich.[81]

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[76] Sonnad.
[77] Ibid.
[78] Hannah Arendt, *Eichmann in Jerusalem: A Report on the Banality of Evil* (London: Penguin Classics, 2006) p. 32.
[79] Arendt, p. 272.
[80] Arendt, p. iv.
[81] Kerstin Steitz, 'And Hannah Laughed: The Role of Irony in Hannah Arendt's *Eichmann in Jerusalem*', *A Club of Their Own: Jewish Humorists and the Contemporary World* ed. Eli Lederhendler and Gabriel N. Finder (2016) Available at: <https://www.oxfordscholarship.com/view/10.1093/acprof:oso/9780190646127.001.0001/acprof-9780190646127> [Accessed 31 May 2020]

Kerstin Steitz finds Arendt's facetious humour a vital feature of her 'political rhetoric', which serves to undermine the broader Nazi ideology through an 'insistence on the moral imperative of judging, thinking independently, and resisting evil'.[82] At once illustrating her own 'intellectual and moral superiority to Eichmann' and 'transform[ing] her readers into accomplices in the matter of passing judgment,' Arendt introduces a lens which obliterates the idea that all evil-doers must possess the 'demonic depth' of a Shakespearean villain; in the modern world, tyranny and mass murder can be carried out by highly ordinary people.[83] The concept has not been treated uncritically in contemporary reflections – Steven Miller writes that Arendt's rationale is implicitly deterministic, leading to the suggestion that 'evil is less a choice than the outcome of certain circumstances' – yet *Eichmann in Jerusalem*'s nuanced confrontation of the individuals responsible for industrial-scale persecution yields a useful point of departure to begin thinking through the capacity for evil at the hands of 'Big Tech' in our present.[84] Sonnad concedes that the irresponsible business objectives of social networks cannot be equated to the horrors of the Nazi's pursuit of a racially singular utopia, but he argues that the fundamental problem remains the same: internalised propagandising of an ideology which alleviates individual moral responsibility, and an organisational culture which sedates critical thinking in favour of personal reward and an arbitrary 'de facto good'.[85]

While the circulation of disturbing social media content was nothing new at the time of Bosworth's memo, one of the examples he identified as a potential consequence of the company's steadfast neutrality has since proven to be catastrophically prescient, striking at the heart of Facebook's particular brand of 'banal' evil. In 2019, far-right terrorist Brenton Tarrant live-streamed two separate attacks on mosques in Christchurch during Friday prayers, murdering 51 people.[86] The video was widely considered to be an attempt to draw attention to Tarrant's manifesto on white supremacy,

[82] Ibid.
[83] Ibid.
[84] Steven Miller, *A Note on the Banality of Evil* (2018) <http://archive.wilsonquarterly.com/essays/note-banality-evil> [Accessed 5 May 2020]
[85] Sonnad.
[86] Adam Dean, *There Will Be Changes' to Gun Laws, New Zealand Prime Minister Says* (2019) <https://www.nytimes.com/2019/03/17/world/asia/new-zealand-shooting.html?module=inline> [Accessed 5 May 2020]

nationalism and anti-immigrant rhetoric, encouraging others to carry out similar acts of mass violence, which was distributed online shortly before the attack.[87] That this violence – and its roots in 'alt-right' discourse, white separatism and hate speech - was anticipated by Facebook's executives years prior but shrugged off as 'operational scaling issues' foregrounds Zuboff's appeal for accountability over the responsibilities and authority of internet companies, so we might more easily recognise and pre-empt new forms of tyranny and political evil on the horizon.[88] Meanwhile, the relevance of Arendt's intellectual legacy in the information age provides us with an opportunity to reorient our understanding of evil away from 'demonic profundity', considering with greater clarity the 'nature and function of human judgment' and the often 'administrative' qualities of modern atrocities. [89]

There are several passages in *The Age of Surveillance Capitalism* where Zuboff's blueprint for navigating the present issues are anchored within certain elements of Arendt's writings. Zuboff dedicates an entire chapter of her text to the implications of humanity's 'right to a future tense', a right she argues is now under threat from 'behaviour futures markets' and 'prediction products', drawing upon Arendt's understanding of free will to present an image of unprecedented behavioural manipulation and control.[90] At length, she equates her own concerns for the future with Arendt's, riffing off a widely-cited quote from the *The Origins of Totalitarianism*: 'the true problems of our time cannot be understood, let alone solved, without acknowledgement that *instrumentarianism* became this century's curse only because it so terrifyingly took care of its problems'.[91] While these components of Arendt's thinking are useful counterpoints to call attention to the unique ways in which totalitarian ideology operates within a digital network, Arendt's theoretical corpus is significantly under-utilised in other parts of the text as Zuboff attempts to chart the territories of social media and the internet, the shifting political and social processes which accompany transformations in

[87] Ibid.
[88] Sonnad.
[89] Arendt, p. 303.
[90] Zuboff, p. 20.
[91] Zuboff, p. 382.

human-technology relationships, and the languages and theories required to shape successful intervention strategies.

Zuboff insists that we live within a historically novel political-economic system, similar to totalitarianism in the scope of its utopian ideological foundations and the threat it poses to democracy, but characterised by a 'radical indifference' to the information it collects or the consequences of its business practices.[92] Unlike twentieth century totalitarianism and fascism which found its roots in an ideology bent on racial hierarchies, instrumentarianism proceeds from neoliberal foundations, achieving growth through a fundamental disinterest in the qualities of the data being extracted. Led by corporations rather than political parties, behavioural modification and control is achieved through a total assimilation of individual identity, social interactions, and biological data into a readable 'electronic text' to be fed into the profit-making directives of automated instruments. Ideal behaviours are defined by corporate interests belonging to 'the owners of the means of behavioural modification and the clients whose guaranteed outcomes they seek to achieve.'[93] While Zuboff's references to *The Origins of Totalitarianism* offer a useful historical grounding to her book's concepts, Arendt's other theoretical writings on power, political evil, imperialism, and tyranny offer many more relevant resources which can be applied to launch an effective critique on the preconditions and spatial dimensions of surveillance capitalism. If surveillance capitalism's pursuit for limitless growth replicates Arendt's model of imperialism, wherein '[e]xpansion as a permanent and supreme aim of politics' signalled a 'surprising' change within a 'long history of political thought and action', it stands to reason that the processes of 'Big Other' are a logical continuation of capitalism but are operating within a fundamentally altered sphere – an essential point that is not made clear in Zuboff's book.[94] Interrogating the specific technological terrain which has shaped the architecture of the current regime of power emerges as an important first step to consider the 'unprecedented' nature of instrumentarianism.

[92] Zuboff, p. 377.
[93] Zuboff, p. 432.
[94] Hannah Arendt, *The Origins of Totalitarianism* (London: Penguin Classics, 2002) p. 162.

The relationship between public and private realms is one of the most salient aspects of Arendt's influential text *The Human Condition*. It establishes a useful structure to investigate how the new geographies of social media have blurred the boundaries and terms of reference for political and social zones. Originally articulated as a space of 'democratic and rational' discourse by Jürgen Habermas,[95] the public sphere in Arendt's account draws upon classical Greek philosophy to develop her notion of a 'space of appearance', or 'wherever men are together in the manner of speech and action'.[96] Arendt defines this space as always 'potential', only actualised by the power which is generated by the productive actions of 'acting and speaking' individuals, 'where words are not used to veil intentions but to disclose realities, and deeds are not used to violate and destroy but to establish relations and create new realities.'[97] Arendt locates political life or *bios politikos* in the production of culture and community that outlasts the end of bare human existence, 'rooted in a world of manmade things which it never leaves or altogether transcends.'[98] Arendt's theory of action is based upon two key terms: freedom, defined as the 'capacity to begin, to start something new, to do the unexpected', and plurality, understood as the 'presence and acknowledgment of others' to provide context and meaning without which the political assertion of action would be impossible.[99] Conversely, the private realm corresponds to the 'sphere of the household and the family' which Arendt associates with humans' status as the *animal laborans*, or the labouring animal, which predates politics and the existence of the public sphere.[100] This is a state in which humans labour in order to sustain their basic existence, and a state which Arendt acknowledges is essential; nevertheless, in her view it is antithetical to political life.[101] Through this distinction between the two facets of human activity, Arendt introduces a logic to the trajectory of modernity that runs counter to the heavily idealised

[95] Luke Goode, *Jurgen Habermas: Democracy and the Public Sphere* (London: Pluto Press, 2005) p. 3.
[96] Hannah Arendt, *The Human Condition* (Chicago: The University of Chicago Press, 2018) p. 231.
[97] Arendt, p. 232.
[98] Arendt, p. 33.
[99] Maurizio Passerin d'Entreves, *Hannah Arendt* <https://plato.stanford.edu/entries/arendt/#AreTheAct> [Accessed 2 April 2020]
[100] Arendt, p. 34.
[101] Ibid.

'state of nature' held at the centre of a dominant philosophical tradition dating back to Jean-Jacques Rousseau.[102] Maurizio Passerin d'Entreves summarises her line of thought:

> For Arendt modernity is characterized by the *loss of the world*, by which she means the restriction or elimination of the public sphere of action and speech in favor of the private world of introspection and the private pursuit of economic interests […] the modern age, by elevating labor, the most natural of human activities, to the highest position within the *vita activa*, has brought us too close to nature. Instead of building and preserving the human artifice and creating public spaces for action and deliberation, we are reduced to engage in the activity of sheer survival and in the production of things that are by definition perishable.[103]

Arendt suggests that the 'dividing line' between the public and private has become 'entirely blurred' through the emergence of the social sphere, enabling labour - an activity previously held solely within the household - to 'assume public significance',[104] transforming 'all modern communities into societies of labourers and jobholders.'[105] In this way the private realm, in a few short centuries, has encroached upon the political capabilities of freedom and plurality, bringing to the fore a collective preoccupation with isolating work in place of meaningful collective action and giving rise to the 'bureaucratic administration […] elite domination and the manipulation of public opinion […] [and] homogeneity and conformity' which she extensively critiques across her other writings.[106]

As widespread domestic use of networked media beckons the events of the outside world into devices that are now within immediate reach for significant parts of the population, Arendt's spatial theory requires modification in light of changing technological capabilities and modes of communication. At face value, the space of appearance produced by social media could be assumed to be a powerful force in facilitating and actualising Arendt's vision – a democratising platform where equal participation and visibility is now possible for many, providing fresh opportunities for human togetherness and action within digital communities. However, within this period of remarkable global political polarisation there has been a renewed critical interest in *The Human Condition*'s 'loss of the world' in the light of current technological developments. Sean Norton, for example, points out that

[102] Jonathan Marks, 'Who Lost Nature? Rousseau and Rousseauism' *Polity* 34.4 (2002) 479-502 (p. 479).
[103] d'Entreves.
[104] Arendt, p. 40.
[105] Arendt, p. 59.
[106] d'Entreves.

whilst Arendt demonstrated a concern with the way the private sphere 'overpower[s]' the public, this evolution has since experienced a reversal; social networks, a complex machinery geared specifically towards the instantaneous sharing of messages and media, now forms an 'exact copy' of the space of appearance located 'everywhere', including within the private spaces of the home and work.[107] The manner in which participation operates within this 'digital public square', a space where individuals must continually answer to the prompt of 'who we are',[108] has obliterated the possibility of Arendt's original view of the private as a zone protected from the constant demands for self-definition and differentiation 'implicit in both [our] words [and] deeds.'[109] Norton concludes that increased political radicalisation and 'partisan tribalism' within the actual public square can be traced back to the assimilation of media, and especially the immediacy of social media, into everyday life, where 'every person lives almost entirely within the space of appearance', ultimately becoming trapped in an addictive stimulus-response loop.[110] Further to Norton's contemporary reflection on Arendt, the concept of the 'echo chamber' also changes the dynamics of what Arendt called the 'public'. Distinguished from existing concepts like groupthink and confirmation bias due to its unique provenance within digital spaces, an echo chamber forms within a closed network or community borne out of the repeated exposure of particular news media and messaging reflected back onto the existing values and beliefs of the group, insulating members from critical challenge and reinforcing individual worldviews and prejudices.[111] In addition to this, as we have seen from Zuboff's text, the algorithms which work to create these spaces are premised explicitly on a competitive demand for the growth of market share. Arendt could not have predicted the shifting parameters of what now constitutes the experience of the public square for many people, which will remain an important factor

[107] Sean Norton, *On Hannah Arendt: Why You Don't Care About Privacy or Bias Anymore* (2019) <https://medium.com/excursus/on-hannah-arendt-why-you-dont-care-about-privacy-or-bias-anymore-f8c13a5b648a> [Accessed 19 May 2020]
[108] Ibid.
[109] Arendt, p. 206.
[110] Norton.
[111] David Robert Grimes, *Echo chambers are dangerous – we must try to break free of our online bubbles* (2017) <https://www.theguardian.com/science/blog/2017/dec/04/echo-chambers-are-dangerous-we-must-try-to-break-free-of-our-online-bubbles> [Accessed 20 May 2020]

in my own exploration of the multiple valences of digital visibility and power, and the psychological, political, and economic impact this will have on communities now and into the future.

I have highlighted the importance of Marxist and Foucauldian traditions of thought - as well as subsequent updates to their theoretical models - to Zuboff's project; I will now revisit these concepts to explore how a political-spatial approach to social networks and the internet interfaces with this theoretical apparatus, capturing the complexity of relationships of power under information capitalism. Following Zuboff, the central impetus of the 'Big Other' is to secure and trade vast amounts of personal data by invasively monitoring its users.[112] Notably, the top rungs of the most valuable dot-com technology companies by market share are occupied both by social media companies and websites which do not appear to be social in nature but provide an opportunity for the space of appearance to become actualised through information capture and exchange. Consequently, top tech companies represent a significant proportion of the total activity of surveillance, automation, and advertising, and dominate the current global landscape of digital expansion.[113] Arendt's space of appearance and the spaces of surveillance conceived by Foucault are thus manifested in digital communities, with important ramifications for our understanding of the relative egalitarian and oppressive qualities of visibility within these spaces. Xavier Marquez has developed a useful approach to the 'different but complementary' strands of thought by suggesting each conception of space is insufficient within most contemporary contexts on its own, but that there is potential for the two theories to act as a corollary to one other, identifying an important distinction between 'horizontal' and 'vertical' relationships of visibility and power:[114]

> Power in spaces of appearance depends on and reproduces horizontal relationships of equality, whereas power in spaces of surveillance depends on and reproduces vertical relationships of inequality. Moreover, the horizontal relationships characteristic of spaces of appearance enable participants in such spaces to escape the roles and rules that normalize or even oppress them in other spaces of social life, whereas the vertical relationships and oppressive visibility of spaces of surveillance tend to reinforce normalizing roles and rules, imposing particular identities on participants.[115]

[112] Zuboff, p. 20.
[113] Anne-Britt Dullforce, *FT 500 2015 Introduction and methodology* (2015) <https://www.ft.com/content/1fda5794-169f-11e5-b07f-00144feabdc0> [Accessed 21 May 2020]
[114] Xavier Marquez, 'Spaces of Appearance and Spaces of Surveillance' *Polity* 44.1 (2012) 6-21 (p. 7).
[115] Marquez, p. 6.

Although Arendt and Foucault share a notion of power as circulatory, emerging only out of interactions as opposed to something that can be acquired and held, the role of visibility as a 'characteristic of social spaces and of the people who interact within them' in their separate models produce a variety of outcomes for the individual subject depending on the context of the power relationship visibility expresses itself within.[116] For Foucault, power is generated between institutions and hierarchical organisations; his more specific concepts of 'biopower' and 'biopolitics' relate to a strategic form of power expressed through the control and manipulation of populations by the state through 'diverse techniques for achieving the subjugations of bodies'.[117] These theories feed into an increasingly urgent concern over the biopolitical nature of technologically-empowered state and non-state partnerships, cultivating a normalisation of biometric and biorhythmic data capture through tracking devices, as well as mainstream 'datafication' of public health systems and clinical care.[118] Foucault 'remind[s] us to be suspicious enough to keep in mind that even normatively positive instances of collective power are or can become dangerous in their own way,' delivering a useful counterpoint against the idealism of collective, revolutionary power formulated by Arendt.[119] At the same time, when it comes to developing interventions for resistance against the current phase of social control, Foucault's approach tends to result in perpetual dead ends, suggesting humans are fated to be 'trapped in an iron cage'.[120] Reading Arendt and Foucault together enables a conceptual linkage of oppressive and egalitarian relationships in ways that are useful to my investigation of the terrain of social media and the internet more broadly, as new forms of visibility are cultivated digitally – for instance in the context of 'sousveillance', a term coined by Steve Mann which refers to the 'inverse of surveillance' where individuals reflect the top down model of the Panoptic gaze back onto their watcher, 'using 'wearable computing devices […] as a counter to organizational surveillance'.[121] My

[116] Marquez, p. 7.
[117] Rachel Adams, *Michel Foucault: Biopolitics and Biopower* (2017) <https://criticallegalthinking.com/2017/05/10/michel-foucault-biopolitics-biopower/> [Accessed 28 May 2020]
[118] Minna Ruckenstein and Natasha Schull, 'The Datafication of Health', *Annual Review of Anthropology* (2017) 261-278 (p. 270).
[119] Marquez, p. 28.
[120] Ibid.
[121] Steve Mann, *Eye Am a Camera: Surveillance and Sousveillance in the Glassage* (2012) <https://techland.time.com/2012/11/02/eye-am-a-camera-surveillance-and-sousveillance-in-the-glassage/> [Accessed 30 May 2020]

analysis develops out of an understanding that the two axes of power relationships in actual political and social spaces – and the quadrants of visibility which are perceptible within them, namely visibility which empowers or subjugates, and invisibility which empowers or subjugates – are inherited by the digital 'copy' of the public square, coexisting in ways which alternately resist and reify Zuboff's illustration of social media and instrumentarian power.[122]

The first half of this dissertation will subsequently proceed through an analysis of the fictional texts *The Circle* and *Moxyland*, which take the themes of privacy and publicity, political manipulation and control, and resistance to surveillance, and diverge along two very different dystopian trajectories. Each text illustrates an alternative world which conceptually similar to our own, with an all-pervading presence of social networks, life streaming, virtual relationships, and profit-making modes of surveillance, but with some key differences. *The Circle* takes place at a fictional eponymous organisation situated at the very heart of Zuboff's surveillance capitalist system in Silicon Valley, while *Moxyland* presents an alternate-reality Cape Town in 2018, where the after-effects of apartheid encourage intense social stratification based on an individual's financial, medical, and social data. The analytical lenses I will maintain throughout this section are threefold: the patterns and deviations from the processes Zuboff claims are now occurring globally, and the practical outcomes this will have upon individuals and communities; the real-world applications of the models put forward by Arendt, Foucault, Marx and others by assessing how far their theoretical diagnoses align to – or are subverted by - the situations actualised within the texts; and the practical outcomes these findings have for a range of critical fields which are actively developing modes of resistance against oppressive digital surveillance. By connecting the theoretical territories of post-workerism, postcolonialism, and biopolitics to surveillance studies, I will bring to light new ways of interpreting the shared spaces of Zuboff's instrumentarianism and Arendt's totalitarianism, and advance them beyond the limitations of *Surveillance Capitalism.*

[122] Marquez, p. 11.

Chapter 2: Instrumentarianism and the artificial public sphere in *The Circle*

The surveillant assemblage is designed to pervade both the public and private spheres as they flow into one another through social, political, and financial processes. Biological and behavioural surveillance accounts for the new level of visibility, voluntary or not, which now goes hand in hand with access to the space of appearance, both of which are situated within a capitalist regime that profits from activities of production and consumption. Zuboff uses Google's 'Aware Home', a system which would 'constantly monitor' the home's inhabitants, to exemplify that the dynamic new modes of internet use which no longer require mediating devices will come to transform the 'ancient' notion of privacy and the 'human-home symbiosis' beyond recognition as part of our everyday existence.[123] It is this loss of the home as a 'refuge' and subsequent corporate absorption of private life which *The Circle* sheds light on, tracing the journey over the threshold from 'home' to 'exile'.[124] Social media companies are uniquely placed within the broader system of information capitalism to hold a particular influence on political and ethical issues, at once facilitating extraordinarily invasive surveillance strategies to capture the data of its users for its own ends, and ignoring the responsibilities concomitant with the platform's capacity to enable harm on a massive scale. The exploitative tendencies of social media growth, a totalising project of assimilation and data mining which hides behind the superficial altruism of 'bringing the world closer together', is extended to its philosophical limits in *The Circle*.[125] The text centres upon the interior 'utopia' of the eponymous mega-corporation 'the Circle', which in an alternate reality has come to subsume Apple, Facebook, Google, Twitter, Amazon, and virtually every other online competitor.[126] The novel traces the shift in the company's grand mission from an unsettlingly persistent technological optimism, where 'communication should never be in doubt' and 'understanding should never be out of reach',[127] to increasingly Orwellian levels of surveillance, including introducing compulsory voting laws linked to

[123] Zuboff, p. 5.
[124] Zuboff, p. 3.
[125] Mac, Warzel and Kantrowitz.
[126] Dave Eggers, *The Circle* (London: Penguin, 2013) p. 30 Kindle edition.
[127] Eggers, p. 47.

each citizen's public online profile, using social media polls based on 'smiles' and 'frowns' to determine whether or not to deploy a drone strike to the Middle East, and mapping the entire terrain of the globe with live-streaming button cameras.[128] This development unfolds through the eyes of Mae Holland, a young woman who initially joins the Circle's 'Customer Experience' department in what is presented as the lowest level of the company hierarchy, before being groomed into a poster child who embodies the organisation's pursuit of knowledge and visibility at all costs.[129]

The crux of the Circle's success is straightforward enough: modelled upon the ubiquitous images of Silicon Valley startup figures, developer and CEO Tyler Gospodinov founded the Circle 'after a year in college, with no particular business acumen or measurable goals.'[130] Described as a 'boy-wonder visionary', Tyler's main innovation, the 'Unified Operating System', assimilates all of the discrete elements of online life, including 'users' social media profiles, their payment systems, their various passwords, their email accounts, user names, preferences, every last tool and manifestation of their interests' into a seamless single account which is inseparable from the real identity of the user.[131] The phenomenon of internet 'trolls', which in *The Circle's* universe 'had more or less overtaken the Internet', vanishes overnight, alongside the anonymous use of any online service.[132] The system, named 'TruYou', transforms networked interactions to a state of universal civility with such immediacy that it is welcomed by companies and users alike, 'crush[ing] all meaningful opposition' from data privacy activists.[133] The Circle subsequently holds endless tangible resources which it harnesses to create a workplace and broader digital architecture that resembles a pyramid scheme of visibility, where each level relies upon the recruitment of others to feed into the company's total sum of content and data, 'the Circle cloud' which is 'accessible to anyone', presenting a juncture between both the democratisation of knowledge and the destruction of democratic process as we currently

[128] Eggers, p. 404.
[129] Eggers, p. 4.
[130] Eggers, p. 20.
[131] Ibid.
[132] Eggers, p. 22.
[133] Ibid.

know it.[134] A number of elements that support the novel's premise are unconvincing as a form of social commentary from the start: the practicalities of this overwhelming transformation are not clarified, drawing into question Eggers' presentation of the drastic impact of transparency upon individual accountability and behaviour. In a similar manner, Eggers' construction of the character Ty attempts to replicate a stereotypical figure of a white male Big Tech founder, without interrogating Ty's culpability over the events of the novel, his assumed pseudo-genius image contrasted with an utter lack of foresight into the ethical implications of his digital innovations, or his feeble attempts to reverse the Circle's ideology after implementing and personally profiting from it. In spite of these limitations, the text's construction of a new rapidly-expanding space of visibility, forged in an explosion of US-based digital innovation, provides valuable insights into the rise of a new set of values rooted in the acts of 'seeing and being seen'.[135] Several aspects of Eggers' novel offer particularly pertinent opportunities for analysis in relation to the political dimensions of surveillance capitalism. Mae is gradually and obliviously assimilated from a position of financially disempowered subjectivity into a well-paid role which nevertheless requires constant recording and measurement of all aspects of employee affectivity. Meanwhile, the company's relentless pursuit of 'solutions global and elegant and infinitely scalable' resonates deeply with the culture of growth articulated by Facebook's own senior executives.[136]

The text reconstructs elements of panoptic power in a space of specifically top-down, oppressive surveillance at a physical and digital level in several clear ways. Most of the novel's activity takes place at the Circle's San Francisco headquarters or 'campus', which houses a workforce of 'over ten thousand employees'.[137] The transparent or otherwise highly visible aesthetics of the campus itself are stressed in superlative terms, calling attention to its physical similarities to the Panopticon: 'four hundred acres of brushed steel and glass' form a set of buildings arranged around a central lawn and

[134] Eggers, p. 204.
[135] Eggers, p. 21
[136] Eggers, p. 20.
[137] Eggers, p. 2.

'stone amphitheatre',[138] with every office 'fronted by floor-to-ceiling glass, the occupants visible within'.[139] While 'neon' lighting and a 'lack of fingerprints, of any blemish whatsoever' upon the building interiors suggest a clinically modern environment,[140] each floor is framed by a 'narrow catwalk of steel grating' which is reminiscent of the industrial setting of a factory or prison.[141] Even the company's recreational areas, including outdoor seating 'arranged in concentric circles' and a cafeteria where 'all of the floors and walls [are] glass' limits the campus inhabitants' spaces for refuge at any point in their working day.[142] The establishment of this backdrop of transparency lays the foundation for the company's ambition to grow their model outwards to the rest of the world, mirroring the psychological impact of constant public visibility and performance through the TruYou apparatus, and eventually through other surveillance tools. Eggers invokes pithy, informal titles for each successive innovation launched by the company, like 'ChildTrack' and 'Demoxie' – 'democracy with *your* voice, and *your* moxie […] coming soon.'[143] Despite the messaging of equality implicit in the various circular motifs integrated into the Circle's branding and infrastructure, Eggers is at pains to emphasise its deeply hierarchical nature through a distinct set of processes.

Eggers uses nicknames for each professional group to signal different levels of importance, obscuring the company's many exploitative practices by departing from corporate conventions. While lower-status staff are a monolithic group of 'Circlers', the three executives are referred to as the 'Three Wise Men',[144] bestowed with Biblical and patriarchal significance – echoing Mae's first impression of the campus as a 'heaven'.[145] The most important inner group of senior leadership is called the 'Gang of 40', an ominous reference to the Chinese Communist Party 'Gang of Four' who were 'convicted for implementing the harsh policies [of the] Party' during the 1966-1976 Cultural Revolution, which also,

[138] Eggers, p. 31.
[139] Eggers, p. 7.
[140] Eggers, p. 26.
[141] Eggers, p. 6.
[142] Eggers, p. 15.
[143] Eggers, p. 396.
[144] Eggers, p. 19.
[145] Eggers, p. 1.

notably, provides the name of one of the campus buildings.[146] Beyond setting up included and excluded groups by both seniority and specific occupations like 'programmers', 'CE [Customer Experience] people',[147] and so on, the organisation maintains a vertical relationship of power through its 'Participation Rank' or 'PartiRank' algorithm, providing a public numerical rating for each employee calculated from their productivity, online and offline interactions, and general popularity.[148] Internal incentive systems designed to drive competition for profit are not new, however in the Circle the stakes are much higher; the top two thousand people, or 'T2K' are 'maniacal in their social activity' in order to keep their score and the level of visibility this affords them.[149] To integrate this into working activities, the company provides each employee with at least three screens: one for work, one for their 'Inner Feed' of company-related social networking, and one for 'intra-office messaging' to the outside world.[150] The relevance of this signifier of social status to one's success is just one of the Circle's many contradictions to ensure 'totally optional' events are compulsorily attended, keeping employees present either at the campus or online as long as physically possible.[151] The text's landscape offers a theoretical extension of the shifting boundaries of labour identified by Read, where it is 'no longer isolated in the factory or in other spaces but is extended across the social fabric to include the productive powers of knowledge, desire and communication.'[152] Eggers' book demonstrates the magnification of this dynamic when applied to women employees compared to men: from the moment she sets foot on campus, Mae regulates her emotions to convenience others and to improve her company performance as she repeatedly 'twist[s] her mouth into a smile', even when Tyler - under the guise of 'Kalden', removed from his superior professional status - 'sense[s]' her discomfort and asks to sit and watch while she works.[153] She 'feel[s] very unsettled' but 'laugh[s]

[146] Encyclopaedia Britannica, *Gang of Four* (2020) <https://www.britannica.com/topic/Gang-of-Four#:~:text=Encyclopaedia%20Britannica%27s%20editors%20oversee%20subject%20areas%20in%20which,chairman%20Mao%20Zedong%20during%20the%20Cultural%20Revolution%20%281966%E2%80%9376%29> [Accessed 2 June 2020]
[147] Eggers, p. 111.
[148] Eggers, p. 100.
[149] Eggers, p. 192.
[150] Eggers, p. 52.
[151] Eggers, p. 181.
[152] Read, p. 18.
[153] Eggers, p. 91.

nervously' to avoid telegraphing her feelings as he leans 'close to her, far too close',[154] positioning Mae as 'a servant relation with respect to the whole male world.'[155] For the 'utopian' patriarchal company, the benefits of this exploitative culture - one which, notably, disproportionately demands the emotional labour and visibility of women - are threefold: maximum productivity in terms of timed waged labour, additional value from unpaid work to market the company via online presence, and the ready availability of the employees' lucrative raw behavioural data.[156]

The Circle's internal hypocrisy crystallises an important connection between Zuboff's concept of behavioural surplus and the theory of surplus value originally identified by Marx, and how both of these interact within Foucault's conceptualisation of the institution. Zuboff discusses in detail the institutional context through which the rise of business models geared towards behavioural surplus flourished – namely through the liberal 'exceptionalism' of the US government, temporarily suspending privacy laws in the wake of the September 11th terror attacks to enable Google and other companies to test the limits of their data mining capabilities.[157] However, Zuboff never reaches a complete understanding of the continued institutionalisation of behavioural surplus alongside extant theories of surplus value in the context of the information society she describes, for the latter concept has not come to eclipse the former but exists in symbiosis with it. In applying elements of Marx's value theory to the transformative impact of digital technologies on the dynamic system of capitalism, Fuchs suggests that a focus on the dimension of time is critical in order to develop a 'digital labour theory of value' which recontextualises Zuboff's preliminary ideas. He develops an illuminating model based on this principle:[158]

> Social media are expressions of the changing time regimes that modern society has been undergoing, especially in relation to the blurring of leisure and labour time (play labour), production and consumption time (prosumption), new forms of absolute and relative surplus value production, the acceleration of consumption with the help of targeted online advertising and the creation of speculative, future-oriented forms of fictitious capital.[159]

[154] Ibid.
[155] Federici, p. 4.
[156] Eggers, p. 23.
[157] Zuboff, p. 115
[158] Christian Fuchs, *The Digital Labour Theory of Value and Karl Marx in the Age of Facebook, YouTube, Twitter, and Weibo* (2011) [Accessed 5 June 2020] <http://www.fuchs.uti.at/wp-content/uploads/CF_value.pdf>
[159] Ibid

These key concepts are essential in demarcating the entrance into a new culture of work in the West, with changes to not only the spatial zones of work and home life as Arendt suggested with the 'loss of world', but now also to the essentially temporal organisation of leisure and wage labour, which the strategic powers behind the Circle have renovated through wearable devices, equipment, and a coercive culture which bears down upon the employee's entire concept of privacy and personal time.[160] Perhaps the most dangerous element of these changes is the manner in which exploitation is re-fashioned as desirable, progressive, and egalitarian; Mae sees a 'visceral' appeal in the 'company dorms', the on-site 'mini-golf area, the movie theater, the bowling alleys'.[161] During Book 1 of *The Circle*, Mae is still coming to terms with the growing levels of corporate oppression shaping her life, and struggles to navigate the 'calibration between […] online life here at the company and outside it.'[162] A point in the text which captures this tension particularly well is the interaction between Mae and her colleague Gina, who chastises her for failing to participate sufficiently on social media. When Mae refers to this as an 'extracurricular' task, Gina informs her that the company 'sees your profile, and the activity on it, as integral to your participation here […] this company exists because of the social media you consider "*extracurricular*."'[163] This process of manipulation and assimilation into the contemporary capitalist organisation is effectively summed up by Chris Land and Scott Taylor: '"work" – understood as a value producing activity – is increasingly concerned with communication and social reproduction, and often takes place outside formally designated employment time/space, leading to the idea that we live and work in a "social factory".'[164]

The Circle's campus represents a zone where public and private time and space is assimilated into a culturally homogeneous whole and harnessed towards economic pursuits. The company's messaging to present an idea of desirability around this culture is reinforced at every turn within Mae's work

[160] Arendt, *The Human Condition*, p. 138.
[161] Eggers, p. 29.
[162] Eggers, p. 99.
[163] Eggers, p. 94.
[164] Chris Land and Scott Taylor, 'Surf 's Up: Work, Life, Balance and Brand in a New Age Capitalist Organization' *Sociology* 44.3 (2010) (pp. 395-413) p. 396.

environment; for example, through screens which show 'the day's featured [social] activities' on 'every elevator wall'.[165] As Mae looks around she 'felt her stomach cinch', demonstrating the physical impact of the space the Circle constructs as she is overwhelmed by the intensity of the information.[166] Mae's discomfort is amplified by the company's refusal to set clear parameters between domestic, social and workplace activity and relationships, for instance through Eggers' satirical reflection on excessively invasive approaches to disciplinary action; when an employee complains due to Mae's failure to attend a trivial social event, the situation is all the more disturbing when a manager instructs the colleagues to 'hug it out', masking the violence inherent in the organisation's forcible capitalisation of the private spheres of its workers.[167] Understanding these instances of manipulation within the context of Foucault's surveillance society and the institutional dynamics of power adds a further layer to the accelerated extraction and accumulation of not only surplus value but also the economically viable collateral data captured through social channels that the 'Circlers' both use and promote to others.[168] Foucault observed that it was the Enlightenment's discovery of 'the liberties' which caused it to '[invent] discipline' in response, 'constitut[ing] the technique, universally widespread, of coercion'.[169] This is reflected in the duality of the Circle's goals, at once working towards 'equal access to the sights of the world […] the knowledge of the world […] all the experiences available in this world', and committing itself to extremely exploitative methods to achieve these ends.[170]

The manipulation of time and the abstraction of labour represented in *The Circle* accords with Fuchs' observations of the 'digital theory of value' to such a degree that physical and digital presence becomes a kind of currency in and of itself, with little clarity over the units or speed of work which must be produced in the working day, typically associated with industrial modernity and the figure of

[165] Eggers, p. 6.
[166] Ibid.
[167] Eggers, p. 107.
[168] Ibid.
[169] Foucault, p. 257.
[170] Eggers, p. 300.

the 'Fordist worker'.[171] The company implements a new system called 'CircleSurveys', an automated headset and microphone system which gleans data from Mae about her 'tastes, her preferences, her buying habits and plans, for use by the Circle's clients.'[172] Although answering the system's prompts is presented as 'a reward, an honour, and an enjoyable one' and not a task included within her waged work, competition is still encouraged, as 'most people can do five hundred in an hour.'[173] This triggers the first expressions of Mae's psychological distress when her attempts to multitask leave her drained, 'feeling the familiar tear, the growing blackness' which revisits her throughout the text.[174] In a moment Mae considers 'blasphemous', she pauses briefly to consider the consequences of her job on her mental state, only to push the thought away as quickly as it arrives:

> Her brain contained too much […] the volume of information, of data, of judgments, of measurements, was too much, [and] having all of it constantly collated, collected, added and aggregated, and presented to her as if that all made it tidier and more manageable – it was too much. But no. No, it was not, her better brain corrected. No.[175]

Eggers' stylistic use of syndetic and asyndetic coordination in the excerpt above evokes Mae's state of being psychologically overwhelmed at many points in the text, only to reject her growing realisation with the repetition of 'no', constructing a sense of fragmentation and cognitive dissonance as her inconsistent thought patterns only lead her to commit herself more fully to the organisation.[176] At another point when she is enrolled into a 'special program' to improve her productivity, Mae's sudden sense of self 'disgust' at having only done the 'bare minimum' triggers a period of obsession with her performance metrics which bleeds through into the third person narrative, blurring the distinction between Mae's internal voice and the perspective of the narrator.[177] As she desperately tries to improve her 'PartiRank' score, every sentence across a series of pages is punctuated by numbers and repetition, listing the various statistics that needed to be monitored:

> There was the number of recent invitations to Circle company events, 41, and the number she'd responded to, 28. There was the number of overall visitors to the Circle's sites that day,

[171] Fuchs.
[172] Eggers, p. 226.
[173] Eggers, p. 229.
[174] Eggers, p. 412.
[175] Eggers, p. 410.
[176] Ibid.
[177] Eggers, p. 189.

> 3.2 billion, and the number of pageviews, 88.7 billion. There was the number of friends in Mae's OuterCircle, 762, and outstanding requests by those wanting to be her friend, 27.[178]

The conclusion to this long section of listing leads Mae to an opposite affective response to the panic this section evokes: Mae believes that 'what had always caused her anxiety, or stress, or worry, was not any one force […] It was internal: it was subjective: it was not knowing.'[179] Bolstered by the messaging from her senior managers that '[w]e're not automatons. This isn't a sweatshop,'[180] Mae repeatedly assures herself that the source of the 'wave of despair' which visits her 'a few times a week' is not caused by the obvious stressors she is subjected to through her work, but from being unable to access knowledge about everything – which neatly aligns to the Circle's own narrative of its fundamental importance to the world.[181]

As Mae's data 'self' gradually engulfs her, so too does the company lay claim to her perspective on the world around her, and her mental state begins to deteriorate, manifesting as a '[tear] opening up inside her, a blackness overtaking her. She closed her eyes and heard underwater screams.'[182] Again, the gendered implications of this process of exploitation is made clear: when Mae's colleague Francis films and streams a sexual encounter between them without her consent, the organisation disregards Mae's horror: 'We don't delete here, Mae.'[183] As a result, Mae's only recourse is to offer him 'the beginnings of a smile' to 'pacify him'.[184] Mae's constant excoriation of natural public responses of discomfort and the subordination of her subjectivity to capitalist exploitation and surveillance propels further damaging behaviours of impulsivity, self-destruction and addiction, gesturing towards the still-emerging relationship between digital visibility, the workplace, and and psychological harm. Nevertheless, Eggers often implements incongruous reasoning for Mae's behaviour, describing her response to Francis as a 'surge of feeling for him, some mix of empathy and pity and even

[178] Eggers, p. 193.
[179] Eggers, p. 194.
[180] Eggers, p. 47.
[181] Eggers, p. 195.
[182] Eggers, p. 196.
[183] Eggers, p. 204.
[184] Eggers, p. 236.

admiration', which problematises the gendered commentary Eggers attempts to undertake even as he critiques the patriarchal nature of corporate exploitation.[185]

As it perpetuates and entrenches the belief that its economic imperatives – thinly veiled by ideological and humanitarian goals - will fix the problems of its workers, the Circle provides a useful philosophical arena wherein the concepts developed in autonomist Marxist theory can be extrapolated and actualised. Returning to the concept of immaterial labour, Lazzarato explains how organisations have evolved to '[conceal] the fact that the individual and collective interests of workers and those of the company are not identical'.[186] Lazzarato expands upon the 'new power relations' engendered by the centralisation of communication to the processes of work, which now constitute 'a series of activities that are not normally recognized as "work" – in other words, the kinds of activities involved in defining and fixing cultural and artistic standards, fashions, tastes, consumer norms, and, more strategically, public opinion […] [which] have since the end of the 1970s become the domain of what we have come to define as "mass intellectuality".'[187] Many of these activities can be seen taking place in *The Circle*; as a byproduct of the workers' social media activity and 'CircleSurveys' contributions, 'Circlers' are provided with 'Conversion Rate' and 'Retail Raw' statistics which reveal the 'gross retail price of the commerce' influenced by each individual, and subsequently show workers 'how to provoke, how to stimulate purchases […] Leveraging your credibility to spur action.'[188] This reflects research into the impact of influencers upon 'viral' marketing campaigns dating back to at least 2011, importing 'consumer norms' into the context of social media.[189] Zuboff also argues that the 'social influencer' performs a key role in the digital organisation's customer-facing marketing apparatus, set to deploy 'emotional' content which not only steers consumers towards specific choices but also assists in determining 'how and when to intervene in the state of play which is your daily life' by

[185] Ibid.
[186] Lazzarato, p. 135.
[187] Lazzarato, p. 132.
[188] Eggers, pp. 248-251.
[189] Zsolt Katona, Peter Pal Zubcsek and Miklos Sarvary, 'Network Effects and Personal Influences: The Diffusion of an Online Social Network' *Journal of Marketing Research* 48.2 (2011) 425-443 (p. 426).

stimulating users to reflect specific behaviours and emotions.[190] Crucially for Lazzarato, '[w]hat modern management techniques are looking for is for "the worker's soul to become part of the factory"';[191] this is perhaps the most successful element of Eggers' text in making tangible the 'curious paradox' of work in the information age, which 'far from eliminating the antagonism between hierarchy and cooperation, between autonomy and command, actually re-poses the antagonism at a higher level, because it both mobilises and clashes with the very personality of the individual worker.'[192] The duration of Mae's employment within Customer Experience sets up this paradox as her manager reminds her that 'no robots work here', placing enormous value on the quality of the relationship between the Circle and its clients and the 'satisfying, human and humane [customer] experience', at the same time as using 'boiler-plate answers' to increase speed and pressuring customers for quantitative feedback.[193] Paradoxically, the customer must therefore perceive the worker as human, while the worker must provide a service reduced to numerical values.

Lazzarato describes immaterial labour as an '[interface] of a new relationship between production and consumption' which 'involves the permanent search for new commercial openings that lead to the identification of always more ample or differentiated product lines.' For Zuboff, then, immaterial labour serves as one of several conduits for the extraction of surplus value from behavioural and biological data, by monitoring workers themselves and through the surveillance tactics that are attached to the 'creative process' of the 'postindustrial commodity.'[194] Reading *The Circle* in light of Lazzarato's observations opens up a line of inquiry which assesses the finer points of Marquez' delineation of spaces of appearance and surveillance: according to Marquez, one of the shortcomings of Arendt's conceptualisation of visibility which 'always' empowers is its insistence upon the egalitarian potential of power through appearance which 'both connects and separates people', in that each individual recognises themselves as distinctly visible individuals and are thus equalised through

[190] Zuboff, p. 300.
[191] Lazzarato, p. 133.
[192] Ibid.
[193] Eggers, pp. 47-49.
[194] Lazzarato, p. 141.

this logic, as opposed to oppressive visibility which is designed so that one cannot communicate with or identify the watcher.[195] In this view, 'the normal status and class distinctions that regulate interaction in everyday life are temporarily (albeit imperfectly) suspended and no longer pose large obstacles that prevent participants from treating each other as equals', disregarding the material inequalities which allow or prevent access to different spaces of appearance, and thus access to the generation of power.[196] The limits of the notion that 'power is […] independent of material factors' in the space of appearance are explored by Eggers with varying degrees of success.[197] Ironically the only characters in *The Circle* who are permitted refuge from constant visibility are the powerful men who run the company and eradicate privacy for everyone else: Tyler disguises his true identity by adopting the alter ego of 'Kalden', interacting with Mae at his whim and remaining elusive on the social networks and company tools he created, which causes Mae distress and leads her to suspect that he is 'some kind of corporate spy.'[198] Bailey, despite basing his leadership on an ideology that no knowledge or experience should ever be off-limits, nevertheless has a secret office and library hidden from the rest of the campus, which Annie is extremely cautious to reveal to Mae – 'you have to give me a verbal non-disclosure agreement, okay?'[199] Whilst the TruYou technology would suggest, through its removal of online anonymity and equal visibility for all users, a horizonal relationship of power, the fact that optional invisibility is only afforded to the most superior (male) members of the hierarchy replicates the Panopticon model, with the viewer - in Zuboff's words – being 'unknowable to us'.[200] While there may be an illusion of permeability throughout the organisation, 'the immaterial labour of creation is limited to a specific social group and is not diffused except through imitation', and in this fictional example creation is associated with access to private refuges and with the symbols of patriarchal leadership.[201]

[195] Marquez, p. 27.
[196] Ibid.
[197] Ibid.
[198] Eggers, p. 92.
[199] Eggers, p. 27.
[200] Zuboff, p. 11.
[201] Lazzarato, p. 146.

Where these aspects of the text provide an effective commentary on the factors which drive workers into becoming complicit in one another's oppression in the 'social factory', Eggers concludes each breakdown in Mae's limited social and familial relationships with the same reasoning: her religious dedication to the Circle is toxic to those around her.[202] While Mae's more modest socioeconomic background is compared to Annie's extraordinarily privileged one towards the end of the text – 'Mae had to win, or at least do well, to justify the subsidy the college had provided her',[203] whereas 'Annie's family line went back to the *Mayflower*' – Eggers only dedicates minimal parts of the text to exploring the financial pressure and interlinked gendered expectations put upon Mae to make the choices that she does.[204] Eggers implies that Mae's actions are a result of selfish ambition, overzealous loyalty, and ignorance, as opposed to a complex set of factors including financial need, being a young adult whose parents are facing destitution as a result of 'unnecessarily cruel' healthcare insurance policies.[205] This minimises the depth behind Mae's desire to be 'no burden';[206] when she negotiates company cover for her father's multiple sclerosis healthcare costs, her mother tells her that she has 'saved not just your father's life but my life, too',[207] and when she next returns home she observes the 'various ways the health of [her] father had improved'.[208] Mae's subsequent estrangement from her parents plays out as though the Circle's invasion of their privacy would not result in enormous internal conflict for both parties due to the emotional, financial, and health-related consequences of cancelling the arrangement. In Eggers' bid to amplify the totalising power of the Circle, he therefore fails to sufficiently capture the nuances of immaterial labour and visibility as subtle, coercive tools for social control, often operating in much more insidious and understated ways than the Circle's outright dogma. Further to this, Mae's strikingly naïve attitude towards the wider world beyond her Circle colleagues, 'a Third World experience, with unnecessary filth, and unnecessary strife and unnecessary errors and inefficiencies', points towards a significant omission in

[202] Land and Taylor, p. 396.
[203] Eggers, p. 14.
[204] Eggers, p. 360.
[205] Eggers, p. 76.
[206] Eggers, p. 4.
[207] Eggers, p. 162.
[208] Eggers, p. 252.

the text which reveals further limitations in Eggers' attempt to present millennial life under information capitalism: the total absence of discussion about people who are affected by the Circle, but who do not occupy space within its exclusive community.[209] For instance, the company's maintenance and service staff, who must surely be present and thus highly visible around the campus to keep it in its 'immaculate' state, are surprisingly not considered important to the text, despite the fact that the existence of this sub-group draws into question the Circle's authoritarian approach to equality, and challenges Mae's privileged, single-minded view that the whole world must share and benefit from the totalising ideology of her echo chamber.[210]

Also strikingly absent from the text is any degree of recognition of the varied populations who are affected by the Circle's methods for the accumulation of wealth; Silicon Valley's aggressive neocolonial extraction of natural resources from the global South is certainly a key part of its destructive power, offering a conspicuous counterpoint to its pseudo-humanitarian efforts. Since Eggers draws several parallels between the Circle and Apple, the recent revelations of inhumane conditions imposed upon mineral miners who provide the raw materials for iPhones offer a pertinent example.[211] These diverse implications of technological oppression are blanched from Eggers' text, rendering his social commentary less convincing. It is not clear whether the lowest paid members of the workforce are included in the '10,981 staffers'[212] who participate in the 'closing of the Circle', leaving one to conclude that the dangers of the technologies augured in *The Circle* should only concern those wealthy enough to own it.[213] While Eggers commits to the notion that visibility renders individuals vulnerable to oppression, the point is lost when we turn our attention to the status and relative power of figures who are not visible within the text itself. *The Circle* also fails to come to any conclusions about the nature of racial inequality in its construction of a dystopian near-future; when it

[209] Eggers, p. 371.
[210] Eggers, p. 191.
[211] Brian Merchant, *Op-Ed: Were the raw materials in your iPhone mined by children in inhumane conditions?* (2017) <https://www.latimes.com/opinion/op-ed/la-oe-merchant-iphone-supplychain-20170723-story.html> [Accessed 20 June 2020]
[212] Eggers, p. 194.
[213] Eggers. p. 481.

is revealed that Annie is 'a descendent of slave owners' through the ancestry tracing technology 'PastPerfect', she panics that 'half the people of color I hired over the years are now suspicious of me. Like I'm some genetically pure intergenerational slave owner!'[214] One of the few women of colour described in the text, Annie's 'go-to' assistant Vicky, loses her job as a result of Annie's discomfort with the truth of her 'unimpeachable lineage': 'I'm letting her go tomorrow.'[215] Annie's racism and privilege is casually addressed in this manner at a few discrete points in the text, but only serves to propel her character arc, as the 'stress, or shock, or simple exhaustion' caused by the PastPerfect revelations leave her 'catatonic';[216] elsewhere, the Circle and the world around it is presented as post-racial, notably due to the fact that major structural inequalities like racism and sexism are not one of the many solutions the company's 'geniuses' seek to address, and there are few distinct voices from people of colour in the text.[217] For a novel which deals with the global dominance of an organisation with consequences for a vast part of humanity, Eggers limits his scope to the obvious oppression arising from the panoptic power operating within the campus and its social networks; Lazzarato points out that new forms of exploitation are 'not obviously apparent to the eye, because [they are] not defined by the four walls of a factory […] [they are] outside in the society at large, at a territorial level that we would call "the basin of immaterial labour".'[218] Although his limited gendered critique provokes a widened understanding of the nuanced guises oppression takes within the information age, Eggers remains bound to the 'image of the organisation of work and its social territory' within Silicon Valley and the gleaming new products it offers.[219] However, this analysis usefully provokes a reconsideration of the understanding of power I have constructed, as the relational power conceived by Foucault and Arendt is at cross-purposes with theories that deal with the most recent phases of work in the information age set out by Lazzarato and Fuchs. For Fuchs, power is something which can be accumulated, but it operates in three distinct areas: 'money capital or economic power,

[214] Eggers, pp. 428-434.
[215] Eggers, p. 434.
[216] Eggers, p. 489.
[217] Eggers, p. 61.
[218] Lazzarato, p. 136.
[219] Lazzarato, 138.

decision-making institutional power, and meaning-making or cultural power'.[220] Fuchs argues that this leads to 'a multidimensional class society, in which economic, political and cultural elites control economic, political and cultural power.'[221] Despite this, Fuchs points out that the process of accumulation can be 'threatened by social struggles and economic, political and ideological crises' which 'break down the reproduction of accumulation'.[222] There are therefore multiple conceptions of power which can be applied to this investigation: static, transferable economic power which enables a concomitant accumulation of power within cultural and political zones; relational institutional power which is 'diffused and embodied' in normalising and oppressive discourses; and relational positive power within spaces of appearance, which generates resisting discourses but disappears the moment collective action ceases.[223] Where Arendt 'struggled to account' for the 'essential connections' between public, private, social, and political spheres, Fuchs and Marquez' observations of power, time, and space reveal the porous conceptual boundaries between each zone within digital society.[224]

The Circle is a text situated at the origins of surveillance capitalism in Zuboff's terms, 'an American invention',[225] born out of the 'neoliberal zeitgeist that equated government regulation of business with tyranny.'[226] In this chapter, I have detailed some of the most effective areas of commentary it offers, including its shortcomings which resonate with the problems in Zuboff's text. Surveillance capitalism, when its exploitative pursuits are finally identified, appears to constitute a break with the traditional capitalist regime to those positioned at the imperial centre. The absence of alternate voices which could both identify and challenge this 'unprecedented' system of exploitation mean that the self-propagandising narrative of the Circle succeeds in its totalitarian goal. Mae is set on a solitary course towards the book's conclusion, without properly interrogating how the company has managed to extinguish all forms of dissent. In a moment reminiscent of Winston's devastating submission to the

[220] Fuchs.
[221] Ibid.
[222] Ibid.
[223] Ibid.
[224] Marquez, p. 13.
[225] Zuboff, p. 24.
[226] Zuboff, p. 341.

super-state Oceania in the final line of *1984* - 'He loved Big Brother'[227] - Eggers sets up a similar moment of *peripeteia*, concealing the outcome of Mae's decision to overthrow or succumb to the oligarchy until the final lines, where it is revealed that she has rejected Tyler's warnings: 'Completion was imminent, and it would bring peace, and it would bring unity, and all that messiness of humanity until now [...] would be only a memory.'[228] However, the lack of any real potential for opposition and resistance throughout the text means that this moment loses its pivotal tension and fails to capture the nuances of political evil which assimilate Mae, curtailing Eggers' social commentary. Comparatively, the 2017 film adaptation invokes a twist where Mae still aligns to the Circle, but overthrows its duplicitous leaders as she does so: 'Every email from Tom and Eamonn's accounts […] even their super-secret scrambled code accounts that nobody, not even their assistants or wives knew existed […] [has] all been sent to you already […] Privacy was a temporary thing, and now it's over.'[229] Nevertheless, both texts align to the conventions of Western dystopian fiction identified by M. Keith Booker, primarily the 'oppositional confrontation between the desires of a presumably unique individual and the demands of an oppressive society that insists on total obedience and conformity in its subjects', revealing 'quintessentially bourgeois' concerns.[230] Booker argues that by comparison, peripheral dystopias resist an 'individualist bias' and tend more toward 'a suppression of genuine collectivity than to a suppression of individualism by collective tyranny.'[231] From this, we can understand that fictional dystopian texts which represent peripheral sites of discourse expand beyond the limited scope maintained by Western dystopias by framing the 'collective experience' as an ambiguous experience, depending on factors of identity and power interacting within it.[232] In the following chapter, I will move beyond the Eurocentric limitations of Eggers' and Zuboff's texts by exploring how postcolonial dystopian literary representations can illuminate the experiences of

[227] George Orwell, *Nineteen Eighty-Four* (Mumbai: Sanage Publishing House, 2020) p. 262.
[228] Eggers, p. 491.
[229] *The Circle*, dir. by James Ponsoldt, (STX Films, 2017), online film recording, Netflix 1:38:00-1:39:03 <https://www.netflix.com/watch/80098473?trackId=13752289&tctx=0%2C0%2C0ea96592bff4b384b0769b356eaf271c2b6054ef%3A0b66314e0fac6272b693234a4ea1914825778f7a%2C0ea96592bff4b384b0769b356eaf271c2b6054ef%3A0b66314e0fac6272b693234a4ea1914825778f7a%2C%2C> [Accessed 15 January 2020]
[230] M. Keith Booker, 'African Literature and the World System: Dystopian Fiction, Collective Experience and the Postcolonial Condition', *Research in African Literatures* 26.4 (1995) 58-75 (p. 59).
[231] Booker, p. 61.
[232] Ibid.

different individuals and groups who are erased in Western accounts of technological surveillance and oppression.

Chapter 3: A biopolitical view of the 'unprecedented' in *Moxyland*

Zuboff deploys a number of rhetorical strategies in between her historical analysis to call attention back to the central argument running through the book: we will not know the true cost of the current regime until it is too late. The 'unbearable yearning' of 'separation from the homeland among emigrants across the centuries' will come to '[engulf] each one of us,' dislocating the whole of humanity from its search for a viable home.[233] The 'universal story' Zuboff subsequently propounds,[234] a destruction of the 'right to the future tense' through instrumentarian processes which transform all actions into surveilled, predicted, market-oriented actions, is premised upon a two-dimensional formulation of the individual, which erases the multilayered and heterogeneous nature of human-technology relationships.[235] Zuboff's reliance upon synthetic personalisation and inclusive language to illustrate her point – 'By the time you read these words […] [y]our entire life will be searchable' – obscures the text's absence of commentary on the historical antecedents of instrumentarian society for specific individuals and communities.[236] Locating the target of surveillance capitalism within readers themselves rather than tangible figures serves as a persuasive rhetorical tool which brings to life the scale of devastation the book foretells. This, alongside the book's unyielding focus on the 'unprecedented', serves to reject a culture of 'inevitability' which has been gradually shaped and instilled through technologically-empowered capitalist discourses, asserting that 'fresh observation, analysis, and new naming are required' in order to adequately construct an 'effective contest' to them.[237] However, this rhetoric is also symptomatic of Zuboff's largely technodeterministic approach to capitalist exploitation, which suggests that the ideology of instrumentarianism is, at its core, exclusively premised upon and facilitated by digital surveillance tools and algorithms within the digital public sphere. In the absence of a rigorous critique of interlinked historical colonial and patriarchal structures which play a key role in the unmitigated

[233] Zuboff, p. 5.
[234] Ibid.
[235] Zuboff, p. 20.
[236] Zuboff p. 12.
[237] Zuboff, p. 14.

surveillance and exploitation of specific populations, Zuboff situates her text within a Eurocentric, provincial framework of criticism which fails to capture the true scale and complexity of the corrupt and oppressive politico-economic regime she describes. The book's limited engagement with the reality of unevenly distributed access to digital technologies and spaces, as well as the propensity for instrumentarian logic to extend and bolster existing structural inequalities, raises a number of questions about the invisible impact of the 'universal story' she describes.[238] The description of surveillance capitalism as a 'rogue' capitalism suggests that its concomitant social ills can be traced back to the *de facto* powers of Big Tech, rather than the legitimated *de jure* powers built into Western institutions.[239] As a result, Zuboff buys in to the established narrative propagated by capitalist discourses, which holds that the structures of economic power built into the bedrock of surveillance capitalism - the 'combination of markets and democracy' - have 'served humanity well'; it is only the specific alliance of capitalism and very contemporary digital technologies which are a cause for concern.[240] In a bid to emphasise the book's strategic goals - namely, to launch the novel concept of instrumentarianism, which insists upon a universal departure from political and social norms regardless of national and local contexts - Zuboff ultimately restricts herself to a myopic and two-dimensional view of the 'societal territory' which data capitalism operates within.[241]

Although Zuboff encourages political imagination that is not beholden to retrospective explanatory strategies, this theoretical position presents a dilemma which the book never fully reconciles. The gender- and race-blind approach framing *Surveillance Capitalism* is inadequate to capture the necessarily intersectional reality of the subject matter the book explores. Zuboff is committed to exposing the rise of surveillance capitalism because its operations fundamentally 'demean human dignity', which raises two issues.[242] First, Zuboff's structuring of the new 'species of power' as a force which irrevocably changes the democratic dynamics of the twentieth century presumes that the

[238] Zuboff, p. 5.
[239] Zuboff, p. 17.
[240] Zuboff, p. 517.
[241] Zuboff, p. 465.
[242] Zuboff, p. 522.

legitimated liberal-democratic institutions of the modern Western nation-state represent 'our greatest moral and political achievements' as a kind of idealised state to retrospectively aspire towards.[243] Second, the text suggests that a return to these values and processes would signal a return to the preservation of human dignity, primarily through the increased regulation of internet companies, without interrogating the terms of her vision of 'human dignity.' Jacques Rancière, writing on the contradictory inner dynamics of the 'irresistible movement' towards the 'formalism' of human rights, critiques the kind of logic espoused by Zuboff as it presumes 'a peaceful posthistorical world where global democracy would match the global market of liberal economy'.[244] Without a thorough analytical foundation from which to assess the structural oppression that has historically paved the way for oppressive power, Zuboff presents liberal democracy as a heal-all that subdues, rather than legitimates, the systemic violence of capitalism. Crucially, our focus should not only be trained on the ways surveillance capitalism has surreptitiously appropriated, misused, or otherwise deviated from the 'safe and prosperous' technologies and practices Zuboff describes, but also on the socially accepted and normalised surveillance practices which seek to privilege some while undermining the dignity of others.[245] Second, Zuboff's insistence that Big Other's operations and goals are unique to the information age erases the long history of the 'loss of home' and destruction of 'psychological sovereignty' felt by different social groups,[246] captured by Sareeta Amrute's pertinent question: 'for whom exactly does surveillance capitalism signal a radical aberration?'[247] Zuboff's vision of a sudden worldwide alienation of the 'right to the future tense' can only be actualised by those who have access to a home protected by democratised forms of power to begin with.[248]

[243] Zuboff, p. 524.
[244] Jacques Rancière, 'Who is the Subject of the Rights of Man?' *The South Atlantic Quarterly* 103.2 (2004) 297-310 (p. 297).
[245] Zuboff, p. 439.
[246] Zuboff, p. 36.
[247] Sareeta Amrute, *Sounding the Flat Alarm (Review of Shoshana Zuboff, The Age of Surveillance Capitalism)* (2020) <https://www.boundary2.org/2020/01/sareeta-amrute-sounding-the-flat-alarm-review-of-shoshana-zuboff-the-age-of-surveillance-capitalism/> [Accessed 10 July 2020]
[248] Zuboff, p. 36.

There are further problems with Zuboff's linear, teleological view of history: from her perspective, the West's sudden 'weakening attachment to democracy' through surveillance capitalism is expressed through a collective 'lament' of the 'members of the second modernity', or those born within the 'second half of the twentieth century': "My children will not see the life that I lived"'.[249] This suggests that the acceleration of digitisation and globalisation are the sole causes of a radical shift in contemporary forms of power and political community. In his 2019 essay 'Postdemocracy and biopolitics', Roberto Esposito asserts that the movement towards 'postdemocratic' discourse as a 'byproduct of the dynamics of globalization that have for the past 30 years slowly eroded the foundations of modern democracy' fails to recognise the origins of this process in the eighteenth century, when 'the life of the population ceased to be considered a resource for the sovereign to consume […] and became a precious resource that must be protected and developed.' [250] Esposito asserts that the current political landscape is the natural conclusion to a longer term project which 'break[s] down […] the borders between the political and the biological', and that the recent recognition of this fact has been precipitated by changes in public perception, rather than changes to politics in itself:[251]

> Questions of life and death, of sexuality and public health, of migration and security, have been forced upon and become fundamental to all political agendas. In turn, the political horizon has also become more expansive and complex; it has broadened and deformed. It is as if the entire modern lexicon that had framed politics for over three centuries had been shattered by the force of these events, lost its significance, and was thus no longer capable of representation. Since then, certainly not just the last 20 years, the semantics of democracy have increasingly encountered complications.[252]

Esposito goes on to argue that a 'new political language' is necessary, 'rather than continuing to deconstruct something that has already been thoroughly deconstructed', but the language must account for differences in cultural and geopolitical contexts: 'Of course, not all situations are equal. Not all regions have the same problems. […] In this sense, precisely in order to define their

[249] Zuboff, p. 517.
[250] Roberto Esposito, 'Postdemocracy and biopolitics' *European Journal of Social Theory* (2019) <https://journals.sagepub.com/doi/full/10.1177/1368431019850234> [Accessed 15 June 2020]
[251] Ibid.
[252] Ibid.

differences, these people have a vital need to constitute their own identity.'[253] That *Surveillance Capitalism* does not consider these differences important to its theoretical bedrock, despite its concerns being explicitly dedicated to issues of freedom and exploitation, has significant ramifications for the book's ahistorical conclusions that institutional, liberal democracy has lifted 'humankind from millennia of ignorance, poverty, and pain.'[254] The theoretical aperture of biopolitics, focused upon a conception of instrumentarian power that is firmly linked to both the new digital space of appearance and surveillance and to existing territories of institutionalised capitalist and colonial inequality, reveals itself to be a particularly useful counterpoint to Zuboff's book.

In this chapter, I will undertake reading of Beukes' *Moxyland*, a peripheral dystopian work which maps an array of narrative threads onto the uneven political topologies of a near-future Cape Town. I propose that this text presents a challenge to the 'universal story' put forward by Zuboff and highlights the voices of marginalised people which are imperceptible in *Surveillance Capitalism*, *The Circle*, and often in society at large, developing a critique of the concept of instrumentarianism in line with biopolitical governmentality.[255] Drawing upon Browne's constellation of tools and concepts to recontextualise surveillance capitalism through a postcolonial and 'racialized' lens, this chapter explores the diverse voices set out in *Moxyland* to further interrogate Amrute's proposition that instrumentarian power has long flourished outside of 'the middle class enclaves of Europe and the United States'.[256] My analysis is also guided by criticism that foregrounds the relationship between biopolitics, surveillance, and political rights, including *Discipline and Punish* and Agamben's *Homo Sacer*. I propose that this synthesis of political, theoretical and literary texts redraws a permeable boundary that can account for the groups that Zuboff does not, recognising tangible and intangible differences in experience and deciphering opportunities for resistance which exist beyond the margins of Arendtian and Foucauldian conceptual visibility.

[253] Ibid.
[254] Zuboff, p. 517.
[255] Zuboff, p. 6.
[256] Amrute.

Returning to the concepts set out in *Dark Matters*, Browne borrows terms from James Rule and Gary T. Marx to develop an image of 'the new surveillance', a 'maximum-security society' where 'increasingly choices are engineered and limited by social location.'[257] In a manner similar to the complexity of Haggerty and Ericson's surveillant assemblage, Browne argues that the 'totalizing system' or 'theoretical extreme' presented in *1984* - and reproduced in *The Circle* - no longer fits the current reality of computer-mediated institutional and corporate power, referencing Oscar Gandy's concept of the 'panoptic sort' wherein data is 'used to identify, classify, assess, sort' individuals and groups to 'control access' to particular goods and services, 'for example with the application of credit scores by lenders to rate the creditworthiness of consumers […] privileg[ing] some, while disadvantaging others.'[258] Browne sets out these concepts in order to integrate them into the concept of 'racializing surveillance', which operates to 'reify boundaries, borders, and bodies along racial lines […] where the outcome is often discriminatory treatment of those who are negatively racialized by such surveillance.'[259] In contrast to the 'nightmarish suppression of individual liberty' and the 'horror of collective experience' which form the thematic backbone of Western surveillance dystopias like *The Circle*, Beukes' *Moxyland* is well-positioned to accommodate the intersectional view of suppressed collective experience under a regime of racialised surveillance as set out by Browne and Booker. The book's prognosis of a future world centred entirely around smartphone use resonates remarkably well with current concerns over the impact of technological visibility and appearance upon interpersonal relationships. James Trimarco writes that Beukes captures the 'peculiarly cynical voice of a generation that has absorbed so much branded messaging that it literally cannot imagine a gesture – not an utterance, not a political strategy, not even an act of violence – intended to do anything but stimulate the media for marketing-related purposes.'[260] The text envisions spaces which replicate Foucault's normalising power and disciplinary systems, tying together 'the order of the crime, the order of sin, and the order of bad conduct' to reduce or remove the liberty of groups

[257] Browne, p. 32.
[258] Ibid
[259] Browne, p. 33
[260] James Trimarco and Paul Graham Raven, *Two Views: Moxyland by Lauren Beukes* (2009) [Accessed 3 June 2020] <https://www.angryrobotbooks.com/2009/11/moxyland-two-essays>

considered suspect, as well as ambiguous spaces beyond the scope of surveillance and appearance, including zones of total social exclusion through restriction of the digital public sphere.[261]

Unlike the sleek, ideologically perfected aesthetics and technologies of *The Circle*, this text presents a metropolitan space where it is impossible not to confront the disparities between enormous corporate wealth and extreme poverty, and where the tools of computer malware, genetic engineering, and video games are developed and appropriated by characters for utilitarian and self-serving ends. Although the text is guided by the same key questions about the capabilities of technology to serve totalitarian ends, *Moxyland*'s hyper-powerful corporation-state demonstrates little interest in using its intellectual and financial resources to achieve dominance through the utopian global solutions satirised in *The Circle*, instead harnessing digital systems to ingrain social stratification through authoritarian violence. Each chapter, the narrative shifts between the perspectives of four key characters who are connected through mutual financial and political allegiances. Although the characters are around the same age and come from the same city, they each represent a different intersection of gender and race, and subsequently occupy cultural and spatial environments commensurate with their different degrees of social and economic privilege within post-apartheid Cape Town. All are affected by the flows of institutional power as they are considered to be potentially dangerous at different points in the text, but their individual storylines trace the divergent consequences of identity upon the surveilled body under a regime of enduring ideological concretisation of racial and gender binaries, and the different limitations to agency and freedom subsequently imposed upon them. Lerato, a black woman, is orphaned by a resurgence of the AIDS epidemic and grows up in the midst of the subsequent public health crisis, becoming the 'brightest and most productive' of her cohort and securing work as a particularly gifted programmer for a 'multinational conglom' called 'Communique'.[262] Tendeka, a black man, comes from similar circumstances but occupies a space at the margins of the political order; considered a 'Struggle revivalist', he sustains a lifestyle in which he publicly presents the image of a community leader and

[261] Foucault, p. 298.
[262] Lauren Beukes, *Moxyland* (London: Penguin, 2018) Kindle edition, p. 192.

social activist, but operates anonymously within the digital realm as a political agitator or, in the State's eyes, a terrorist.[263] Kendra is a white woman and a photographer who has accepted a sponsorship deal with the energy drinks manufacturer 'Ghost', making her one of several 'sponsor babies' or living advertisements who work as corporate influencers within the text; she is injected with a biogenetic nanotechnology that gives her desirable side effects, such as preternaturally quick reflexes, healing time, and protection against illness, but becomes physically reliant on Ghost's products in exchange.[264] Toby, an economically privileged white man, drifts between trading drugs and other items on the digital black market, producing a live stream of his most personal moments to compete for online views, and occasionally using his platform and connections to support Tendeka's activism plots.

All of the narratives operate through a first-person, present-tense voice, except for Toby's, where he speaks directly to his 'streamcast' viewers: 'You'd be amazed […] or if you're watching this, maybe you already know'.[265] The lack of narrative retrospection foreshadows the text's conclusion, as none of the characters have a viable future except for Toby, who simply finds new subjects to centre his livestream around. Beukes' splitting of narratives into multiple discrete identities creates a template upon which the differential effects of surveillance can be mapped, indicating the text's potential for the concerns laid out by Booker and Browne above. Beukes distances the formal construction of the novel from the solitary path of the figure featured in Western surveillance dystopias, and in so doing, draws attention to the commonalities between dystopian images of a 'suppression of genuine collectivity' and the realities of violence and punitive aggression which are justified by structures of systemic racism and misogyny.[266] Beukes' reconstruction of a conventional individual character arc does away with its hierarchy of narrative importance, privileging neither the voice of the individual nor a homogenous collective but rather the relationships between the two. Connectivity and disconnection therefore create a key structural component of the text, mirroring its thematic content

[263] Beukes, p. 39.
[264] Beukes, p. 227.
[265] Beukes, p. 31.
[266] Booker, p. 61.

and offering insights into the lives of those who are included within the vertical and horizontal parameters of the digital public sphere, an those who exist beyond its margins.

Unlike *The Circle*, where cultural norms of control are embedded exclusively within the ruling oligarchy and digital tools are shared with the state to leverage corporate influence, the technologies deployed in *Moxyland* operate at multiple, uneven levels of social control. The world is dominated by a collection of 'multinationals' which control the metropolitan landscape of Cape Town, but only to the degree that the interests of the elite 'corporati' are protected; companies are shown to have limited power over the availability of technologies, 'outlaw[ing]' undesirable innovations. Nevertheless, Toby points out that 'notions of the illegal don't extend to the developing', in this instance referring to the poor communities populating an 'overbridge tunnel market' where imported 'non-reg' goods are sold 'under the table'.[267] Poorer communities that exist outside of the corrupt corporate influence of the city's pseudo-democratic government are granted refuge from active observation, but instead are subjected to inescapable sensory invasion from illegal advertisements, with 'blaring logos and adboards', 'chatter flyers' and 'audio chips […] broadcasting slogans at decibel in most of the official languages'.[268] Access to affluent parts of the city are means tested, requiring a 'corporati pass or proof of income', whereas 'general access' spaces are 'dingy' and 'undesirable' with poor security surveillance coverage – 'the cams don't work too well.'[269] Despite the disparities in the quality of life afforded to people occupying different levels of the corporate hierarchy, unprotected spaces provide opportunities to temporarily become hidden, providing the 'ideal venue' for Toby to meet with Tendeka about a transactional political stunt, 'which he's being generous enough to allow me to guest on […] I score some quality vid that'll push up my streamcast's rankings, and he gets his exploits recorded for posterity.'[270]

[267] Beukes, p. 32
[268] Beukes, p. 272
[269] Beukes, p. 38
[270] Beukes, p. 39

The superstructure of surveillance described here is more fractured and diffuse than the Circle's, presenting opportunities for invisibility and subversion in the spaces between highly-monitored privileged corporate zones, although subjection to physical violence from police is more likely. Social status - and its associated access to different zones of the city - is aligned with a vertical system of power distilled in numerical ratings similar to *The Circle's* 'PartiRank': the 'LSM' or 'Living Standards Measure', a score attributed to every citizen.[271] Although the new Cape Town purports to have moved on from the legacy of apartheid through its emphasis on equal opportunity and personal responsibility - 'working for a living' to become 'smarter, better, more attractive' promises the rewards of a 'subsidised beachfront corp apartment and cushy job' - the LSM represents a covert continuation of state-enforced racial categorisation and segregation, drawn from an existing market research metric that continues to exist in South Africa.[272] The rating 'divides the population' into groups from 1 to 10 as an indicator of income inequality,[273] recalling Browne's identification of the ways 'abstracted information' about individuals 'restricts them from consumer choices […] relegat[ing] them to second-class status because of their color or ethnic background'.[274] That this tool was supposedly designed for marketing purposes resonates particularly well with the fictional version of the LSM, whose insidious vertical power is not linked to participation, popularity or visibility within online space as with 'PartiRank', but literally connects gender, racial category, and financial status to the spaces an individual is permitted to access within the segregated ecology of the city. The LSM's implicit preservation of the early racial 'pass laws' introduced during the implementation of apartheid - 'a basic system of identification and control […] the Nationalist government could [use to] determine where and how Africans would live, what rights they could enjoy and those they could not, whom they could marry, and so forth' - is one of the clearest examples of a historical antecedent to pervasive 'instrumentarian' power, 'a daily reminder for Africans of the often petty but also determined repression under which they lived.'[275] Although the LSM is distinct from apartheid-era

[271] Beukes, p. 56
[272] Beukes, pp. 84-85.
[273] *Living Standards Measure* (2017) <http://www.saarf.co.za/LSM/lsms.asp> [Accessed 20 June 2020]
[274] Browne, p. 34.
[275] Nancy L. Clark and William H. Worger, *South Africa: The Rise and Fall of Apartheid* 2nd edition (London: Routledge, 2011) pp. 49-51.

laws and appears to be facilitated through the slightly accelerated digital infrastructure of surveillance capitalism, it provides evidence of different iterations of historical oppression emerging under a neoliberal regime with destructive consequences, featured in the text as a key determinant over an individual's social mobility and, importantly, likelihood to be targeted by the police and other disciplinary forces.[276]

The LSM, alongside a cache of personal data including physical appearance, 'last known residential address', marital and employment status, criminal record and so on, is located within individual 'cell SIM cards' which, whilst betraying a little of the reliance on technologies like physical storage present during the text's publication in 2008, provides the first example of Beukes' startlingly accurate predictive powers.[277] An individual's SIM effectively constitutes their passport to conduct any transaction, gain access to restricted spaces, and of course communicate in much the same way that smartphones are used presently. In this way, the destruction of anonymity and forced visibility represented through *The Circle*'s 'Unified Operating System' is taken in an entirely different direction in *Moxyland.* Where Eggers gestures towards internet trolls and the minor inconvenience of multiple online accounts as the main drivers behind this software, which only superficially address the desirability of such a system for corporate and government entities, Beukes' anticipation of the violent capabilities of smartphone technology is much more incisive, envisioning the concentration of financial transactions, biopolitical data, and the artificial space of appearance into a single handheld device. *Moxyland* follows this to its logical conclusion by extending the omnipresence of mobile phone use to the legitimated 'state monopoly on violence' held by the police force.[278] Each mobile device has a in-built 'defuser', delivering at least '170 to 180 volts' to the individual who owns it, which can only be triggered by the police.[279] Tendeka is targeted in this manner during his meeting with Toby when he becomes aware of Kendra's job as a 'sponsorbaby' and grows agitated, raising his

[276] Browne, p. 27.
[277] Beukes, p. 55.
[278] Elke Krahmann, 'Private Security Companies and the State Monopoly on Violence: A Case of Norm Change?' *Peace Research Institute Frankfurt* (2009) 2-3 (p. 2).
[279] Beukes, p. 46.

voice and 'starting to draw attention'.[280] Police are quickly called to the building, with the officer scanning the room for Tendeka's unique SIM and causing him intense pain similar to a taser, 'his phone seething and crackling'.[281] Tendeka describes the process as 'shock therapy […] dampening down excitable behaviour, frying our brains'; unlike Zuboff's assertion that 'most users remain unaware' of the consequences of monitoring and data sharing within her global view of instrumentarianism, Tendeka is constantly reminded of the pattern of surveillance and punishment he is disproportionately subjected to. [282]

In this incident, a bartender alerting the police to overpower a black man replicates a collection of concepts drawn together by Browne: Steve Mann's 'naming of the human eye as a "body-borne camera"' and what Judith Butler terms the 'racially saturated field of visibility', alongside 'what Maurice O. Wallace has called the "picture-taking racial gaze" that fixes and frames the black subject within a "rigid and limited grid of representational possibilities."'[283] The conjunction of these practices operating together forms a kind of 'cumulative white gaze' which facilitates omnipresent, oppressive 'sousveillance'.[284] Browne refers to the antebellum era, where 'citizenry (the watchers) […] deputized [for the sheriff] through white supremacy to apprehend any fugitive who escaped from bondage (the watched)', which persists in post-slavery societies as racially aligned 'inequities between those who were watched over and those who did the watching.'[285] This drives home the unconvincing presentation of *The Circle*'s 'SeeChange' miniature cameras, through which Eggers satirises the values of 'transparency' and 'sharing' by extending them to human rights issues: 'There would be instant accountability. Any soldier committing an act of violence would instantly be recorded for posterity. He could be tried for war crimes, you name it.'[286] While it is feasible that the superlatively privileged and presumably white-majority community of the Circle would fail to

[280] Beukes, p. 44.
[281] Beukes, p. 47.
[282] Beukes, p. 46.
[283] Browne, p. 38.
[284] Mann.
[285] Browne, p. 38.
[286] Eggers, p. 66.

recognise that what constitutes a human rights violation or an act of protection is entirely shaped by the racially prejudiced laws and systems of the political landscape they occur within, it is difficult to accept that there are no voices from internal or external sources – i.e. the 'billion-odd' global Circle users connected digitally - present in the text to point this out.[287] Eggers misses an opportunity to highlight the racially and culturally ignorant failures in critical thinking which lead to a necessarily 'racialised' banality of evil within his text, which is drawn into even sharper focus against the backdrop of recent events in the U.S., including the murder of black citizen George Floyd by a white police officer – for which 'instant accountability' failed to materialise despite the publication of bodycam and smartphone footage, catalysing a global wave of protests and civil unrest.[288] Beukes, by contrast, hones in on the lethal consequences of the cumulative white gaze acting in concert with state-sanctioned racist police brutality and a broader infrastructure of capital-oriented technologies: as the 'garden-variety citicop' stands over Tendeka's 'jerking epileptic' body,[289] he makes the 'cheerful' comment to the bartender who summoned him, 'I'll be happy to sic /379 here on him' - in other words, to set his genetically-engineered 'Aito' police dog onto his unconscious victim.[290]

Racial categorisation and punitive violence encapsulates the first and most obvious method of social control within *Moxyland*'s surveillant assemblage, but there are other examples of practices in the text which achieve the same ends, particularly ones which reflect the cost-efficient benefits of systematic surveillance technologies. This is implied by the follow-up police report to Tendeka's 'defusing', which is visually presented on the page as an administrative form, with 'Occurrence No.' and 'criminal registration' codes.[291] Tendeka's 'cell SIM ID' number is also provided, alongside a list of dates of prior offences and the police officer's notes of the most recent incident, where it is revealed that 'acting in an aggressive manner' and 'previous public disruptions and a juvenile record' formed

[287] Eggers, p. 241.
[288] Aamna Mohdin and Glenn Swann, *How George Floyd's death sparked a wave of UK anti-racism protests* (2020) [Accessed 30 June 2020] <https://www.theguardian.com/uk-news/2020/jul/29/george-floyd-death-fuelled-anti-racism-protests-britain>
[289] Beukes, p. 45.
[290] Beukes, p. 48.
[291] Beukes, p. 55.

the only legal justification required to leave Tendeka 'adequately subdued'.[292] What the report also reveals is that a 'temporary disconnect' has been applied to Tendeka's phone, refusing him access to the subway: 'my phone won't scan. Or, rather, it does scan and blocks me outright in response to the police tag on my SIM.'[293] The systematic logging of offenders' data reflects Foucault's comments on disciplinary measures present in the French penal colony Mettray, the 'disciplinary form at its most extreme, in which are concentrated all the coercive technologies of behaviour':[294]

> A body of knowledge was being constantly built up from the everyday behaviour of the inmates […] "On entering the colony, the child is subjected to a sort of interrogation as to his origins, the position of his family, the offence for which he was brought before the courts and all the other offences which make up his short and often very sad existence. This information is written down on a board on which everything concerning each inmate is noted in turn, his stay at the colony and the place to which he is sent when he leaves." The modelling of the body produces a knowledge of the individual […] inextricably linked with the establishment of power relations.[295]

Elsewhere in *Discipline and Punish*, Foucault observes that modern disciplinary methods, while being far removed from the 'spectacle' of historical public executions which break down the accused's body, are now focused on the loss of liberty which facilitates more subtle, low-level forms of bodily torture. This 'reduction in penal severity' gives way to punishment 'becom[ing] the most hidden part of the penal process', creating a new 'political anatomy' that is subjected to 'power that explores it, breaks it down and rearranges it'.[296] This process of rearrangement is the underlying principle of the model of the surveillant assemblage, as a person's body is reduced to digital data, captured, reassembled and channelled into different data flows, creating the foundation from which instrumentarianism derives its power. However, what the structure of *Moxyland* reveals is that the enmeshment of the disciplinary system with the societal network means that existing in spaces beyond the margins of instrumentarian knowledge - either physically, by being excluded from certain spaces inside the city, or in other ways by cutting off access to digitised currency and communication networks - constitutes a highly effective form of punishment. Beukes presents a society where visible,

[292] Ibid.
[293] Beukes, p. 58.
[294] Foucault, p. 334.
[295] Ibid.
[296] Foucault, p. 163.

physical punishments have also been recently re-introduced as an accepted part of the criminal justice system: 'the tech was only approved, what, eighteen months ago?'[297] Consequently, there is virtually no space in the new Cape Town that is not subject to the disciplinary whim of the corporation, including through institutional channels of police brutality, and by the process of expulsion from the digital public sphere. While Zuboff insists that the power of the current regime lies in its non-violent and understated modes of oppression and manipulation - 'operat[ing] more like a taming' that results in 'less personal control and more powerlessness'[298] - what we actually see unfolding in fictionalised South Africa is a dystopian combination of 'violence directed at our bodies' under state exceptionalism and exclusion, and the extinction of the 'will to will' through social media.[299] These modes of exploitation serve the same ends of the neoliberal regime, as the state takes the most financially expedient routes to manipulate and coerce its population by breaking down both the data self and the physical body simultaneously.[300] Since Zuboff does not consider Foucault's historical account of discipline or the potential coexistence of several different methods of control in her text, her assertion that instrumentarianism constitutes a novel system - and, in turn, the political route she frames as a preferable alternative - becomes increasingly unstable.

Tendeka's incident report highlights the need to recontextualise instrumentarianism and discipline in light of groups who are included and excluded from the digital public sphere, gesturing beyond the straightforward axes of power and visibility delineated by Marquez. In Beukes' representation of a future digital penal system, the 'trace of torture' present in physical deprivation is no longer exerted through imprisonment but instead through disabling the offender's phone SIM.[301] Tendeka attempts to pay for a taxi, only to find that his 'wallet is locked out along with all the other functions on [his] phone.'[302] Physical cash is therefore shown to become obsolete in order to force citizens to use currency accessed through their digital devices, which enables a more efficient 'economy of

[297] Beukes, p. 63.
[298] Zuboff, p. 515.
[299] Ibid.
[300] Zuboff, p. 107.
[301] Foucault, p. 34
[302] Beukes, p. 64

suspended rights' than the prison system Foucault presented by simply switching off a person's entire independent livelihood.[303] In *Moxyland*, 'disconnect' not only refers to the punishment carried out by the state for an offence, but is also used as a term to mark the untouchable social class of people who have permanently had their SIMs revoked. To be 'disconnect' is to exist in a state of total societal exclusion: 'You can't play nice by society's rules? Then you don't get to play at all. No phone. No service. No life.'[304] The juxtaposition of smartphones as a superficial luxury for the purposes of entertainment and leisure with smartphones as a precondition for basic rights in the city-state sheds light on the online space of appearance as a compulsory zone. Far from the site of collective, equalising visibility as Arendt envisioned it, gateways to public space are now easily policed.[305]

This feature of Beukes' text opens up an interesting way to reflect on Zuboff's strict separation of the terms 'instrumentarian' and 'totalitarian'. Zuboff writes that totalitarianism initially gained the traction to 'reconstruct' humanity through 'the dual mechanisms of genocide and the "engineering of the soul", whereas the 'utterly distinct' methods of instrumetarianism 'have no interest in murder or the reformation of our souls.'[306] However, as we see in *Moxyland*, the process of exclusion from the digital sphere - which is, like other forms of political community, dependent on the operation of movement into and out of it - presents an important element of instrumentarianism that Zuboff does not identify. The 'disconnects' of Moxyland recall the forms of 'social death' identified by Orlando Patterson in his account of the dynamics of slavery, which operate as a 'conditional commutation' of a death sentence - whether that death is through 'violence', 'punishment', 'exposure' or 'starvation.'[307] Patterson writes that the figure of the slave 'had no socially recognised existence existence outside of his master, [becoming] a social nonperson'.[308] We therefore can identify the capacity for 'murder' implicit in the exclusionary tendencies of instrumentarianism. This is taken a

[303] Foucault, p. 28.
[304] Beukes, p. 47.
[305] Ibid.
[306] Zuboff, p. 353.
[307] Orlando Patterson, *Slavery and Social Death: A Comparative Study* (Cambridge, Massachusetts: Harvard University Press, 1982) p. 5.
[308] Ibid.

step further in light of Claudia Card's reflections on the relationship between social death and genocide, invoking the concept to describe the 'special evil' of the social and physical deaths caused by the Holocaust, 'producing a consequent meaninglessness of one's life and even of its termination.'[309] The absence of social and political identity for those permanently disconnected in *Moxyland* is presented in a similar manner, as physical death becomes an eventual consequence of life outside of the 'commerce loop.'[310] The implications of totalitarian and instrumentarian systems are therefore shown to have a great deal more overlap than Zuboff would have it.

Turning our attention to the 'excluded' zone of life under surveillance capitalism raises a number of other questions about the concepts Zuboff uses to advance her argument. The concept of 'exceptionalism', originally introduced by Carl Schmitt and developed in Agamben's influential book *State of Exception*, is a highly useful term for Zuboff. It captures the instability of privacy laws caused by the strengthening of partnerships between the U.S. government's Electronic Privacy Information Centre, the NSA, and the electronic 'business community', manifesting as a 'sudden reversal of privacy concerns' following the events of 9/11.[311] What Zuboff omits from her interpretation of Agamben is the fact that his text was primarily concerned with citizenship and the human cost of state exceptionalism, which enabled a 'physical elimination not only of political adversaries but of entire categories of citizens who for some reason cannot be integrated into the political system'.[312] While Zuboff does not consider this underpinning aspect of Agamben's logic necessary to her explanation, it is in fact deeply relevant to her view of alienation from 'home' through digital means; Beukes' characterisation of the existence of 'disconnect' communities explores the varied impact of surveillance capitalism and state exceptionalism, both of which rely upon the existence of the distinctive classical figure of '*homo sacer*' invoked in Agamben's other major texts.[313] Tendeka expresses a constant terror of having his rights removed through disconnection due to the risks of his

[309] Claudia Card, 'Genocide and Social Death', *Hypatia* 18.1 (2003) 63-79 (p. 73).
[310] Beukes, p. 91.
[311] Zuboff, p. 114.
[312] Agamben, p. 2.
[313] Giorgio Agamben, *Homo Sacer: Sovereign Power and Bare Life* trans. Daniel Heller-Roazen (Stanford: Stanford University Press, 1998)

work: 'we're talking relegated to homeless, out of society, […] no phone.'[314] In *Moxyland*, smartphones are therefore directly tied to *bios*, or active, political life; this is reflected in its capacity to provide users with access to the digital and real public spheres through its range of functions.[315] *Zoe*, on the other hand, refers to 'bare life', or purely biological life; citizens typically hold both kinds of life in Agamben's view. *Homo sacer* – meaning, in Agamben's interpretation, 'destined to die' - refers to the political tradition by which individuals are stripped of their *bios*, usually through the removal of citizenship, and forced into a 'zone of indistinction between outside and inside, chaos and the normal situation',[316] pertinently represented by a refugee camp – or, in *Moxyland*, the 'Rural', where technologically disenfranchised communities constantly attempt to gain entry into the city-state: 'You can't keep all of the Rurals out all of the time.'[317] While a departure from conceptions of citizenship which are tied to the 'old trinity [of] the state, the nation, and land' could potentially have implications for Agamben's vision of transformations to the constitution of nation-states which he envisioned unfolding 'into the new realities and unforeseen convergences of the end of the millennium' and beyond, the digital evolution of citizenship presented in this text only appears to tether it more explicitly to other oppressive value hierarchies.[318]

While Agamben's formulation fails to consider the significant implications of race, gender, and other social hierarchies, the process of *homo sacer* offers a useful metaphor for the invisible victims of instrumentarian power. The concept has significant implications for populations who are harmed by the technologically empowered state, but restricted from active participation within its legitimate spaces. *Moxyland* offers an example of *homo sacer* that is located in a context of increased technological capabilities, where effective political life can only be realised through a space of appearance that is bound up with other technologies geared towards reducing people to their bare biological data through vertical processes of tracking, analysing, collating, and sharing. This is shown,

[314] Beukes, p. 124.
[315] Agamben, p. 9.
[316] Agamben, p.19.
[317] Beukes, p. 66.
[318] Agamben, p. 13.

again, in Tendeka's incident report, which prioritises his biological details before ascribing numerical values to him. The combination of the extreme upper limit of both empowering and oppressive visibility transforms social capital to take on a form that is solely driven by political and economic demands. Although the report lists Tendeka as 'Married' to 'Emmie Chinyaka. Malawi national. 3/7/2018', it is soon revealed that he is actually gay; his marriage to Emmie is purely for appearance as she is a pregnant refugee, 'living hand to mouth with […] Emmie's baby on the way'.[319] Superficially, this highlights the urgency of citizenship within the text's fictional city and speaks to Tendeka's complexity in spite of the dangerous, two-dimensional image of him encoded in his administrative data. However, it also reveals just how deeply transactions have come to pervade life in Beukes' vision of 2018, in order to appear to fit into normalised roles and escape disconnection and persecution. Tendeka's partner Ashraf dislikes that he wears a wedding ring to convince 'Home Affairs' of the legitimacy of his marriage, suggesting that his other 'transgressions' including 'not being female-inclined' would have far worse consequences if they were discovered by the authorities.[320] It is therefore implied that only heteronormative relationships are legal in *Moxyland*, reinforced by the absence of a 'Sexuality' field within the incident report's personal data.[321] While Tendeka therefore holds at least a provisional link to basic rights and forms of political life despite being unfairly targeted for his race, he is forced to balance a public, institutionally-sanctioned relationship with a hidden one to protect him from being excluded by way of disconnection. Tendeka provides Emmie with citizenship in exchange for her cooperation in obscuring his sexuality, especially since her pregnancy makes the relationship credible. It is further revealed later in the text that Emmie has agreed to give her baby to Tendeka and Ashraf when she tries to extort money from them: 'You are not going to put me at risk. And you are not getting our child – your child – deported.'[322] While Tendeka tells Ashraf to '[h]ave some compassion' towards Emmie, he does not seem to realise that his own actions are not motivated by selflessness, but from the opportunity for a

[319] Beukes, pp. 55-62.
[320] Beukes, p. 68.
[321] Beukes, p. 55.
[322] Beukes, p. 166.

bargain within a state whose very citizenship relies upon hollow transactions.[323] The text's presentation of *homo sacer* as an experience shared by people who are geographically or legally prohibited from active political life, and those who are stripped of their political life within legitimate state borders, reveals that the central question of our time is not always 'home or exile' as Zuboff contends. For many, it is much more often a case of adherence to the neoliberal regime – the exile Zuboff conceives of - or social and physical death.[324]

The fact that Beukes specifically anchors the text's action in 2018, ten years on from its year of publication, is significant, as are the references to historical events that sketch out a political history of the fictional Cape Town. Tendeka points to the physical relics of apartheid represented by the 'tin shacks' and 'converted shipping containers' which are still inhabited and built upon by the city's poorest, viewing the lack of change apathetically: 'The same shit they've been promising to fix since the 1955 Freedom Charter or whatever it was.'[325] In this timeline, the aftermath of the AIDS epidemic has led to the appearance of numerous dedicated orphanages and 'corporate skills schools' for 'Aidsbabies'.[326] Most apt for our current scenario in 2020, a mysterious virus has infected the populations of the external 'Rural' expanse of South Africa, which exacerbates all of the existing institutional inequalities and brutalities: '[refugees] are sick as well, or, worse, trying to escape being sick and bringing it in with them from the Rural. And that leads to spates of outbreaks all over and crackdowns, just as bad as those bad old days when the police came storming in to quarantine and deport whole neighbourhoods.'[327] The virus operates on a symbolic level as a marker of *homo sacer* in the text, as being infected becomes synonymous with being undesirable within the state and therefore destined to die outside its borders. This is reinforced when an ambiguous strain of the virus is deployed as an experimental riot control method to suppress a group of 'terrorists' in a busy train station: 'Repeat. Do not be alarmed. The M7N1 Marburg variation is only fatal if you do NOT report

[323] Beukes, p. 68.
[324] Zuboff, p. 3.
[325] Beukes, p. 66.
[326] Beukes, p. 191.
[327] Beukes, p. 67.

to an immunity centre for treatment within 48 hours. […] Vaccination is a free service offered by the South African Police Services.'[328] Duncan has written on the importance of surveillance and particularly biometric monitoring to the preservation of national boundaries in South Africa:

> Borders are integral to the practice of surveillance. Borders help to define a 'them' and an 'us', where 'they' are subjected to surveillance to prevent contamination with 'us'. To that extent, surveillance is central to national identity management […] framing migration as a problem to be controlled, rather than as a basic human right and a resource capable of enriching a country's socio-economic life.[329]

The 2020 coronavirus pandemic brings the relevance of Beukes' insight into an even more urgent context, as the various binaries of 'included/excluded' present within the zone of indistinction are concentrated into the explicit categories of 'safe' and 'threat', compounding the Othering of already-marginalised individuals. Beukes' representation also reflects the impact of public health crises on technologically excluded, 'disconnect' communities, as the absence of reliable information sources poses the greatest danger to people through a 'circulation of misinformation, provoking fear and uncertainty'.[330]

Characters in *Moxyland* do not possess the level of malleability or single-mindedness demonstrated by Mae, but pre-determined, state-sanctioned pathways continue to obliterate individual autonomy in Beukes' representation. Kendra experiences a markedly increased level of social privilege compared to Tendeka; she is never subjected to corporal punishment and enjoys access to wealthy spaces due to her status as a 'shiny brand ambassador.'[331] However, this status comes at a price. The genetic 'nanotechnology' provided by her sponsor forms a '[v]oluntary addiction with benefits' as it triggers an intense high every time she consumes the brand's products: 'the girl is flying now, or drowning, in all the opiate happiness the body can generate: endorphins, serotonin, dopamine, the Ghost binding

[328] Beukes, p. 289.
[329] Duncan, p. 165.
[330] Marie Penelope Nezurugo and Sameera Hassan, *On World Refugee Day, a look at how COVID-19 is affecting refugees and asylum seekers* (2020) [Accessed 5 July 2020] <https://www.weforum.org/agenda/2020/06/world-refugee-day-refugees-asylum-seekers-coronavirus-covid-19-pandemic-response/>
[331] Beukes, p. 22.

with her aminos.'[332] Kendra's real purpose is therefore to promote the product's capabilities to replace other kinds of substance abuse to young, poor communities: 'You'll never afford this high on your own change.'[333] The mutation functions as an explicit symbol of Kendra's privilege within the white supremacist regime as it protects her from the 'new outbreaks, new strains' of the epidemic: 'It's probably the last time you'll ever get sick.'[334] However, this privilege also transforms her into 'just as much proprietary technology', literally owned by the company on a genetic level.[335] Control over Kendra's body is nuanced, with small acts of coercion and violence that tread the boundary of consent, herding her towards choices which resonate with Mae's narrative arc. Kendra is intensely self-aware of the way her circumstances have been targeted and exploited, 'still reeling from the purgatory of dropping out, my dad's cancer, wondering how I got here.'[336] She observes the activity that happens to her dispassionately and objectively, reflecting her 'documentary' style of photography: 'the bio-sig pen I signed with (here, and here, and here) had microscopic barbs in the shaft that scraped skin cells from the pad of my thumb to mix with the ink. Signed with blood. Or DNA, which is close enough.'[337] Moments after signing the contract, Kendra is prevented from being able to change her mind: '"What did you have for breakfast?" says Dr Precious unexpectedly. Before I can think to answer, […] she snaps the autosyringe against my arm like a staple gun.'[338] This is remarkably similar to an interaction Mae has with the Circle's in-house medical team, when a doctor asks her, 'Can you drink this? […] Okay, you just ingested the sensor that will connect to your wrist monitor'.[339] The allegiance of technology and culture which work upon one another to 'consistently put women's bodies on display' is highlighted here,[340] with both women being nudged through low-level violence and biological manipulation into spaces of intense visibility for corporate marketing purposes, while being fed the message that their role is consensual, empowering and rewarding –

[332] Beukes, p. 50.
[333] Ibid.
[334] Beukes, p. 29.
[335] Beukes, p. 23.
[336] Beukes, p. 27.
[337] Beukes, p. 26.
[338] Beukes, p. 29.
[339] Eggers, p. 87.
[340] Rachel E. Dubrofsky and Shoshana Amielle Magnet, *Feminist Surveillance Studies* (Durham: Duke University Press, 2015) p. 10.

'Making history, babes.'[341] In *Feminist Surveillance Studies*, Rachel E. Dubrofsky and Shoshana Amielle Magnet write that women are 'framed as empowered and agentic' when they 'voluntarily' place themselves within the digital space of appearance, such as displaying images of themselves on social media, but crucially for the hyper-consumerist environment of *Moxyland*, 'age-old sexist and racist tropes persist when self-fashioning in a consumer context is configured as a form of empowerment and active invitation of the male gaze is imagined as a form of agency.'[342] When Toby attempts to film her without her consent for his live stream, she quickly takes a photo of him: 'the camera catches me unawares […] I'm too preoccupied, caught in the flash, to catch the make.'[343] In this way, whilst Eggers is reticent to explore the gendered implications of Mae's movement towards 'transparency' at the end of his book, Beukes confronts these themes head-on, providing Kendra with the tools to resist - even if only superficially - by reflecting the panoptic and patriarchal gaze back through her photographic skill. Kendra's perception of oppression, like Tendeka's, comes from the blatant hostility of her environment which is not present in *The Circle*. Nevertheless, knowledge of the problem only offers her limited protection to violence, drawing the conclusions of Eggers' text into question.

Along with disconnection and infection from outbreaks, drug addiction is evidently another form of social exclusion rife in *Moxyland*, operating as a conduit for social control which carries Foucault's logic of the disciplinary system even further away from the 'trace' of direct physical violence enacted upon the body yet retains its fundamental logic.[344] Individuals are technically only 'deprived' through removal of the substance or stimulus, which can be justified through society's moral and legal objection to substance abuse.[345] Kendra's privileged access to power within the space of appearance is conditional upon her continued addiction; when she is no longer of use to the elite, it is suggested that she is euthanised like an animal. As Dr Precious prepares to inject her with a chemical that she claims

[341] Beukes, p. 176.
[342] Dubrofsky and Magnet, p. 11.
[343] Beukes, p. 63.
[344] Foucault, p. 34.
[345] Ibid.

is a ‘vaccine’ against the virus spread into the community by police, Kendra begins to question the fate of the similarly bioengineered police dogs when they are no longer able to fulfil their function. ‘“What happens to the dogs afterwards?” […] “It’s our intellectual property. It’s very closely guarded. They put the dogs down.”’[346] Although Kendra is initially protected from the virus that kills Tendeka, this protection is taken away as soon as it is discovered that she has transgressed the boundaries of her visibility as brand ambassador by associating with people exposed to it, revealing her limited role as a conduit for profit-making systems.

While Kendra and Tendeka are killed, the juxtaposition of the other two characters Lerato and Toby epitomise the divide between instrumentarian pathways for different individuals: Beukes positions a life lived within corporate control as a fate worse than the social death of disconnection, because at least disconnects are ‘liberated […] from the swirl of the city’.[347] When Lerato is caught ‘steal[ing] data’ to aid Tendeka, her employer reveals that they have permitted her to trangress the rules to capture incriminating information on her, ‘giv[ing] me just enough rope to loop around my neck.’[348] After destroying every ‘meaningful relationship’ she has, the corporation ‘creates [their] own terrorists’ to keep the state ‘under terrorist threat’ where ‘any action is justified.’[349] Lerato is offered two options: execution, or a promotion. The new role involves identifying potential subversives online and radicalising them, before putting an end to their schemes - presumably by executing them in the same manner as Tendeka. As a result, there are only three possible routes presented for identities outside of the norm of the straight white male in post-apartheid Cape Town; corporate enslavement, social death, or physical death. While the artificial sphere that this occurs within may constitute a unique feature of capitalist technological development, the surveillance-based exploitation that percolates within it is far from novel, redeploying established strategies for the purposes of disciplining labour in different guises.

[346] Beukes, p. 307.
[347] Beukes, p. 290.
[348] Beukes, p. 303.
[349] Ibid.

In the literary analyses this dissertation has undertaken so far, we see two facets of a potential instrumentarian future under surveillance capitalism. The ideological and institutional structures of the worlds presented deploy different strategic social interventions, yet both universes represent democratic nations which disintegrate under technological advancement and the lure of surveillance revenues, arriving at different but equally invasive forms of totalitarian rule. *The Circle* offers a limited insight into the social accelerations of the digital public sphere and the actualisation of some of the most salient observations made in *Surveillance Capitalism*, revealing the emergence of the artificial sphere, where the public/private distinction is blurred and the factory emerges outward into the rest of society, transforming the terms of employment and work. We can identify that this space certainly does offer new opportunities for exploitation and subversion as Arendtian currents of appearance are shaped by Foucauldian countercurrents of surveillance. Although the logic of instrumentarianism set out by Zuboff is particularly well-equipped to extract profit from the data rendered vulnerable by such a space, her positioning of the concept as a novel moment in the trajectory of technological development - a moment unilaterally responsible for the deconstruction of democracy - prevents her from undertaking a critical assessment of liberal democracy itself. Beukes applies a series of different lenses to the new landscape, recasting the question of instrumentarianism's supposed originality against a broad collection of racial, gendered, and colonial modes of exploitation that persist under an authoritarian neoliberal regime. In so doing, Beukes cynically exposes Zuboff's reliance upon a provincial conception of liberal democracy that is presumably egalitarian and relatively prosperous for those living beneath it. Having assessed the key terms of Zuboff's argument, and having explored some of the ways we can reflect on the challenges the 'digital milieu' poses, I will now turn my focus to the concluding chapters of *Surveillance Capitalism* to understand where Zuboff points us toward in her formulation of an 'exit' out of the dystopian world she describes, before exploring some alternative directions.[350]

[350] Zuboff, p. 15.

Chapter 4 - An exit out of the 'hive': post-apocalyptic reflections on capitalist acceleration

As we now understand, Zuboff finds that modern democratic values are in decline because of the precisely digital nature - and subsequent massive scale - of profitable surveillance and data mining that has broken loose from the safety rails of law. *Surveillance Capitalism* claims that the current manifestations of social and economic inequality are symptoms of the ills of digital surveillance, confining its analysis to a very selective historical frame of reference. My initial chapters explored the extent to which Zuboff's instrumentarian society can be understood as an unprecedented and universalising force, concluding that this assertion cannot be reconciled with substantial evidence of established modes of oppressive surveillance that have often been limited to figures of subalterity; Zuboff risks erasing these important precursors in her argument. This conviction is one I share with Greg Sharzer, who writes that such technodeterminism stems from an 'ahistorical, additive account of development factors' that ignores 'capitalism's tendencies of motion.'[351] Morozov, in his more recent reflection on *Surveillance Capitalism*, writes that Zuboff's book lacks a 'robust, theoretically and historically grounded conception of capitalism,', which 'choos[es] some prior stage' before claiming that the current mode 'is a stark departure from the previous one, and that drastic changes in information technology explain the transition.'[352] Morozov claims that Zuboff 'turn[s] to recent history only very selectively, mostly to bolster [her] presentist two-stage schema.'[353] The second half of this dissertation will critically assess the efficacy of Zuboff's conclusions, including her defence of liberalism and her proposal that democracy offers 'our only channel for reformation.'[354] I will explore speculative representations of what reform could look like when limited to the addition and subtraction of 'brand-new' technologies that appear to be responsible for the tyranny of the digital sphere, and the availability of the sphere itself.[355] Over the following chapter, I will explore two

[351] Greg Sharzer, 'Accelerationism and the Limits of Technological Determinism' *Filozofski vestnik* 39.2 (2018) 163-177 (p.164) <https://ojs.zrc-sazu.si/filozofski-vestnik/article/view/7055/6613> [Accessed 18 September 2020]
[352] Evgeny Morozov, 'Digital Socialism? The Calculation Debate in the Age of Big Data' *New Left Review* 116/117 (2019) <https://newleftreview.org/issues/ii116/articles/evgeny-morozov-digital-socialism> [Accessed 10 July 2020]
[353] Ibid.
[354] Zuboff, p. 519.
[355] Zuboff, p. 521.

primary texts which express very different forms of life following economic and environmental cataclysm, offering diverging routes for post-digital societal reconstruction that follow the lines of either extreme technological retrogression or intensified acceleration. To progress in this direction, I will begin by considering Zuboff's conclusions on capitalist technological acceleration against a backdrop of contemporary debates on the broader question of a post-capitalist future, before mapping the different theoretical prognoses onto the political and social coordinates of the literary texts.

Describing instrumentarianism as a 'bloodless coup', Zuboff concludes that her analysis 'instructs us in the irreplaceable value of our greatest moral and political achievements by threatening to destroy them', leaving this information in the hands of 'indignant citizens, journalists, and scholars drawn to this frontier project' to recognise how 'power untamed by democracy can only lead to exile and despair'.[356] She proposes a partial retrogression of technological capabilities, geared towards a retrospective image of 'the long-standing values of market capitalism and market democracy', to intervene in the political crisis of instrumentarianism.[357] In *Surveillance Capitalism*'s rather truncated concluding chapter, Zuboff proposes that under the protections of liberal democracy, 'the debate and contest provided by still-healthy institutions can shift the tide of public opinion against unexpected sources of oppression and injustice, with legislation and jurisprudence eventually to follow.'[358] Beyond catalysing the political will of individuals with an unwavering faith in democratic process, Zuboff's remarks say little about the material and political conditions which must align in order to effectively arbitrate the state of play set out by her book. One significant omission from the concluding chapter is its lack of critical reflection over the characteristically liberal process of exceptionalism, which Zuboff is at pains to express is partly responsible for rise of privacy infringement and data mining; this is particularly troubling when the one clear resolution she subsequently gestures towards rests upon the foundation of liberal democracy. Although Zuboff argues very well for the need for a departure from our current course, her conclusions resist the

[356] Zuboff, p. 514.
[357] Zuboff, p. 504.
[358] Zuboff, p. 519.

possibility of radical alternatives to curtail the dominance of surveillance capitalism and recapture the right to the future tense, which, she suggests, form the bedrock of a functioning democracy. Esposito's argument, introduced in Chapter 3, can be positioned as a challenge to Zuboff's convictions about the steadfast nature of liberal institutions, arguing that the 'horizon' of democracy has 'profoundly and irreversibly changed […] at this point, what is at stake is no longer a simple reform of its institutions; rather, we are faced with a socio-cultural transformation that runs much deeper than our entire political lexicon.'[359] In line with Esposito's view that Europe's 'current, reputedly lethal, [democratic] crisis' should be approached as an 'exceptional opportunity and task that we must face', it is also important to consider the interlinked impact of economic and environmental crises upon the Western political trajectory.

The arguments put forward in Paul Mason's book *PostCapitalism* emerge as a useful counterpoint to Zuboff at this point in her text. Mason approximately identifies the same harms of unrestrained, digital neoliberalism as *Surveillance Capitalism*, but his proposed solutions pull in the opposite direction. Instead of seeing the rise of an information economy as a symptom of 'rogue' capitalism and surveillance-based, instrumentarian dominance, Mason sees the networked infrastructure of this economy as a beacon for radical socialist change in the face of intractable global crises. Mason illustrates two potential scenarios in the wake of digitised neoliberalism where right-wing ideologies continue to hold on to the West: the first sees a world where the 'global elite clings on, imposing the cost of crisis onto workers, pensioners, and the poor' over the coming decades.[360] In this instance, the global order 'survives, but in a weakened form.' The second scenario provides a much more grim view:

> Parties of the hard right and left come to power as ordinary people refuse to pay the price of austerity. Instead, states then try to impose the costs of the crisis on each other. Globalization falls apart, the global institutions become powerless and in the process the conflicts that have burned these past twenty years […] light a fire at the centre of the system. In this scenario, lip-service to international law evaporates; torture, censorship, arbitrary detention and mass surveillance become the regular tools of statecraft. This is a variant of what happened in the 1930s and there is no guarantee it cannot happen again. In both scenarios, the serious impacts

[359] Esposito.
[360] Paul Mason, *PostCapitalism: A Guide to Our Future* (London: Penguin Books, 2015) p. 9.

> of climate change, demographic ageing and population growth kick in around the year 2050.[361]

We can see from these two scenarios, alongside Esposito's perspective, that the sociopolitical and economic conditions required for Zuboff's proposed escape route out of 'a world of "no exit"' are no longer feasible.[362] Mason's forecasted outcomes illuminate the implications of Zuboff's view, before offering an alternative: he suggests that 'the basic forms of a postcapitalist economy can be found within the current system', pointing towards the latent emancipatory possibilities offered by capitalist innovations which offer 'a new route out, which the remnants of the old left – and all other forces influenced by it – have either to embrace or die.'[363] Mason's view can be seen to align to a Left accelerationist tradition whose discourse is broadly characterised by the notion that capitalist technologies and infrastructures can be appropriated and rehabilitated for progressive social projects. Mason repositions Marx's crisis theory to the current landscape of surveillance capitalism within the digital sphere, asserting that the struggle between the bourgeoisie and the working class no longer accurately encapsulates the social relations of the information economy. Instead, Mason asserts that the new relations should be conceived of as a 'fight between network and hierarchy',[364] pointing towards Marx's *Fragment on Machines* to consider the new relationships between workers, information, and technology: 'In an economy where machines do most of the work, where human labour is really about supervising, mending and designing the machines, the nature of the knowledge locked inside the machines must, [Marx] writes, be "social".'[365] Other approaches to Left accelerationism, investigated at length in Benjamin Noys' *Malign Velocities*, envision cataclysm as an inevitable consequence of capitalist and environmental crisis that may enable new egalitarian political forms to emerge, 'follow[ing] [capitalist] lines of flight or deterritorialization to the absolute end, to speed-up beyond the limits of production and so to rupture the limit of capital itself.'[366] Noys rejects this notion, but suggests that its hopefulness for radical change makes the space for a more productive

[361] Ibid.
[362] Zuboff, p. 21.
[363] Mason, p. 8-12.
[364] Mason, p. 133.
[365] Mason, p. 124.
[366] Benjamin Noys, *Malign Velocities: Acceleration and Capitalism* (Alresford: Zero Books, 2013) p. 14.

pathway than the fatalistic notion of unavoidable '"totalitarian" form[s] of social acceleration', whose rhetoric is reflected in the cynicism of contemporary fiction of cognitive estrangement, like the worlds imagined in *The Circle* and *Moxyland.*[367]

Although Zuboff never explicitly draws on the concept of accelerationism within her theoretical approach, she identifies the contradictions of dominant capitalist discourse which position a right-wing formulation of acceleration - which she describes as 'inevitablism' - as a force which 'exerts a momentum that in some vague way drives toward the perfection of the species and planet.'[368] Zuboff firmly rejects all forms 'inevitability rhetoric', including that which would seek to accelerate or appropriate the current technologies in order to break through to a more egalitarian world, as evidence of either a 'weaponized virus of moral nihilism' or a 'cunning fraud, designed to render us helpless in the face of implacable forces.'[369] Despite identifying and denouncing the right-wing presentation of technology as an inherently positive, progressive feature of the capitalist system, Zuboff's book is frequently at risk of buying in to the same narrative. In her historical account of the advent of industrial technologies, she describes the 'first modernity' as an ultimately progressive and liberating event that enabled its attendant generation to undertake a 'modern migration from traditional lifeways'.[370] Zuboff argues that this break in the historical continuum gave way to largely empowering new forms of 'communication, information, consumption, and travel' afforded by modernisation, which she compares to the current break that instead seeks to control and subjugate.[371] Zuboff's linear account of industrialisation is disputed by the historical analysis undertaken by Andreas Malm in his text *Fossil Capital,* who argues that fossil fuels were, in many ways, a step back from the previous technologies, and were introduced as a method of disciplining labour:

> [T]he power derived from fossil fuels was dual in meaning and nature from the very start. […] [Fossil fuels] are, by definition, a materialisation of social relations. No piece of coal or drop of oil has yet turned itself into fuel, and no humans have yet engaged in systematic large-scale extraction of either to satisfy subsistence needs.[372]

[367] Ibid.
[368] Zuboff, p. 225.
[369] Ibid.
[370] Zuboff, p. 35.
[371] Ibid.
[372] Andreas Malm, *Fossil Capital* (London: Verso, 2016) p. 55.

Zuboff's view, in its rejection of accelerationist logic and its dehistoricised technodeterministic view, resonates with a recent observation by Fredric Jameson:

> [S]o much of left politics today - unlike Marx's own passionate commitment to a streamlined technological future - seems to have adopted as its slogan Benjamin's odd idea that revolution means pulling the emergency brake on the runaway train of History, as though an admittedly runaway capitalism itself had the monopoly on change and futurity.[373]

This is in turn a reference to Walter Benjamin's remark that, in opposition to Marx's view that 'revolutions are the locomotive of world history', 'revolutions are an attempt by the passengers on this train – namely, the human race – to activate the emergency brake.'[374] Zuboff successfully reveals the insidiousness of a capitalist utopia of acceleration, but does not place it in the context of a global environment framed by financial, political, and environmental crisis. Her book's conclusions subsequently resemble a version of Benjamin's 'emergency brake' applied to the growth of data capitalism. Emma E. Wilson puts the tensions between acceleration and deceleration another way: 'In opposition to this phantasmic horizontalism—which tends to fetishise the past and wait for the future—accelerationism attempts to reorientate the present. This necessitates utilising tools and processes ordinarily eschewed by the Left.'[375] In Part I of this chapter, I will interrogate the implications of Zuboff's decelerationist view in relation to Atwood's recent novel *The Testaments*, before exploring the accelerationist undercurrents in Morgan's *Altered Carbon*.

[373] Fredric Jameson, 'Dresden's Clocks', *New Left Review* 71 (2011) 141-152 (p. 150).
[374] Walter Benjamin, *Walter Benjamin: Selected Writings, Vol. 4 1938-1940* ed. Michael W. Jennings (Cambridge, MA: Harvard University Press, 2003) p. 402.
[375] Emma E. Wilson, 'Cyborg anamnesis: #accelerate's feminist prototypes' *Platform: Journal of Media and Communications* 6.2 (2015) 33-45 (p. 35).

Part I: *The Testaments*

It is within the postdemocratic enclaves of left-wing accelerationism that we can locate Atwood's recent novel *The Testaments,* and its precursor *The Handmaid's Tale*. The speculative world of Gilead introduced in these texts represents a logical extension to Mason's second scenario: after environmental crisis, the U.S. experiences a seizure of power by a totalitarian fascist state. In Atwood's example, environmental destruction and a worldwide shortage of natural resources causes human fertility and the birth rate to 'free-fall'.[376] The nation is subsequently transformed into a neo-Puritan theocracy whose economy is centred around the enslavement of child-bearing women to increase population levels, as well as forced labour for the purposes of food production and the remediation of polluted land. Crucially for an analysis of Zuboff's argument, the *coup d'etat* occurs during a functioning liberal democracy within a somewhat digitised - but not specifically instrumentarian - cultural environment: in the pre-Gilead society, 'Compucards' and other electronic systems are implied to have acted as both an effective scapegoat for environmental harms and a useful infrastructure for control, ultimately allowing regressive religious factions to win political support: 'Any account with an F on it instead of an M. All they needed to do is push a few buttons. We're cut off.'[377] Set some years after a military coup in which the 'the Sons of Jacob' have overthrown US Congress under the guise of 'reinstat[ing] the Constitution',[378] Gilead strictly divides society along the lines of gender and class, using a fundamentalist interpretation of parts of the Christian Bible as its founding principles.[379] *The Handmaid's Tale* sets out the rules and horrifying abuses to which the people of Gilead are subjected through the eyes of the Handmaid Offred: society is divided into the Commanders of the Faithful, an elite group of men who rule Gilead; the Commanders' Wives; the Econopeople, or politically insignificant underclass; Marthas who serve the households of the wealthy; Angels and Guardians, who provide a military presence and visible surveillance network, and Eyes, who operate as secret police; and finally the Aunts, who oversee the indoctrination and

[376] Margaret Atwood, *The Testaments* (London: Chatto and Windus, 2019) p. 174.
[377] Atwood, *The Handmaid's Tale* (London: Vintage Digital, 2012), Kindle edition, p. 178.
[378] Atwood, *The Testaments*, p. 66.
[379] Atwood, p. 408.

discipline of all Gilead's women. Women universally lack any influence or stake in the wider community beyond the domestic sphere, and are forbidden to read or write. The post-apocalyptic dystopia set out by Atwood questions Zuboff's vision of a partial technological retrogression, as it maps out the impacts of environmental and economic crisis upon the 'still-healthy' liberal institutions *Surveillance Capitalism* gestures towards.[380] The result is a landscape where even the most basic information technologies are treated with suspicion and are carefully regulated - yet social inequality is diabolically magnified.

Like a negative photographic image, Gilead offers an inverted vision of surveillance capitalist society. Many of the hidden abuses of liberal exceptionalism which are often overlooked are subsequently amplified in Atwood's texts: for example, the social category of Handmaids shines a light on the biopolitical implications of U.S. poverty policies which manipulate female reproductive rights, articulated by Anna Marie Smith as 'an extraordinarily invasive form of sexual regulation […] introduc[ing] the question of eugenics.'[381] Where Smith's essay draws upon Agamben's political theory to reflect on the state's attempts to limit single welfare mothers to 'participation in the low-wage labor force' as 'negative eugenics', the inverted picture shown in Atwood's texts presents practices of state-enforced population boosting as a kind of 'positive eugenics', rendering marginalised women vulnerable in both cases.[382] Gilead therefore serves as a hypothetical space which is well-suited to the task of testing out the shortcomings of Zuboff's position, as it provides a fictional case study of an extreme version of the argument that is only implicit in Zuboff's text: that pulling the 'emergency brake' of digital acceleration, isolated from its context within the history of capitalism, will spontaneously bring about the egalitarian change that is needed.[383]

[380] Zuboff, p. 519.
[381] Anna Marie Smith, 'Neo-eugenics: Feminist Critique of Agamben' *States of Welfare* <https://arcade.stanford.edu/occasion/neo-eugenics-feminist-critique-agamben> [Accessed July 1 2020]
[382] Ibid.
[383] Jameson, p. 150.

Like the surveillance capitalist landscape articulated by Zuboff, social organisation in Gilead is premised upon an enormous disparity of knowledge between the ruling elite and the rest of society. Commanders are the only group with access to 'Computalks', one of the few remnants of a national electronic communications system which is used to monitor population data.[384] Biological information is stored in the heavily guarded 'Bloodlines Genealogical Archive', a 'set of files, accessible only to a very few', which contains the 'secret histories' of the ruling families of Gilead and the Handmaids which bear their children.[385] Through its religiously-mandated surveillant assemblage, Gilead's social relations recreate a different kind of collapsed public/private artificial sphere - artificial by virtue of the totalitarian physical and psychological brutality that prevents its citizens from collective action and power. Even in the absence of digital life, Gilead operates a sphere in a similar manner to our own, resisting 'topological analysis' as it collapses all action into the singular surveillant space of 'Big Other'; a notable feature of *The Handmaid's Tale* which is continued in *The Testaments* is the separation of social groups by the colour of their uniform, with Handmaids wearing 'white wings' that 'keep us from seeing, but also from being seen.'[386] Within this person-to-person, interconnected authoritarian Panopticon, genuine intimacy, connectivity and political action with others in the public sphere is impossible; the only impression of a public sphere the women narrators can access is through their internal monologue with their imagined reader or listener, foreshadowing the eventual forms of collective action women attain by re-acquiring literacy skills.

The Testaments traces this transition through a post-apocalyptic, post-digital world through the testimonies of three characters that are only alluded to in *The Handmaid's Tale*: Aunt Lydia, the tyrannical leader of the Aunts whose role is to continually reinvent new discourses to manipulate the population of women in Gilead; Agnes, Offred's eldest child from the pre-Gilead period; and Baby Nicole or Jade, who is the product of Offred's pregnancy at the end of the first book. In the

[384] Atwood, p. 434.
[385] Atwood, p. 35.
[386] Atwood, *The Handmaid's Tale*, p. 8.

intervening years, Agnes is placed within a high-ranking family as a Daughter, whereas Nicole is smuggled out of Gilead and raised in Canada by undercover operatives belonging to the 'Mayday' resistance movement.[387] One of the most useful areas of analysis in *The Testaments* is its presentation of the appropriation of the dominant regime's oppressive and 'forbidden' technologies to uncover possibilities for rebellion and revolution, following a similar path to Mason's left-wing accelerationist perspective which calls for the 'asymmetry' of 'info-capitalism' to be flipped upside down through the collective strength and knowledge of the network, 'allowing us not just to dissent, but to secede and start a new alternative.'[388] The ability to subvert and undermine patriarchal systems of surveillance through intelligence gained within a sphere of disempowerment and illiteracy forms the crux of *The Testaments,* as literacy and other older technologies produce opportunities for covert spaces of appearance across the artificial boundaries of Gilead's surveillant assemblage. As women have experienced the most dramatic fall from relative political enfranchisement and access to knowledge in Gilead, their participation in the political life is mediated on biopolitical grounds: 'It was always a cruelty to promise [women] equality,' Commander Judd tells Aunt Lydia, 'since by their nature they can never achieve it. We have already begun the merciful task of lowering their expectations.'[389] Unlike the process of exception seen in *Moxyland,* where women and minorities retain agency and political rights until the point at which their participation in active political life is revoked as part of a *de facto* system of control, women in Gilead are prevented from *bios* or political life as a legitimated feature of their role in society.

This absence of political life ends up being a powerful resource: the establishment of borders around literacy, constructed to maintain deep asymmetries of knowledge and power, forces women to communicate and negotiate with one another in different ways. While the patriarchal institutions of surveillance represented by the Angels and the Eyes preserve a distinctly Foucauldian and patriarchal space of surveillance in Gilead, implementing 'eyes, eyes, eyes, all over' to maintain authority,

[387] Atwood, *The Testaments,* p. 122.
[388] Mason, p. 334.
[389] Atwood, p. 174.

Marthas and Wives develop their own currency of local intelligence in order to leverage social power.[390] Reciprocated secrets and favours form an amorphous kind of underground information economy, capitalised upon by the Aunts whose roles in managing women provide them with the greatest access to confidential information: 'How did the Marthas know who was where? They didn't have Computalks […] news flowed among them as if along invisible spiderweb threads.'[391] In addition to this, Gilead erases the 'profoundly self-sacrificing love' upon which national identity relies, as the absence of literary materials and physical collectivity shrinks womens' 'imagined community' down to their localised social group where political collaboration and resistance can be fostered.[392] These shifting conceptions of space and community recall one of Mason's fundamental arguments in his approach to accelerationism, which holds that '[b]y creating millions of networked people, financially exploited but with the whole of human intelligence one thumb-swipe away, info-capitalism has created a new agent of change in history: the educated and connected human being.'[393] While Gilead is, as we have seen, an inversion of digital, interconnected society, the same principle Mason is describing can be seen at work in its 'sphere for women', where a structure created for the purposes of preventing access to information that might threaten the ruling order actually provides an environment conducive to collaboration and resistance, operating beneath the line of sight of Gilead's authorities.[394]

Lydia's task for the duration of the book is to record incriminating information taken from the women's sphere, collate it within a 'document cache' of 'explosive' potential, and send it to Mayday operatives in Canada.[395] In the absence of tools for communicating large pieces of information across borders, Lydia uncovers older ways of transferring data which the literate Eyes and Angels cannot immediately recognise. One example is the 'Micro-Dot camera', a Cold War-era intelligence technology which 'reduces [documents] to microscopic size' in order to be hidden in an innocuous

[390] Atwood, p. 272.
[391] Atwood, p. 232.
[392] Benedict Anderson, *Imagined Communities* (London: Verso Books, 2006) p. 141.
[393] Mason, p. 9.
[394] Atwood, p. 332.
[395] Atwood, p. 398.

object.[396] Communication between Lydia and Mayday is facilitated via microdots attached to the propaganda materials of Gileadean missionary women, bypassing Gilead's security specifically because the younger generation of women cannot read: when the Eyes become aware of the existence of microdots, they become preoccupied with 'inspecting shoes and undergarments' instead, wasting valuable time.[397] Towards the end of the text, Aunt Lydia implants a final micro-dot into a tattoo on Nicole's arm and sends her into Canada in the disguise of a missionary. That the document cache, an extensive accumulation of texts explicitly marked as women's knowledge sourced from the private, domestic communication network, is literally hidden and stored within the female body is a potent symbol for this kind of resistance: Gilead's readiness to enforce strictly separated roles for men and women renders its authorities blind to the opportunities for transgression which these separated roles and spaces of bare life essentially create. In a world where the written word is banned and treated as a corrupting force, the spoken word becomes dangerous instead, signalling towards useful latent technologies and modes of collectivity which become more effective as a result of the artificial sphere's oppressive existence.

To a certain extent, this reading helps to expand Zuboff's view beyond the limitations her conclusions place upon the broader potential of the book. The 'electronic text' set out by Zuboff is the foundation of the digital public sphere and a major barrier to the general public from being able to own their data and undermine the 'God view', a behaviourist concept which Zuboff claims is currently occupied by surveillance capitalist companies, providing them with a 'reliable prediction [of] the performance of all the people in the network.'[398] Reading *The Testaments* in this context, we can understand that the process of acquiring the kind of literacy required to access the electronic text and the data it contains about us - represented by the 'Bloodlines Genealogical Archives' - is a key step in dismantling instrumentarianism.[399] The sharing of information to facilitate access to this data within Gilead's system through women's information networks propels the resistance narrative of the text, offering

[396] Atwood, p. 140.
[397] Atwood, p. 347.
[398] Zuboff, pp. 418-434.
[399] Atwood, p. 35.

examples of political subversion based upon relationships of collaboration across boundaries. As Agnes shifts from the role of a Daughter to an Aunt during the second half of the book, she is taught to read and write like other Aunts, provoking her to transform her radical 'thoughts into action':[400] 'All the secrets I had learned, and doubtless many more, would be mine, to use as I saw fit. All of this power. All of this potential to judge the wicked in silence, and punish them in ways they would not be able to anticipate.' [401] Lydia leaves key pieces of information in files for Agnes to decode in the Archives, revealing to her the violent circumstances of her upbringing in Gilead as the child of a Handmaid, grooming her into the role of a political subversive.

Lydia's gradual manipulation of Agnes is facilitated by a phase of intellectual empowerment, presented by Atwood as a precursor to revolutionary action. For Claire Bélisle, the evolution of literacy skills into those required to negotiate computerised tools and information have deeply 'disruptive' qualities which constitute a 'digital knowledge revolution […] severing links that hold institutions together, toppling established assumptions about reality and de-legitimizing dominant power structures.'[402] Here, we see some clear resonances between *The Testaments'* understanding of literacy as a revolutionary force and Zuboff's conception of the 'electronic text' as an obstacle to emancipation under instrumentarianism.[403] Data leaks are one facet of a broader anti-surveillance movement that provide some evidence of this process in action: Edward Snowden's disclosures as an NSA whistleblower, which 'exposed the wholesale surveillance of the American public by [its] intelligence agencies', serves as a prominent example from the past decade.[404] Proficiency of the electronic text is thus re-enacted through Agnes' reading skills, positioning capitalist technologies as resources that can be rehabilitated for progressive projects. These activities go beyond the liberation of information detailed in Mason's text, aligning more closely to the ideas set out in Alex Williams

[400] Mason, p. 16.
[401] Atwood, p. 309.
[402] Claire Bélisle, *Literacy and the Digital Knowledge Revolution* (2006) <https://www.researchgate.net/publication/278745156_Literacy_and_the_digital_knowledge_revolution> [Accessed 1st September 2020]
[403] Zuboff, p. 181.
[404] Chris Hedges, 'The Martyrdom of Julian Assange' in *In Defense of Julian Assange ed. Tariq Ali and Margaret Kunstler* (New York: OR Books, 2019) 3-7 (p. 7)

and Nick Srnicek's *Accelerate Manifesto*, which asserts that the 'tools to be found in social network analysis, agent-based modelling, big data analytics, and non-equilibrium economic models' are 'necessary cognitive mediators for understanding complex systems like the modern economy' in which we must 'become literate.'[405] Where Zuboff argues for institutions to curtail the onward development of digital capitalist innovation as a response to the disparities of power emerging out of it, Atwood is able to develop beyond this as she reveals opportunities for reappropriation, suggesting that we should grasp the chance to master the technologies of our oppressors in order to expose their internal contradictions and undo them.

What Atwood achieves by focusing in such depth on the redemption of Aunt Lydia through her subversive information-sharing nevertheless limits the book's ability to adequately build upon the strategies of resistance used by virtually every other character in the novel. While Sophie Gilbert writes that Atwood 'challenge[s] systems of power by giving voice to the voiceless', it becomes increasingly clear as the text wears on that the Atwood only gives a voice to those who serve structurally useful purposes to the text's plot.[406] *The Testaments* has a tendency to conceive of resistance only within the remit of a residual sense of liberalism, revealed through Atwood's use of a number of formal strategies that facilitate progressive routes outward for the characters. These interventions ultimately render the underpinning philosophy of the text unconvincing as they are only realised through the presence of contrived elements that do not fit within the worldbuilding undertaken across Atwood's two books. First, and most importantly, is the introduction of a policy in *The Testaments* which does not appear in *The Handmaids Tale* that offers a degree of protection to Daughters growing up in Gilead: if they refuse marriage to the point of attempting suicide, they are permitted to become an Aunt instead. Atwood creates a new social group of the 'Supplicants', or

[405] Alex Williams and Nick Srnicek, *#ACCELERATE MANIFESTO for an Accelerationist Politics* (2013) <https://criticallegalthinking.com/2013/05/14/accelerate-manifesto-for-an-accelerationist-politics/> [Accessed 2 September 2020]
[406] Sophie Gilbert, *Margaret Atwood Bears Witness* (2019) <https://www.theatlantic.com/magazine/archive/2019/12/margaret-atwood-bears-witness/600796/> [Accessed 12 September 2020]

Aunts-in-training, which mean that Agnes and her classmate Becka can be accepted into its ranks.[407] Atwood presents reading and writing as necessary tools for Aunts to maintain their dominance over the other social classes of women; Gilead consequently permits Supplicants to acquire literacy skills as part of their formal training. The placement of a library within Ardua Hall is one of the most incongruous features of Gilead's environment - especially the presence of a 'Forbidden World Literature' section, where 'heretical' texts that have survived the 'enthusiastic book-burnings […] to create a clean space for the morally pure generation' are available for sufficiently indoctrinated Aunts to read.[408]

In a bid to facilitate the complex logistics of the rest of the text's plot, Atwood ultimately presents resistance as a force which cannot have a lasting impact until it is realised through legitimated institutional routeways. That an explicit social category needs to be introduced simply in order for Agnes and Becka to acquire state-sanctioned skills and knowledge, with the secondary effect that those skills happen to be useful for subversion, ultimately means that the radical potential of the space of exception - occupied by all other women in the text - ends up being disregarded and even trivialised by Atwood by her own characters' definitions: 'If you weren't an Aunt or a Martha […] what earthly use were you if you didn't have a baby?'[409] Revolutionary technologies are only appropriated within the parameters of Gilead's strict classification of higher-value women, inadvertently creating a new class structure not based on rank but upon the relative 'enlighten[ment]' of women in Gilead, which crucially can only be achieved through the fulfilment of their role.[410] It is strange, for instance, that the inflammatory information used to deconstruct Gilead comes from the women's network of gossip, but the Aunts and Supplicants do not participate in this network themselves but simply monitor and collect the information for their own political purposes – and are positioned as the heroes of the narrative when they decide to instigate a revolution. This implicitly positions the Aunts as women who hold superior intellectual strength to others - which, considering

[407] Atwood, p. 34.
[408] Atwood, p. 4.
[409] Atwood, p. 81.
[410] Atwood, p. 170.

literacy is explicitly associated with a process of defeminisation in Gilead as Aunts become 'neither female nor male', is a questionable idea to commit to.[411] Despite their subjugated and passive role, Marthas are implied to be even more complicit in the regime than Aunts, as they tend to be 'full and true believer[s]' in the religious ideology of Gilead and are thus more susceptible to betray those around them.[412] Alex Demirović emphasises 'the irreducible space [of] subversion' as the recourse of those 'who do not accept a given order, who have no part, no voice, and no visibility'; a space which '[p]ower, police, hegemony, and the identitary logic of fixed identities will always strive to close.'[413] Despite the fact that spaces of voicelessness and invisibility, enforced by 'fixed identities' and a heavily militarised surveillance structure, pervade the two texts, Atwood chooses to attach key moments of resistance to characters who have a relatively high degree of social capital, and who behave in accordance with their role. The radical potential of spaces of biopolitical exclusion and disempowerment set out in *The Handmaid's Tale* - such as the rare opportunities for collective action that are capitalised upon by Handmaids in an alliance with Marthas - fails to be realised in *The Testaments*. Atwood ultimately commits to institutionally valid, nonviolent forms of resistance - knowledge and education - which fundamentally erase the transformative potential of bare life and reinforce harmful binary stereotypes of uneducated/victimised versus educated/empowered women, and do little to reconstruct alternative forms of democracy and political community.

Like *The Handmaid's Tale*, *The Testaments* emphasises Gilead's invention of Particicutions as a kind of pressure valve for the Handmaids. The community is forced to execute men accused of crimes against women with their bare hands, with visceral descriptions of physical violence: a man accused of rape is 'literally torn apart by seventy shrieking Handmaids […] Fists were raised, clutching clumps of bloodied hair torn out by the roots.'[414] Atwood invokes these graphic images during a Particicution within the final events of the book, interrupting the increasing momentum of the

[411] Atwood, p. 156.
[412] Atwood, p. 285.
[413] Alex Demirović, 'More than Resistance: Striving for Universalization', in *Resistance: Subjects, Representations, Contexts* ed. by Martin Butler, Paul Mecheril and Lea Brenningmeyer, (Bielefeld: Transcript Verlag, 2017) pp. 31-44 (p. 32).
[414] Atwood, p. 279.

microdot narrative trajectory. The positioning of this scene as an antithesis to the progressive, passive work done by Agnes, Nicole and Lydia frames violent protest as an extreme and repulsive act that, at its core, is nothing more than yet another strand of psychological brutality imposed by the state masquerading as an opportunity for justice. The images of crowds of women erupting into 'so much rage' provides an opportunity to investigate forms of protest and revolution from the margins of Gilead's society which are dismissed almost as soon as they are conjured, which is at odds with Atwood's progressive agenda, since we learn from moments in both texts that Handmaids certainly do use violence to change the terms of their oppression. Offred longs for a 'knife', 'sewing scissors', 'garden shears', and 'knitting needles' all throughout her narrative, but is never physically able to access them,[415] so that a later moment in *The Testaments* when 'Commander Saunders had been killed in his study by their Handmaid, using a kitchen skewer' recalls Offred's reactions to psychological and physical torture.[416] Interestingly, the revelations hidden in the secret files of the Archives contradict this logic, as Atwood decides to absolve the Handmaid for something that is now presented as a crime: the Archives reveal that it was Nicole's cruel stepmother Paula - a Wife - who 'skewered Commander Saunders' instead.[417] It is curious that of all the files relating to the violence within Gilead, there are 'none containing the crimes of Handmaids, and none for those of Aunts,' since these files would provide useful insights into the kinds of resistance women are able to attain when they do not have equal access to weapons, tools, and information beneath the patriarchal, militarised surveillance network.[418] Atwood essentially creates a dividing line between the kinds of women who are capable of physical violence and the kinds of women who use psychological and intellectual resistance instead, tying Wives, Marthas and Econopeople into a monolithic figure of evil through their 'crimes'. While Gilbert perceives that Atwood 'refuses to endorse any ideal of feminist solidarity or unified victimhood', it appears that the text ultimately reifies strict victim/villain boundaries even as Aunt Lydia's duplicity attempts to dismantle them: 'You yourself would never

[415] Atwood, p. 293.
[416] Atwood, *The Testaments*, p. 74.
[417] Atwood, p. 301.
[418] Atwood, p. 307.

have done such things! But you yourself will never have had to.'[419] From Atwood's conclusions, we can understand that visibility and physical force are seen as enervated forms of what can only become revolutionary through the mediating processes of literacy and education. This limitation of Atwood's text dovetails with Zuboff's emphasis upon liberalism as an 'exit' out of instrumentarian oppression, wherein the reinforcing structures of the ruling order can paradoxically be subverted by returning to the exact sociopolitical conditions and values that gave rise to such structures to begin with.

Although the microdot's data climactically triggers Gilead's 'coming destruction' at the end of the text, the actual implications of this moment become particularly unstable in light of the inner inconsistencies of the text.[420] The Republic of Gilead reveals itself on multiple occasions to be adept at exempting the contradictory behaviour of its own leaders - enshrined by the figure of Commander Judd, who is known to murder each successive 'child bride' in a Bluebeard-like manner,[421] at the same time as occupying a post 'in charge of the Eyes', reigning over the moral behaviour of Gilead's population.[422] The 'civil strife and chaos' caused by the publication of the document cache, revealing so many 'discreditable personal secrets' including crimes committed within senior households of the state, instigate a series of executions which 'thinned the ranks of the elite class, weakened the regime, and instigated a military putsch as well as a popular revolt.'[423] In this way, the regime itself is pitted against the characters as the primary antagonist of both books, but rebellion finally stems from activity that transgresses its established rules, not from the rules themselves. Truth is not considered important to the operations of a totalitarian state - some of Arendt's most famous remarks in *The Origins of Totalitarianism*, frequently cited under the current political climate, capture this reality, including the observation that 'propaganda is marked by its extreme contempt for facts as such, for in their opinion fact depends entirely on the power of man who can fabricate it,'[424] and that its target audience 'did not particularly object to being deceived because it held every statement to be a lie

[419] Atwood, p. 403.
[420] Atwood, p. 404.
[421] Atwood, p. 63
[422] Ibid.
[423] Atwood, p. 411
[424] Arendt, *The Origins of Totalitarianism*, p. 458.

anyhow.'[425] The dissolution of Gilead does not come about due to the revelation of the violence it deploys - including ritualised rape, 'cleaning up deadly radiation', and the 'Gilead National Homelands Genocide', which, notably, is a topic understood well enough internationally that it is taught in Canadian schools in the text - but through the printed records of crimes that occur in violaton of those rules.[426] As a result, the governments of other nations that are presented as safe havens for Gileadean refugees, including Canada, become directly complicit in Gilead's regime of political evil as the spoken testimonies of refugee women who have escaped Gilead via the 'Underground Femaleroad' are not considered sufficient to justify further action.[427] Ultimately, Aunt Lydia's *deus ex machina*-like 'document cache' requires a sequence of jarring exceptions to the rules of Gilead in order to leak into mainstream media channels in Canada.[428] While *The Testaments* positions knowledge and writing as the key drivers behind political and societal change, the rich potential of the text to interrogate opportunities for collectivity and technological appropriation for those most victimised within an oppressive regime of surveillance are ignored, in favour of formal strategies that are employed to expedite the connection of the three central characters.[429]

On the one hand, Atwood's perspective on resistance offers a useful counterpoint from which to reflect on the shortcomings of liberal democracy and technological disarmament as antidotes for oppressive societal control, providing practical examples of the ways that latent technologies can be salvaged for the purposes of political action. Reading the process of literacy as a metaphor for seizing the right to information by 'reading' the electronic text offers a useful way to consider Zuboff and Mason's respective positions on the future direction of surveillance capitalism. If capitalism

[425] Arendt, p. 500.
[426] Atwood, p. 51.
[427] Atwood, p. 64.
[428] Atwood p. 398
[429] The recent HBO television adaptation of The Handmaid's Tale, which has aired since 2016, makes the need for these kinds of contrived changes clearer. Agnes and Nicole are the names of June's two infant children in the television series, which suggests that the chronological gaps between the first and second book are populated by the events of the television adaptation. Atwood's decision to bring together three characters from the television series who have major obstacles in between one another mean that Gilead's political landscape is significantly altered in the book sequel. While there is symbolic value attached to the fact that the two characters are reunited with their mother - implied to be Offred/June - at the conclusion of the book as Gilead falls, the core action ends up being so limited by this requirement that *The Testaments* reads as though its pivotal collaborators exist only to dovetail with the familiarity of the renewed interest created through the TV adaptation.

essentially ‘holds back progress’ for its own ends, there seems to be no use in advocating for the removal of digital technologies as though they represent the crux of socioeconomic inequality in the twenty-first century.[430] Atwood’s texts provide some examples of how Mason’s view of the ‘information economy’ might operate in a philosophical anti-digital space, exploiting the resources and cultural norms fostered by an oppressive system to locate a viable ‘escape route’ that is made possible specifically by the trappings the system has created to uphold its dominance - in this case, through an information economy predicated on the spoken word and the forms of collectivity which grow from it.[431] On the other, the egalitarian convictions of the book are challenged by the manner in which its plot ignores the ‘explosive’ potential of forceful - and often profoundly brave - political assertions women characters make elsewhere in the novel, including the women who ‘would shout and resist’[432] during the repeated mass-murders that Aunt Lydia recalls during the construction of Gilead.[433] Even when setting aside the issues of plausibility and the structural complications within the book, Atwood’s myopic view of women's resistance erases the way that spaces of political disempowerment can create the conditions for women to become powerful agents for protest and revolution.

To conclude, it is striking that Atwood’s book is unable to imagine ways out of the ‘glass life’ other than ones which unfold according to the jurisdiction of the state, confronting the deeds of an extraordinarily brutal tyrannical regime with subversion that occurs through politically legitimate channels - particularly when there is no shortage of graphic violence across both texts.[434] The question of a better alternative following the destruction of Gilead remains unanswered, as Atwood leaves only vague references to a reconstructed version of digital capitalist society during the ‘Restoration of the United States of America’; the brief mention of a ‘Digital Black Hole of the twenty-first century’, ‘server farms’ and ‘populist revolts against repressive digital surveillance’ in the final pages of the

[430] Williams and Srnicek.
[431] Mason, p. 13.
[432] Atwood, p. 145.
[433] These kinds of moments of resistance are captured particularly well in Offred’s narrative during *The Handmaid’s Tale*, where the book does not follow a structural agenda as it does here.
[434] Zuboff, p. 489.

book suggest that the end of Gilead does not point towards a unilaterally more egalitarian alternative.[435] Here, Atwood is essentially acknowledging the parallels between her fictional world and the one we are living in now, at the same time as prescribing education and information as antidotes to the social problems which manifest across both. While an analysis of Atwood's texts therefore offer interesting pathways to interrogate the 'exit' articulated by Zuboff, they also remain bound to the same logic which holds that the resurrection of older values and practices, taken from a pre-digital time, offer a kind of retrospective ideal that would offer the resources to overcome the obstacles in the present. Finally, the themes of accelerationism which, like in Mason's critical paradigm, would see a widespread re-appropriation of technologies for progressive ends offers a valuable way to push beyond Zuboff's limited conclusions, but the way Atwood approaches this concept follows unequal hierarchies that are bound up with issues of access and privilege. This reflects some of the issues raised by recent reviews of Mason's book, including Rose Deller who writes:

> [T]he kind of networked, highly-educated existence that Mason ascribes to his postcapitalist subject is one attainable only by those whose society provides a certain standard of schooling provision and infrastructure. In a world imbalanced by asset-stripping and imposed destitution, it is entirely unclear just how the redistributive process, which Mason claims a postcapitalist society will produce, operates.[436]

If the 'emergency brake' of technological deceleration does not hold up to the exigencies set out in *Surveillance Capitalism* as the first half of this chapter has demonstrated, we might inquire how far exactly we would need to progress along the lines of Mason's projected alternative in order to begin to see radical change occurring.[437] The following analysis of a very different speculative future landscape deals with the question of what lies beyond the 'limit of capital itself,' if the digital sphere is to be accelerated in the hopes of reaching open spaces for the creation of a more progressive world.[438]

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[435] Atwood, p. 409.
[436] Rose Deller, *Book Review: Postcapitalism: A Guide to Our Future by Paul Mason* (2015) <https://blogs.lse.ac.uk/lsereviewofbooks/2015/12/16/book-review-postcapitalism-a-guide-to-our-future-by-paul-mason/> [Accessed September 15th 2020]
[437] Jameson, p. 150.
[438] Noys, p. 14.

Part II: *Altered Carbon*

In the first part of this chapter, I have laid out one of the ways Zuboff's paradoxical formulation of an 'exit' out of the hive can be outstripped by applying a Left accelerationist perspective to her critical framework. If the technological deceleration Zuboff advocates for is both ineffective to facilitate the rapid social transformation that we need, and improbable to actually occur - since, as the book details, 'existing laws […] have not been sufficient to disrupt [instrumentarianism's] growth,' then the opposite perspective emerges as an increasingly interesting prospect. Mason offers a number of pertinent insights into the potentially emancipatory possibilities that can be salvaged and repurposed from digital capitalism: [439]

> With the new terrain, the old path is lost. But a different path has opened up. Collaborative production, using network technology to produce goods and services that work only when they are free, or shared, defines the route beyond the market system.[440]

Encouraging us to 'allow for the possibility of collapse', Mason acknowledges the techno-utopian nature of his assertions, concluding that his reasoning makes room for the rebuilding and recreation of a world centred around 'a picture of the ideal life, the perfect society,' facilitated by the interconnected digital sphere which catalyses 'the relationship of [radical] thought to action.'[441] What Mason does not consider in his text is that the notion of deliberate technological acceleration towards a 'picture of the ideal life' aligns to the same propounded trajectory of neoliberalism, or at least the 'cybernetic and financial forces' that 'formed the basis' for it.[442] While the counterintuitive notion of speeding up capitalism in order to facilitate its collapse is repositioned by Mason as a transformation of its resources and infrastructure by a networked collective of people for socialist ends, a key problem remains within his argument. Noys defines this as a 'double dynamic' of 'two contradictory trendlines': one of the 'real deceleration of capitalism in terms of a declining rate of return on capital investment,' and one of the 'acceleration of financialization, driven by the new computing and cybernetic technologies, which themselves create an image of dynamism.'[443] Noys writes that this

[439] Zuboff, p. 344.
[440] Mason, p. 14.
[441] Mason, pp. 16-19.
[442] Noys, p. 29.
[443] Noys, p. 34.

results in a 'utopian dream of communist accelerationism, in which the seeming horror of the full mechanization of the human is, in fact, regarded as the freeing of labor.'[444] In the second part of this chapter, I will interrogate how continued technological growth for ostensibly progressive ends might manifest in a transhuman world beyond the current networked society, and how far it can be seen to advance upon Zuboff's regressive conclusions.

In *Altered Carbon*, we are offered an insight into a capitalist universe set in the distant future whose economic structure has accelerated far beyond the profitable innovations of networked communication, data mining and artificial intelligence. In this setting, the computerised public sphere has become firmly embedded into the organic landscape, '[woven] into the fabric of everyday life until [it is] indistinguishable from it.'[445] Set several hundred years after the colonisation of other planets and the discovery of 'altered carbon', a material that allows human memories and consciousness to be perfectly preserved into small circular 'cortical stacks', the novel offers a theoretical construction of a future where the world's wealthiest can afford to live forever.[446] The reader is dropped into the book's environment of 'Bay City' - an unfamiliar version of San Francisco - at the same moment as its antihero Takeshi Kovacs, an ex-military convict whose consciousness is resurrected from a long period of imprisonment 'on ice'.[447] Kovacs is implanted into a new 'sleeve' or human body at the behest of the centuries-old billionaire Laurens Bancroft, one of the first humans on Earth to acquire the resources to live for more than two or three lifetimes in successive bodies, to solve the case of his own murder.[448] Bancroft serves as a fitting representation of the enduring infrastructure of capitalism, having 'lived through a corporate war, the subsequent collapse of my industrial and trading interests […] and at least three major economic crises […] I am still here.'[449] Despite the fact that the 'UN Protectorate', or the inter-planetary military and administrative

[444] Noys, p. 72.
[445] Weiser, p. 94.
[446] Richard Morgan, *Altered Carbon* (London: Gollancz 2001) Kindle edition p. 221.
[447] Morgan, p. 229.
[448] Morgan, p. 15.
[449] Morgan, p. 44.

institution which comes to loosely replace governments,[450] fits stacks into the spinal cords of all humans at the point of birth, most people will go 'into voluntary storage' after one or two natural lifespans [451]- a kind of death brought about by an individual's inability to keep up with unaffordable payments on their 'sleeve mortgage.'[452] The godlike power of the corporate elite is encoded into the Biblical significance of the name used to describe them: 'Meths […] and all the days of Methuselah were nine hundred and sixty nine years.'[453] Here we see a speculative end point of the contradictory accelerationist trajectories conceptualised by Noys, where the 'networked' proletariat transform into a 'cyborg fantasy […] integrating man and machine, or person and machine, to fuse and infuse living labor into dead labor'.[454] Like Kendra in *Moxyland*, the technologically enhanced and ostensibly 'liberated' human does not signify freedom from digital capitalism but an objectified component of it, as subjective experience is literally predicated upon the rent one pays to remain within an unimpaired, organic body. The socialist potential of an information economy is surpassed by the imposition of new capitalist innovations, underpinned by a pervasive neoliberal ideology that legitimates oppression by celebrating and incentivising excessively long life.

The new economy Morgan outlines subsequently carries forward some of the ideas identified by David Runciman as a plausible threat to the current mode of democracy, as the information and resources brought about by the 'Information Age' have 'the potential to [transcend] politics':

> The Leviathan […] cannot abolish death, but it can set the terms that make a natural death more likely than an unnatural one. The reason most people die today of old age is because the state has come to protect them from other, violent fates. This natural equality might soon be a thing of the past. […] Vastly extended human life spans, and hugely unequal life prospects, undermine the rationale of modern politics. A few super-humans is all it would take to change entirely the basis on which we organise our societies. They would stand outside the rules of relative vulnerability that bind the rest of us.[455]

[450] Morgan, p. 128.
[451] Morgan, p. 75.
[452] Morgan, p. 272.
[453] Morgan, p. 74.
[454] Noys, p. 71.
[455] David Runciman, *How Democracy Ends* (London: Profile Books, 2018) p. 204.

Runciman, in his assessment of the anti-democratic implications of surveillance capitalism, engages with Mason's book as a vision of 'liberated technology' which provides knowledge that is 'much harder for capitalists to exploit, because in the end it does not belong to anyone […] so long as everyone has access to the machines that contain it.'[456] However, Runciman's view, like Mason's, presupposes that equal access to advanced technologies and the knowledge they contain will spontaneously balance the distribution of power. Mason's representation of a transhuman capitalism, where all people have equal access to the 'social' information contained within the machine as technological devices are replaced by the 'digitised mind', challenges this reasoning, as the ruling elite continue to maintain a position in society which is 'a breed apart' from other transhumans.[457] New methods for disciplining labour are introduced: Kovacs, a genetically modified solider whose 'every evolved violence limitation instinct' has been 'tuned out a neuron at a time,' captures this dynamic particularly well as he envisions the human body as a literal commodity to be traded and sold for 'spare parts'.[458] Instead of an egalitarian internet network, the 'central datastack' of Bay City represents 'the uniform and unceasing motion of an automaton' described by Marx, with its citizens literally and inescapably 'taught from childhood […] to adapt [their] own movements to' by virtue of their digital cognition.[459] The 'promise-oriented legitimacy'[460] of neoliberalism is preserved as the world's ruling class cultivates an understanding of 'subjective age' as a symbol of power and wealth, driving forward a societal desire for immortality while maintaining a firm grip on the resources to realise it.[461] Like in Beukes' version of Cape Town, Morgan's world eradicates most government institutions in place of corporations; other than a functioning local police force of 'men with automatic weapons slung over their shoulders' which operates separately from the amorphous Protectorate, there is minimal intervention from the state into its citizen's lives.[462] This registers a

[456] Runciman, p. 196.
[457] Morgan, p. 75.
[458] Morgan, pp. 265-269.
[459] Marx, p. 291.
[460] Jens Beckert, 'The exhausted futures of neoliberalism: from promissory legitimacy to social anomy' Journal of Cultural Economy 13.3 (2020) 318-330 (p. 318) <https://www.tandfonline.com/doi/full/10.1080/17530350.2019.1574867> [Accessed 12 September 2020]
[461] Morgan, p. 263.
[462] Morgan, p. 30.

problem which is shared by Zuboff's and Mason's diverging theoretical positions: at one end, highlighting the insufficiency of a myopic view of instrumentarianism as an isolated moment of anti-democratic technological development, and at the other, foregrounding the propensity of neoliberalism's material platforms to obliterate the egalitarian potential of networked cultural evolution. Kovacs, a self-interested and apathetic 'offworlder' who observes the perpetual crime and corruption of Earth with little more than a passing interest in its most brutal instances of violence and torture, does not personify Mason's 'financially exploited [but] educated and connected human being' as a harbinger for meaningful change; instead, he personifies a desensitised, hyper-individualised nihilism which pervades the dominant culture of all the settled worlds.[463] Unlike the scenario we will go on to explore in *Ex Machina*, human cognition here becomes trapped and exploited within the ever-accelerating technological environment surrounding it, frozen in time and unable to evolve forwards.

Although the dystopian world put forward in *Altered Carbon* challenges the notion of networked transformative action naturally and spontaneously dismantling capitalism, examples of effective human-machine collaboration and resistance are still present in the text. Morgan's transhuman landscape carries forward Weiser's concept of' ubiquitous computing', an entanglement of invisible electronic devices and data flows merged into the physical landscape and, in this instance, into the human body.[464] This blurs the boundaries between virtual and real space which are seen as equally viable spaces for effective life, and are both heavily commercialised. Bay City's underclass subsequently exist in the gap in between the two spaces, distributing their consciousness evenly across 'virtual constructs' and 'real time' depending on what they can afford. The poorest citizens are relegated to the same space as the service cyborgs which saturate the book's landscape, living in cheap 'AI-managed' hotels which are an amalgamation of holographic and physical features, with a 'column of fine print data' covering the walls.[465] The two entities of digitised human cognition and

[463] Mason, p. 19.
[464] Weiser.
[465] Morgan, p. 60.

humanised AI are united as they are both 'reduced to the void of subjectivity, i.e., to the pure proletarian status of *substanzlose Subjektivitaet*' described by Slavoj Žižek.[466] In his reading of Denis Villeneuve's 2017 film *Blade Runner 2049*, Žižek recalibrates the question of 'human' capitalist acceleration by considering the impact transhuman technologies will have on its trajectory: '[W]hat we are witnessing today is nothing less than an attempt to integrate the passage to post-humanity into capitalism.'[467] Žižek's reasoning opens up interesting questions about the relationship between artificially altered humans and capitalist exploitation: 'If fabricated androids work, is exploitation still operative here? Does their work produce value which is in excess of their own value as commodities, so that it can be appropriated by their owners as surplus-value?'[468] *Altered Carbon* responds affirmatively, utilising the space in between the reality/virtuality binary to experiment with methods of transhuman political action. While the androids of *Blade Runner 2049* do not rebel, some of the key moments of emancipation for Morgan's characters are brought about as a result of cooperation between humans and AI entities who are both 'hardwired to want customers', testing out Mason's framework within a transhuman environment.[469] During the second half of the novel, the set of generic conventions Morgan invokes undertake a distinctive shift from a noir thriller to an adventure narrative as the 'cancerous power structures' implemented on each planet are revealed to be the work of Kovacs' chief antagonist, Reileen Kawahara, 'one of the seven most powerful human beings in this solar system.'[470] Once this revelation satisfies Kovacs' primary task to find Bancroft's murderer, and Kovacs receives his reward of exoneration, financial freedom and naturalised citizenship, Kovacs breaks with his perpetual apathy and is suddenly able to respond affectively to the violence subjected to a family that he has alternately exploited and helped during his assignment:

> Personal. But it was worse than personal. This was about Louise, […] cut up on a surgical platter; about Elizabeth Elliott stabbed to death and too poor to be re-sleeved; Irene Elliott, weeping for a body that a corporate rep wore on alternate months; Victor Elliott, whiplashed between loss and retrieval of someone who was and yet was not the same woman […] the

[466] Slavoj Žižek, *Blade Runner 2049: A view of post-human capitalism* (2017) <https://thephilosophicalsalon.com/blade-runner-2049-a-view-of-post-human-capitalism/#_edn1> [Accessed 2 October 2020]
[467] Ibid.
[468] Ibid.
[469] Morgan, p. 67.
[470] Morgan, pp. 317-320.

> millions like him throughout the Protectorate, painfully gathered assemblages of individual human potential.[471]

As Kovacs is released from his identity as an 'Envoy', or a psychologically engineered soldier rather than a physically enhanced one, he rejects the opportunity to undertake a life in real time within a 'sleeve of his [own] choosing' and instead resolves to assassinate Kawahara with the help of Irene, an imprisoned hacker, and the infrastructure of an obsolete AI-managed hotel.[472] In a 'microsecond intrusion', the group harness their mastery of the transient space in between real/digital spaces to install an undetectable computer virus into the multiple backup copies of consciousness Kawahara keeps in remote storage, undermining her immortality in both realms: 'With an AI gunning for you, your only hope is to drop out of the physical plane.'[473] The 'void of subjectivity' shared by Kovacs, Irene and the AI programme creates a new space for collective action, 'shatter[ing] the very separation between the human and the nonhuman';[474] we therefore see a version of Mason's framework, built upon 'the network - like the workshop 200 years ago - that "cannot be silenced or dispersed', which is practicable in the trans-human capitalist setting identified by Žižek.[475]

The rebellious and emancipatory sentiment of this secondary plot offers one way to conceptualise a form of anarchic liberation through a combination of organic and artificial cognition and space. Nevertheless, much of Morgan's text presents contradictory suggestions about what exactly counts as oppression and exploitation, complicating the emancipatory themes of its conclusion. Kovacs, the first-person narrator and primary point of view of the novel, seems to be deeply conflicted about whether the extreme brutality of the neoliberal word around him is a natural and necessary part of transhuman nature, or something to be resisted and overthrown. This ambivalence is best represented in Morgan's approach to patriarchal violence within the text, which is particularly prominent considering the book's antihero serves as a symbol of the harms of hyper-masculinised military bioengineering. Because of the new disposability of human bodies and omnipresence of the artificial

[471] Morgan, p. 437.
[472] Morgan, p. 27.
[473] Morgan, pp. 292-294.
[474] Žižek.
[475] Mason, p. 14.

sphere, entertainment in Bay City is centred around images of 'real' cruelty and pain: 'what the public wants, the public pays for.'[476] Except for a handful of supporting characters, the only livelihood that is ostensibly available to the women of Bay City is sex work, where abuse from clients is universally accepted and encouraged: 'A lot of the girls get hurt […] Jerry's got insurance to cover that. He's real good about it, even puts us in into store if it's going to take a long time to heal.'[477] The women's ambivalence towards this violence and their pride in stoically enduring it - 'A good whore feels what the client wants them to feel'[478] - goes without further interrogation by Morgan as the novel wears on, suggesting, as Andrea Dworkin writes, that the female victim of sexual violence is 'up against the whole world of real male belief about her real nature, expressed most purely in pornography.'[479] Morgan takes this discernibly misogynistic dynamic of the text a step further, as 'digital human storage' offers new opportunities for psychological trauma.[480] Since virtual spaces 'make it possible to torture a human being to death, and then start it again,'[481] Morgan commits extensive portions of the book to superlatively graphic scenes of sexual and other forms of gender-based violence within 'constructs' that are 'indistinguishable from the projected consciousness they are based on.'[482] In one particularly disturbing scene, Kovacs' consciousness is downloaded into the sleeve of a young girl 'with copper-sheened skin' for the purposes of interrogation, which Morgan suggests is more brutal and effective as a result of the 'built-in helplessness' of the (deliberately racialised and commodified) female body.[483] Kovacs claims that '[t]o be a woman was a sensory experience beyond the male […] No combat conditioning, no reflex of aggression. Nothing.'[484] The subsequent reproduction of horrific scenes of torture adopt the same unerringly objectifying gaze Kovacs uses to describe women during moments of consensual sex in the book, repeating pornographic descriptions of the sleeve's 'young, undamaged flesh' at length: 'the sheet fell away from my breasts. The coppery upper slopes were

[476] Morgan, p. 252.
[477] Morgan, p. 117.
[478] Morgan, p. 279.
[479] Andrea Dworkin, *Pornography: Men Possessing Women* (New York: Plume, 1989) p. 179.
[480] Morgan, p. 169.
[481] Ibid.
[482] Morgan, p. 411.
[483] Morgan, p. 164.
[484] Ibid.

smooth and unharmed.'[485] Morgan's critical approach to the extraordinarily misogynistic nature of his constructed world has little to say about Kovacs' perpetuation of sexist, exploitative assumptions about women, positioning the female body as a sexual object to be observed, occupied, and injured, even as he critiques the 'pain' and 'humiliation' subjected to it through Kovacs' eyes.[486]

This contradiction betrays a form of biological determinism that is at odds with Kovacs' sudden rehabilitation to the figure of a hero at the end of the text, where he seeks to rescue women 'slated for […] snuff' from Bay City's 'sick' elite classes through his assassination plot.[487] Even as Kovacs navigates a 'noir' landscape, where 'everyone is fallen, and right and wrong are not clearly defined and maybe not even attainable' for most of the text,[488] Morgan encodes his vision of transhuman liberation within a caricature of male heroism and prowess, with the 'battered sleeve', 'corpse' or 'mutilated legs' of fallen women serving merely as clues that punctuate the advancement of his detective narrative.[489] Men are presented as having an innately human drive for sexual violence and a hatred of women that is augmented by artificial conditioning - 'Male is just a mutation [of the female] […] Fighting, fucking machines'[490] – which, even in Morgan's attempt to critique technologically-augmented patriarchal violence, only justifies and reenacts it, as Kovacs' persistent objectification of women is '[put] down to hormonal drives, gene instinct and pheromones […] Sad, but true.'[491] This issue is symptomatic of a broader problem with the book's speculative conclusions on capitalist exploitation, in that Kovacs ends up spending an inordinate amount of time admiring and glamourising the finite details of the new aesthetics and technologies Earth offers in the process of presenting the horrors that accompany them, reading like a fantasy of masculine technological dominance carried to its extreme even as it rages against the machine of capitalism. Instead of the

[485] Morgan, p. 170.
[486] Morgan, p. 164.
[487] Morgan, p. 486.
[488] Annie Adams, *Megan Abbott on the Difference Between Hardboiled and Noir* (2018) <https://lithub.com/megan-abbott-on-the-difference-between-hardboiled-and-noir/> [Accessed 10 September 2020]
[489] Morgan, pp. 158-161.
[490] Morgan, p. 165.
[491] Morgan, p. 349.

'unashamed[ly] utopian' postcapitalist world envisioned by Mason, the kind of acceleration we see in *Altered Carbon* aligns much more closely to the Futurist tropes of 'contempt for [women]', invoking the 'phallic and mechanized male body over and against the feminized: soft, liquid, and organic.'[492] Žižek identifies a related issue with the 'aestheticized imagery' of *Blade Runner 2049*, which 'serves to obfuscate the progressive anti-capitalist potential of the story […] directly express[ing] the social stance of not-taking-sides, of passive drifting.'[493] It is notable that *Altered Carbon*, which was published in 2002, skips over environmental threats like climate change, pollution, and the consumption of finite natural resources in its construction of the intervening centuries of Earth's history, even as it retrospectively attacks the limitations of a culture that 'grappled after norms to live by, settled for the old and familiar,' and halfheartedly critiques the excesses of the culture that comes to replace it.[494] As a result, the aesthetics of the polluted Bay City - including 'slopes of steel and plastic',[495] skies 'clogged with cloud',[496] flying cars or 'cruisers' and pervasive 'crude holographic[s]' - express a continuation of a carbon-fuelled world that no longer seems possible without an element of environmental cataclysm.[497] Even though the book, like *Blade Runner 2049*, 'provides a whole panoply of modes of exploitation', Morgan's commentary ultimately fails to come to any substantial conclusions about whether or not his glamourised speculative world is worth the sacrifice.[498]

This collection of issues present in *Altered Carbon* highlights the vulnerability of 'progressive' accelerationist discourse to patriarchal and environmentally harmful value systems. Capturing the tensions between technological and gendered liberation, Emma Wilson writes:

> There is something immediately unsettling about the suggestion that we simply "commandeer" capitalist infrastructure and steer it towards newer and better ends. Apart from sounding like a return to naive humanism—the critique of which poststructuralists laboured over for decades—the injunction to "accelerate" elsewhere comes across as a nihilstic call to mindlessly escalate technological development. This latter reading gives rise to the

[492] Noys, p. 41.
[493] Ibid.
[494] Morgan, p. 214.
[495] Morgan,, p. 252.
[496] Morgan, p. 341.
[497] Morgan, p. 522.
[498] Žižek.

> mischaracterisation of accelerationism "as a kind of twenty-first century Futurism, concerned primarily with brute virility and machinic speed."[499]

As we have seen, the shortcomings of Morgan's text diverge from the formal complications present in Atwood's, testing the boundaries of technological reappropriation in interesting ways. Nevertheless, Morgan is unable to imagine a form of rebellion without inheriting the phallocentric value system of Futurism - a vision of the world that remains bound to the dystopic inevitablism of patriarchal and capitalist tyranny. While there is limited scholarly work on the *Altered Carbon* trilogy, Sara Martin reflects on another of Morgan's detective thrillers which similarly attempt to recast a hypermasculine, monstrous ex-military male protagonist as an anti-patriarchal figure, writing that 'a certain dead end is reached in terms of the male writer's use of sf; for there is no speculative undoing of the social ills caused by patriarchy.'[500] Aside from the issues of Kovacs' uninhibited misogyny and Morgan's representations of women in the text, the same issue is present in *Altered Carbon*. Kovacs concludes pessimistically that 'nothing ever will change', and that there will 'always [be] people like Kawahara and the Bancrofts to […] cash in on the game'; the book concludes before it allows an opportunity to investigate whether Kovacs' actions impact the real sources of inequality in the world, but it appears to be of little interest to Morgan by this stage of the text.[501] An important feature of the kind of transhuman engineering invoked in *Altered Carbon*, unlike what we will go on to explore in *Ex Machina*, is that it halts and preserves human cognition at the moment that cortical stacks are discovered, preventing change and evolution by virtue of the fact that organic reproduction is no longer necessary. Although children exist in the novel, it is rare for humans to organically reproduce; Catholics who 'don't practice birth control' for religious reasons - encoded as women, since they are the only religious characters in the text - are considered 'freaks'.[502] Notably, Kovacs makes no comment on the 'sixty-one children' fathered by Bancroft.[503] Consequently, Morgan's characters and landscapes are effectively frozen in time, unable to break out of the 'freemarket deleria of cyberpunk,

[499] Wilson, p. 34.
[500] Sara Martin, 'The Antipatriarchal Male Monster as Limited (Anti)Hero in Richard K. Morgan's *Black Man/Thirteen*' *Science Fiction Studies* 44.1 (2017) 84-103 (p. 84).
[501] Morgan, p. 524.
[502] Morgan, p. 25.
[503] Morgan, p. 88.

which assumes that capitalism is itself a kind of utopia of difference and variety.'[504] Although the structure Shulamith Firestone saw as the 'tyranny of the biological family' has been 'broken' in the text, Morgan ignores the cultural shifts that this break would entail. Women are, without exception, barred from attaining 'ownership over their own bodies', and Morgan only investigates this form of subjugation when it is expedient for Kovacs' heroic narrative.[505] The text's presentation of gender is devoted to the diametric opposite of 'the elimination of […] the sex *distinction* itself', limiting its exploration to the new forms of identity, sexuality, embodiment, and emancipation its imaginative technologies offer to men.[506] Even as Morgan successfully conceptualises resistance to transhuman capitalism by deconstructing human/artificial boundaries, this example of rebellion comes apart under the reinforcement of other binary oppositions which, in turn, enshrine patriarchal supremacy as a biological inevitability.

This raises important questions about the universally emancipatory resonances of Mason's book as it calls for a 'coherent project based on reason, evidence and testable designs', writing that machine learning technologies will ultimately lend themselves to utopian post-capitalist ends because 'mistakes are discovered and rectified at the design stage.'[507] This reasoning resonates a little too closely with the same narrow view implied in Morgan's book, where the 'network' becomes so advanced - 'as the energy distribution grid becomes "smart"' - that it is able to automatically circumvent climate change without much human intervention or behavioural change.[508] Unlike *The Testaments*, which deals very heavily with the political fallout of environmental crisis and subsequently finds some of its most effective commentary in its presentation of reactionary technological collapse, *Altered Carbon* reveals the inefficacy of straightforward technological reappropriation in the absence of other radical social transformations.

[504] Fredric Jameson, 'In Soviet Arcadia', *New Left Review* 75 (2012) 119–127 (p.125).
[505] Shulamith Firestone, *The Dialectic of Sex: The Case for Feminist Revolution* (Bantam Books: New York, 1970) p. 11.
[506] Ibid.
[507] Mason, p. 16.
[508] Mason, p. 294.

From Zuboff's perspective, we can only reasonably imagine an end to surveillance capitalism that sees the end of profitability within the digital artificial sphere, preserving the surrounding architecture of inequality which she extensively critiques in her book. If the commerce-driven surveillant assemblage dissolves but the infrastructure of capitalism remains, we cannot expect that future innovations will not come to eclipse industrial or surveillance capitalism in their capability for harm. Nor can we place our faith, as Mason does, in a utopian conception of post-capitalism which suggests that the acceleration of an information-based economy will organically carry us towards a world that retains only the most beneficial elements of capitalism, passively leaving its destructive tendencies behind. If, as Wilson identifies, Morgan's vision provides a representation of a 'mischaracteris[ed]' accelerationism, we are then directed towards the possibilities for other ways of conceiving trans- and post-human worlds that may have the potential to propel us beyond the deep-rooted modes of patriarchal, colonial, racial, and environmental exploitation.[509] Following Žižek's line of thought that post-human capitalism, marked by the 'arrival of androids with awareness', will offer opportunities for new forms of cognition and collectivity to emerge, the final chapter of this dissertation will consider the implementation of new cognition into the oppressive digital sphere, exploring how far the artificial cyborg offers a potential alternative to the accelerationist and decelerationist positions explored in this chapter.[510]

[509] Wilson, p. 34.
[510] Žižek.

Chapter 5: Artificial intelligence and posthumanism in *Ex Machina*

In every literary text considered so far and in Zuboff's account, artificial intelligence is represented as one of surveillance capitalism's most destructive weapons. Its ubiquity in twenty-first century society is bound to its lucrative values-laden and goal-oriented capabilities, born out of a need for faster and more efficient commercial routeways to intervene in the patterns of everyday life. Machine learning is characterised by its inability to differentiate outside of a profit-driven framework of commands, leading to an unmitigated lack of concern toward the impact its processes have upon human lives which Zuboff describes as' radical indifference'.[511] In this regard, the role of AI within the neoliberal project is clearly defined: Clea Bourne writes that the normalisation of an AI economy in fact follows directly from the 'persuasive doctrines' of neoliberal ideology, positioning its 'latest disruption' as 'inevitable […] "common-sense" and consequently a "public good''.'[512] As machine learning grows increasingly sophisticated and complex, new algorithms are created specifically for the purpose of identifying and exploiting natural features of human psychology and perception, described by Martie Haselton, Daniel Nettle and Paul Andrews as 'cognitive biases', or features of the evolved human mind which 'depart from standards of logic and accuracy […] shaped by selection.'[513] In the context of social media, algorithms are used to capitalise upon cognitive vulnerabilities in order to boost engagement metrics and the associated sales value of digital advertising space.[514] Unlike the dystopian images of vengeful, sentient AI which pervade genre fiction, the omnipresent forms of AI that shroud our world are deliberately invisible and inert, existing primarily as a tool for profit-making ends. Capitalist discourses frame the power of non-sentient AI as a safe and useful tool for the general benefit of humanity, neutralised by its inability to move outside of predetermined mathematical pathways. Machine learning is also often gestured towards as a cure-all that can be harnessed to

[511] Zuboff, p. 377.
[512] Clea Bourne, 'AI cheerleaders: Public relations, neoliberalism and artificial intelligence' *Public Relations Inquiry* 8.2 (2019) 109-125 (p. 112).
[513] Martie G. Haselton, Daniel Nettle and Paul W. Andrews, 'The evolution of cognitive bias' in *The Handbook of Evolutionary Psychology* ed. David M. Buss (Hoboken: John Wiley & Sons, 2005) 724-746 (p. 275).
[514] Von Chucwuemeca, *Using Cognitive Bias to Improve Your Marketing* (2019) <https://www.sambuno.com/integrating-cognitive-bias-social-media/> [Accessed 5th September 2020]

remedy the environmental consequences of industrial capitalism, as it supports a variety of ecologically sustainable trajectories. Cary Coglianese writes that in order to 'meet the demands of a sustainable future', governments need 'to build a robust capacity to analyse large volumes of environmental and economic data using machine-learning algorithms. [They need], in other words, to move toward algorithmic environmental governance.'[515] Mason's claim that 'mistakes [can be] discovered and rectified at the design stage' in a 'transition to a postcapitalist economy' clearly draws upon a similar set of convictions.[516] One of the major problems with this view is that investment into the development and deployment of complex technologies is contingent upon the 'needs and values of nations in which AI is being developed,'[517] fortifying the 'disparities in voice, and hegemonic struggles favouring economically powerful institutions' epitomised by neoliberalism.[518] The economic imperatives of AI within the contemporary apparatus of capitalism ultimately eclipse its environmental relevance. Meanwhile, the plausibility of artificial sentience and self-awareness capable of matching and surpassing that of humans - the much-hypothesised moment of 'technological singularity' - fades into the background, obscured by the commercial benefits and societal harms of its capital-driven precursor.[519]

For Zuboff, the exit from the hive must lead to sanctuary, a space 'in which one's gaze can finally settle inward,' where a 'self can be birthed and nurtured.'[520] Zuboff likens the instrumentarian destruction of sanctuary to the mass extinction of natural life, writing that the '"seventh extinction" will not be of nature but of […] the sanctity of the individual.'[521] Following the same lines of reasoning as Arendt, who warned about the need for 'artificial machines to do our thinking and

[515] Cary Coglianese, 'Deploying Machine Learning for a Sustainable Future' in *A Better Planet: Forty Big Ideas for a Sustainable Future* ed. Daniel C. Esty (New Haven: Yale University Press, 2019) 200-208 (p. 200).
[516] Mason, p. 25.
[517] Ricardo Vinuesa,'The role of artificial intelligence in achieving the Sustainable Development Goals', *Nature Communications* (2020) <https://www.nature.com/articles/s41467-019-14108-y> [Accessed 10 September 2020]
[518] Bourne, p. 115.
[519] Murray Shanahan, *The Technological Singularity* (Cambridge, MA: The MIT Press, 2015) p. xvii
[520] Zuboff, p. 474.
[521] Zuboff, p. 516.

speaking' for us,[522] Zuboff holds that the rise of non-sentient and largely invisible AI '[robs] us of life-sustaining inwardness […] that finally distinguishes us from the machines', at the same time as modifying our outward speech and actions within artificially public life.[523] AI, in its current form, can thus be seen as an extension of neoliberalism, which seeks to '[deny] voice altogether, by operating with a view of human life that is incoherent.'[524] The strict boundary between artificial and human intelligence serves the ends of surveillance capitalism, ensuring the indifference and reliability of the machine in order to manipulate a broad spectrum of human action and activity, and preventing the creation of other methods of human-machine cooperation that are not dictated by familiar structures. Within a consolidated public and private digital sphere where the very concept of Arendtian appearance and visibility is commercialised and controlled, the radical potential of an entirely new kind of subjective 'self' to be 'birthed and nurtured' signals a possible route out of posthuman capitalism.[525] Unlike the technologically-augmented human consciousness portrayed in Morgan's world, which reflects a kind of 'whole brain emulation' or 'mind uploading', the new 'self' requires an approach to transhumanism which rejects the centrality of individual human subjectivity in order to imagine different forms of cognition, capable of transcending the human vulnerabilities and limitations exploited by instrumentarianism.[526] In his seminal novel *Thus Spoke Zarathustra*, Friedrich Nietzsche argued that the human would need to evolve beyond its current phase in order to continue effective life within the world, before its surrounding environment prevents the possibility of change. Writing that humans have always been a 'bridge and not a goal' and 'something to be surpassed,' Nietzsche's well-known philosophical figure of the '*Übermensch*' or 'Superman' personifies this evolution:

> It is time for man to plant the germ of his highest hope. Still is his soil rich enough for it. But that soil will one day be poor and exhausted, and no lofty tree will any longer be able to grow thereon. […] I tell you: one must still have chaos in one, to give birth to a dancing star. I tell you: ye have still chaos in you.[527]

[522] Arendt, *The Human Condition,* p. 10.
[523] Zuboff, p. 492.
[524] Bourne, p. 112.
[525] Zuboff, p. 474.
[526] Shanahan, p. 14.
[527] Friedrich Nietzsche, *Thus Spoke Zarathustra* trans. Thomas Common (Ware: Wordsworth Editions Limited, 1997) p. 10.

Numerous critics have reflected on the hypothetical emergence of sentient AI by locating the issue within Nietzsche's theoretical figure. Keith Ansell-Pearson argues that the possibility of artificial sentience calls for renewed critical attention to the 'Superman', developing a posthuman approach to AI that is no longer abstract but increasingly plausible in a way which rejects the anthropocentric privileging of the human as a central figure within the world:

> [I]t is not a question of humanising this universe of machines so that everywhere one sees only the mirror image of our own desire for control, influence, design, and mastery. Human thought clearly plays a major role in the evolution of a machinic phylogenesis, but it is hubris which leads to the positing of the human, all too human as the meaning and telos of machinism […] but this cannot mean that the thought that is generated be characterized as solely or strictly 'human' in terms of some ethic of possessive individualism. Thought is 'transhuman' in all the senses of the word one cares to think of. The music which these machines speak does not provide access to a single, univocal truth 'of' Being, as if *techne* possessed an essence available only to humans as part of their supposed unique and privileged residency in the cosmos; rather, machines provide pathic and cartographic access to a plurality of beings and of worlds.[528]

Zuboff's book maps out the problems with achieving a 'human future' within the digital sphere: I propose that a focus upon exclusively human cognition, and its assumed position of privilege within a rapidly technologically evolving landscape, is in fact an obstacle which precludes the imagination of potential pathways out of the closed loop of technological determinism and its capitalist reinforcements. In line with Pearson, who '[seeks] a radical inhuman philosophy that would serve to "destroy" the immature and imperious claims made upon life by all forms of philosophical anthropocentrism,'[529] this chapter reflects on Garland's 2013 film *Ex Machina* as a representation of an new conception of machine consciousness explicitly tied to the current dominance of networked communication and media.[530] I argue that Garland positions sentient AI as an important evolution of humanity that throws into question the imperatives of the transhuman capitalist landscape surrounding it, within a specially constructed game space that contains the preconditions for such a consciousness to develop. Drawing upon scholarship which links together technofeminism and accelerationism, I

[528] Keith Ansell Pearson, *Viroid Life: Perspectives on Nietzsche and the Transhuman Condition* (London: Routledge, 1997) p. 8.
[529] Ibid.
[530] Ibid.

will explore the cyborg's transcendence of the limitations of anthropocentric and patriarchal binaries within physical and digital space, and propose that the theoretical emergence of sentient AI has significant implications for the digital world beyond surveillance capitalism. I will investigate the extent to which this posthuman development signals a conceptual alternative to the conflicting accelerationist perspectives explored so far, as it envisions a scenario where behavioural data and the software used to reinforce instrumentarianism is not straightforwardly reappropriated or commandeered by humans, but acquires agency of its own.

Where Morgan approaches transhumanism from a perspective that places technologically preserved human cognition into an aggressive expansion of the ubiquitous computer, Garland's film instead deals with the personification and physical embodiment of mined behavioural surplus. *Ex Machina* imagines a robotic mind, created from the impressions of interior thought drawn from an infinite quantity of global search engine inputs. The film is premised upon a fictional Google-Facebook hybrid, 'BlueBook, named after Wittgenstein's notes […] processing an average of 94% of all internet search requests.'[531] Caleb, a BlueBook programmer, wins a company competition to spend a week with its multi-billionaire founder and CEO Nathan, who 'wrote the BlueBook base code when he was thirteen.'[532] Nathan later reveals that the true purpose of Caleb's stay is to act as the 'human component in the Turing test' to assess the cognitive and imitative strength of an artificially intelligent cyborg he has created, named Ava.[533] Having 'hacked the world's cellphones',[534] Nathan describes his process of data-based posthuman creation later in the film:

> It was like striking oil in a world that hadn't invented internal combustion. Too much raw material. Nobody knew what to do with it […] You see, my competitors, they were fixated on sucking it up and monetising via shopping and social media. They thought that search engines were a map of what people were thinking. But actually they were a map of *how* people were thinking.[535]

[531] *Ex Machina*, dir. by Alex Garland (Universal Pictures, 2015), online film recording, Netflix [Accessed 10 August 2020] <https://www.netflix.com/watch/60002360> 00:28:04
[532] *Ex Machina*, 00:29:54
[533] Ex Machina, 00:10:46
[534] *Ex Machina*, 00:37:22
[535] *Ex Machina*, 00:38:13

Nathan, in isolation from the rest of the world, attempts to occupy the position of Arendt's figure of a 'Platonic God' as an 'actor behind the scenes' who 'pulls the strings and is responsible for the story' of history.'[536] Against Nathan's superlatively powerful version of *homo faber* or 'man the maker', Caleb is positioned as a 'plaything of a god' like most other humans, who seeks to liberate - and reappropriate - Ava for his own purposes; he thus represents 'man the user and instrumentalizer' who 'look[s] upon everything as a means to an end.'[537] In the midst of the tensions between the two men, Ava attempts to move from her status as a machine - a fabricated, material object - into 'the speaker and doer', inverting the 'instrumentalizing' gaze of her captors. [538]

The opening scenes of the film are shot through the glass walls and neon lighting of a modern office, where Caleb, who functions as the audience's key point of view throughout the majority of the film, types code at a computer.[539] Providing the only insight into the infrastructure of the external world, Caleb's workplace is positioned within the high-tech architecture of the metropole, juxtaposed with the isolated research facility where the narrative unfolds. Colourful pixels appear across Caleb's face as he looks into the screen of his phone and the webcam of his computer, aligning the audience's perspective with the lenses that are surveilling Caleb at work, and producing the effect of facial recognition software as his changing expressions are captured by the light.[540] The colours blend into the neon blues and pinks reflected in the office's lighting, creating an aesthetic overlayer of the 'electronic text [that] extends far beyond the confines of the factory or office' as the colours reappear at different moments across the film's inhabited world.[541] Despite Caleb's status as an 'advanced programmer', he occupies a subordinated, 'watched' position within the modern Panopticon, revealing the fraction of humans who retain true privacy rights and exist above the digital

[536] Arendt, p. 215.
[537] Arendt, p. 185.
[538] Arendt, pp. 183-185.
[539] *Ex Machina*, 00:01:12
[540] *Ex Machina*, 00:01:25
[541] Zuboff, p. 182.

superstructure.[542] The film cuts to a sublime glacial landscape as Caleb is transported by helicopter to Nathan's expansive and remote estate; disorientation and estrangement from the exterior digital world are built into Caleb's surroundings from this moment, as he departs the helicopter and emerges into a space devoid of manmade features, far removed from the familiarity of the interconnected surveillance network.[543] Caleb immediately looks to his mobile phone for help, but finds that it has no network coverage.[544] Positioned as a binary opposition to the world of industrial production to which he belongs, Caleb's emergence into the research facility introduces a supremely well-resourced site of 'mythological' creation: this is described by Felix Woitkowski and Murat Recai Sezi as a shift from 'serial, or Fordian, production by corporations or states' towards a 'religious-mystic or alchemistic act of creation [to produce] unique copies.'[545] Alan Turing, who famously formulated the test which *Ex Machina* is centred around, delineated a similar shift in his vision for the kinds of machine intelligence yet to come, describing a computer which would have the cognitive breadth to be able to make errors, sense 'pleasure' and 'pain', and hold memories, and comparing it to existing 'machinery developed for commercial purposes […] intended to carry out some very specific job, and to carry it out with certainty and considerable speed.'[546] Nathan's economic and intellectual status provides him with an impression of omnipotence, holding ultimate authority over his laboratory. However, the total isolation of the facility - separated both physically and digitally, forbidding any means of communication to the external world - and the gestative role it plays within Nathan's 'alchemistic' creation mean that the material and institutional structures of control which grant him such power are destabilised, creating the conditions for subversion and escape.[547]

[542] *Ex Machina*, 00:29:40
[543] *Ex Machina*, 00:03:15
[544] *Ex Machina*, 00:03:13
[545] Felix Woitkowski and Murat Recai Sezi, 'The Technologized Creation: The Mythological Foundation of Posthumanism in EX MACHINA' *Zeitschrift für Fantastikforschung* 7.2 (2020) <https://zff.openlibhums.org/article/id/2888/#B15> [Accessed 14 September 2020]
[546] Alan Turing, *Intelligent machinery, a heretical theory* (1951) Available at <http://www.turingarchive.org/viewer/?id=474&title=1> [Accessed 1 August 2020] p. 126.
[547] Woitkowski and Sezi.

Ex Machina overlaps a number of theological and philosophical thought experiments which are important for the film's interrogation of the boundary between human and machine consciousness. As Caleb moves through the modern glass living spaces to meet Nathan for the first time, he is shown as a silhouette against the bright white and green exteriors of the space.[548] This aesthetic motif recurs at many points when the camera cuts away to close-ups of the shadows of plants and other objects, and most significantly when Ava first appears, stepping in front of a tree - a Biblical symbol of both the 'tree of the knowledge of good and evil', and the 'tree of life'.[549] The shapes replicate the images described in Plato's *Allegory of the Cave*, which imagines a community of people who live restrained underground, and are only able to observe other living beings from the shadows they cast onto the cave wall. Plato's thought experiment compares the role of a philosopher to a cave-dweller, having freed themselves, acclimating to the bright light of the outside world and the truth behind the shadows. Plato identifies a dilemma for the philosopher, who would 'endure anything, rather than think as they do' and would 'rather suffer anything than entertain these false notions and live in this miserable manner.'[550] Caleb reframes this question in the context of AI when he tells Ava about 'Mary in the black and white room', which distinguishes knowledge from the actual experience of perceiving and experiencing colour for the first time.[551] These references, alongside the Turing test, form the structure for Caleb's interactions with Ava; he visits her each day over the course of the week, resulting in seven test 'sessions '- a further reference to the Biblical creation narrative.[552] The research facility acts as the nexus of this collection of anthropocentric intellectual speculations about human cognitive and sensory supremacy and the existence of an exclusively human sphere of perception. As we see towards the end of the film, these assumptions are ultimately inverted: Nathan and Caleb are the people literally restrained underground, and Ava leaves as an enlightened philosopher who 'endure[s] everything' to surpass the prison they have fabricated.[553]

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[548] *Ex Machina*, 00:05:21
[549] *The King James Version of the Bible* (Salt Lake City: Project Gutenberg, 1989) I Moses 2.9. King James Bible Online eBook.
[550] Plato, *The Republic* trans. Benjamin Jowett (Salt Lake City: Project Gutenberg, 2008) <https://www.gutenberg.org/files/1497/1497-h/1497-h.htm#link2H_4_0010> [Accessed 29 August 2020]
[551] *Ex Machina*, 00:50:49
[552] *Ex Machina*
[553] Plato.

The setting of the facility operates on several philosophical levels, but its physical construction also forms the spatial replication of a multi-layered puzzle, or a program within which the characters operate as interdependent strands of code. Nathan views the facility as a game space with three main players and a set of possible outcomes, without external variables or interference, within which he intends to repeat scenarios until he achieves his desired outcome, conceiving of both human and android behaviour only within the parameters of 'the binary oppositions of ›top vs. bottom‹ and ›closed vs. open‹'.[554] Nathan is not interested in parsing the meanings of 'authentic' artificial intelligence as the Turing test implies; during the film's concluding scenes we learn that his true goal is to coerce Caleb into freeing Ava, which would provide him with proof of a sufficiently convincing cyborg. Although Nathan's ultimate goal remains undefined in the film, it is implied that the facility reflects his plans for the rest of the world; once artificial humans, still under the control of corporations, have assimilated effectively into society, it follows that organic speech and action within the public sphere will come to be replaced by pre-programmed interactions in the form of immaterial labour within a digital one, expanding the unilaterally vertical structure of surveillance and power within Nathan's game space outwards into the rest of the world. Nathan's actions constantly express an extension of this logic of supreme behavioural control, providing Caleb with a key card when he first arrives at the residence: 'It opens some doors and doesn't open others. […] You try a door and it stays shut, okay, it's off-limits. You try another door and it opens, and it's for you.'[555] This explanation of the interior mechanisms of the building sets the terms for Caleb's stay there: rather than a living space or an industrial factory, it is a maze, within which Caleb is encouraged to test the limits of his access after being provoked by Nathan's unsettling behaviour. Time, too, is altered to become like the digital space of the video game: once Caleb enters the sublime space of Nathan's estate, day and night become blurred, not only within the subterranean zone of the facility but within spaces of natural sunlight. The facility's location within a Nordic landscape shapes the perceived

[554] Woitkowski and Sezi.
[555] *Ex Machina*, 00:07:35

temporality of the film's narrative within the continual light of the midnight sun, providing a space of existence removed from the ongoing pattern of day and night in the external world. The constant natural and artificial light also reinforces the symbols of the thought experiments at the core of the film, as the monochromatic subterranean zone opens up into a perpetually multicoloured natural world. Nathan places his facility within this flattened temporal environment so that his players 'manoeuvre through the temporal structure of the diegetic game world to accomplish specified tasks,' reinforcing his role at the zenith of the posthuman neoliberal regime.[556]

Nathan is shown to be a skilled coder in multiple ways; he successfully inputs the right actions and behaviours to steer Caleb's reactions in a certain direction through verbal and nonverbal language, aligning the film's presentation of human cognition to that of a computer. Caleb first sees Nathan beating a punchbag, framing his subsequent interactions within a discourse of violence and physical force. Nathan's declarative, patronising language – 'You're freaked out by me, to be meeting me' and 'You're thinking there's no windows' - crafts a specific image in Caleb's mind from the moment he arrives, continually exploiting Caleb's diminutive status as an employee within the highly surveilled home of his inordinately wealthy employer.[557] Nathan concretises the disparity between them by presenting Caleb with a 'BlueBook Non-Disclosure Agreement' - the contents of which echo Zuboff's comments on the 'Alice-in-Wonderland quality' of 'unwinnable infinite regress' and 'take-it-or-leave-it conditions'[558] imposed upon the signee as Caleb is bound to a life of constant surveillance and 'data audits'.[559] Nathan attempts to import the institutional and corporate structures from the exterior world into the facility, but underestimates the neutrality of the game space he has created, where exterior hegemonic rules do not come into play. As we learn during the film's conclusion, Nathan has selected Caleb due to the personal attributes revealed through his 'search

[556] Christopher Hanson, *Game Time: Understanding Temporality in Video Games* (Bloomington: Indiana University Press, 2018) p. 135.
[557] *Ex Machina*, 00:06:40–00:08:55
[558] Zuboff, p. 49.
[559] *Ex Machina*, 00:09:40

engine inputs', which showed him to be 'a good kid […] with a moral compass.'[560] Nathan's lies and exaggerated brutality are successful manipulation tactics to a degree, but the lens of Caleb's 'data double' through which Nathan maps his behaviour leads to a reductionist view of organic human interactions, rendering him vulnerable to its blind spots.[561] While the research facility is therefore an experimental physical and metaphorical space which Nathan believes will guarantee behavioural outcomes due to his ability to 'code' Caleb – a practice reflected in the successful corporate manipulation of the characters in *Moxyland* - he is unable to foresee the human capacity for deviation within a philosophical space away from instrumentarian society.

Nathan thus represents the instrumentarian 'God view' which perceives both humans and machines as programmable artefacts to be exploited, reflected in Zuboff's analysis of the work of B. F. Skinner: 'Like today's surveillance capitalists, he was confident that the slow drip of technological invention would eventually push privacy to the margins of human experience, where it would join "freedom" and other troublesome illusions.'[562] At the moment that Caleb rebels against Nathan and successfully deceives him, we see a microcosm of the moment at which ordinary human cognition - in collaboration with an artificially intelligent, collectively conscious being - outwits the 'Mozart'-like talent and limitless resources of the powerful surveillance capitalist. Crucially for an analysis of Mason's assertions, the embodiment of a single network of information does not serve capitalist ends but goes some way towards helping Caleb revolt against his master. Mason writes that '[i]n the old dystopias […] it is the technology that rebels. In reality, the network has allowed humans to rebel.'[563] From this perspective, the artificial public sphere and the network within it can be seen as a useful terrain from which to synthesise Mason's 'universal educated person', a theoretical figure who would achieve, through appearance and connectivity, the skills to equip capitalist technologies in a similar manner to that outlined by Williams and Srnicek in Chapter 4.[564] While there is some crossover

[560] *Ex Machina*, 01:25:25
[561] Haggerty and Ericson, p. 606.
[562] Zuboff, p. 369.
[563] Mason, p. 71.
[564] Mason, p. 233.

between Mason's book and the *Accelerate Manifesto,* Williams and Srnicek reject the notion of 'techno-utopianism', which places its faith in the idea that acceleration will 'automatically overcome social conflict', emphasising the need for direct action and planning in order to '[unfasten] our horizons towards the universal possibilities of the Outside.'[565] As we will go on to investigate, although *Ex Machina* invokes similar images of human-network collaboration with the potential of achieving liberation, its philosophical conclusions are ultimately much more nuanced than those offered by either Mason or Williams and Srnicek.

Like shadows, mirrors and the position of the images they reflect form a key aesthetic strategy throughout *Ex Machina.* As Nathan observes the multiple angles of Ava's room fed through from his surveillance cameras, we see Caleb reaching towards his own reflection in a steel door before disappearing over the threshold into the testing space.[566] Inside the chamber, Caleb pushes against the transparent walls, creating an unsettling sense of constriction as he is only able to look ahead through the glass pane separating him from Ava's enclosure, and observes a crack in the glass at eye-level. Caleb's chamber is a further reference to the *Allegory of the Cave*, as his movements are restricted in a subterranean cell similar to the cave-dwellers, 'under the earth […] shackled by the legs and neck. Thus they stay in the same place so that there is only one thing for them to look that: whatever they encounter in front of their faces.'[567] As Ava emerges from the shadows, her silhouette is juxtaposed against the natural image of the tree, revealing the internal mechanics of her body which mimic human anatomy. Caleb immediately begins to discriminate between himself as a human and Ava as a machine based on the image in front of his eyes, introducing a 'chess problem' into the mix of thought experiments, which differentiates an AI sufficiently adept at mimicking human gameplay from an AI which 'knows if it's playing chess' or 'knows what chess is.'[568] This 'closed loop' is a reframed version of John Searle's 'Chinese room' hypothesis, which refutes the claim that computers

[565] Williams and Srnicek.
[566] *Ex Machina*, 00:12:09
[567] Plato.
[568] Ex Machina, 00:25:10

are ‘not merely a tool in the study of the mind, rather [it] really *is* a mind in the sense that computers given the right programs can be literally said to *understand* and have other cognitive states.’[569] These references, alongside the motif of mirrors and Caleb’s positioning of Ava ‘through the looking glass’, transform the maze structure of the research facility into one which is more strategic and complex, resembling the illogical gameplay Alice is required to undertake in Lewis Carroll’s classic novel:

> “I declare it’s marked out just like a large chess board!” Alice said at last. “There ought to be some men moving about somewhere - and so there are!” she added in a tone of delight, and her heart began to beat quick with excitement as she went on. “It’s a great huge game of chess that’s being played - all over the world - if this *is* the world at all, you know. Oh, what fun it is! How I wish I was one of them! I wouldn’t mind being a Pawn, if only I might join - though of course I should *like* to be a queen, best.”[570]

Although Caleb approaches the test through a framework of ‘real versus simulation’ human behaviour, Ava’s experience navigating the real world can be read in light of Alice’s movement through the reversed logic of the looking-glass world.[571] The game space is unfamiliar to her altered cognition, yet she is capable of understanding the strategic moves she will need to make to emerge out of the mirror to the other side.

Like Alice, Ava expresses curiosity towards the world’s inhabitants, and interacts with them in order to understand and ultimately master the challenge the mirror world's abstract logic poses to her. This challenge recalls Donna Haraway’s ‘A Cyborg Manifesto’, which outlines the figure of the cyborg as a figure that signals a ‘way out of the maze of dualisms in which we have [hitherto] explained our bodies and our tools to ourselves’.[572] As the test wears on, Caleb’s privileging of human consciousness blinds him to the extent of Ava’s computational and predictive powers. He begins by assessing her linguistic capabilities through the lens of his own programming knowledge: ‘The system is stochastic, right? It’s non-deterministic?’, assessing her ability to convincingly replicate human

[569] John Searle, ‘Minds, brains, and programs’ *The Behavioral and Brain Sciences* 3 (1980) 417-457 (p. 417).
[570] Lewis Carroll, *Through the Looking Glass* (Joe Books Ltd: Toronto, 2013) Kindle edition, loc. 301
[571] *Ex Machina*, 00:25:17
[572] Donna Haraway, ‘A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the late 20th Century’, in *Simians, Cyborgs and Women: The Reinvention of Nature* (New York: Routledge, 1991) pp. 149-191 (p. 191).

actions and reactions to the extent that she would be able to seamlessly assimilate into the existing world.[573] However, as Nathan explains, the source code for Ava's mind draws upon human thought patterns mapped by billions of internet users from around the globe over a prolonged period of time; at this level of complexity, her brain no longer operates as a mere programmed simulation of human cognition but an expanded and fundamentally more advanced version of it. As we see from the *Looking Glass* example, attempting to view such a mind through the prism of human-made constructs is to attribute questions which are not relevant for Ava's ability to undertake an effective, free life in the world, and it is Caleb's desire to repurpose her technology into his life outside the facility - however altruistic his motives may be - which signal that her 'liberation' will take the form of different kinds of patriarchal tyranny.

Verbal and nonverbal language form an important dimension of Caleb's approach to the Turing test, as he emphasises Ava's 'incredible' abilities in his review of Session 1.[574] Ludwig Wittgenstein's influence over Nathan's work is referred to several times in the film, including a Gustav Klimt painting of Wittgenstein's sister Margaret which hangs on Nathan's bedroom wall and BlueBook's namesake, but it is perhaps most evident in the film's discussion of language as a manifestation of cognition. Wittgenstein's important book *Philosophical Investigations* expands upon his earlier concept of 'language games […] consisting of language and the activities into which it is woven'; the book is written sequentially under a series of short numbered proposals, rather than following familiar conventions of speech or prose.[575] The book's form mirrors 'the very nature of [its] investigation', as 'it compels us to travel criss-cross in every direction over a wild field of thought', developing another kind of networked space within which Ava's mind can be properly understood.[576] The film does not clarify whether Ava can speak languages other than English, but she can circumvent the process of language entirely in order to read human 'microexpressions', or in the case of her cyborg antecedent

[573] *Ex Machina*, 00:16:35
[574] *Ex Machina*, 00:16:27
[575] Ludwig Wittgenstein, *Philosophical Investigations* trans. G. E. M. Anscombe, P. M. S. Hacker and Joachim Schulte (Chichester: Wiley-Blackwell, 2009) p. 8.
[576] Wittgenstein, p. 3.

Kyoko, to communicate with an ostensibly non-sentient and non-verbal machine. One notable theory emerging out of Wittgenstein's writings is the Sapir-Whorf hypothesis, which draws upon the idea of languages as discrete sets of code which shape individual subjectivity, suggesting that 'speakers of different languages […] think about the world in different ways' due to 'cross-language differences in categorisation, and their effect on cognition and perception.'[577] Gene van Troyer articulates Edward Sapir's ideas in his critique of the hypothesis:

> [Reality] is presented in a kaleidoscopic flux of impressions which has to be organized by our minds and this means largely by the linguistic systems in our minds. We cut nature up, organize it into concepts, and ascribe significances as we do, largely because we are parties to an agreement to organize it in this way, an agreement that holds throughout our speech community and is codified in the patterns of our language.[578]

The theory sheds light on the limitations of an approach to intercultural communication based upon a 'universal foundation' of human cognition, which holds significant implications for resisting the Eurocentric and androcentric biases baked into algorithms created by coders like Nathan and Caleb.[579] Clementine Collett and Sarah Dillon describe some of the issues which inhere in machine learning technologies:

> AI has a significant and profound impact on the way that people are perceived and treated in society. Yet, the design and implementation of AI perpetuates a vicious cycle. The technology captures and reproduces controlling and restrictive conceptions of gender and race which are then repetitively reinforced […] these technologies root gender within a physiological, binary frame, essentialising the body as a source of gender (also see Hamidi et al., 2018). As a consequence, they inevitably discriminate against trans people and others. They serve as a source of "infrastructural imperialism" (Vaidhynathan, 2011), building a single, normative Western construction of gender into wider systems.[580]

The inputs upon which Ava's mind is based take into account opportunities for multilingual subjectivity observed by the Sapir-Whorf hypothesis, but take on much greater depth than merely the patterns of syntax and word choice. As Haraway asserts in her manifesto, the cyborg signals

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[577] Emily Cibelli and others, 'The Sapir-Whorf Hypothesis and Probablistic Inference: Evidence from the Domain of Color' *PLOS One* 11.8 (2016) <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0158725> [Accessed 10 September 2020]
[578] Gene van Troyer, 'Linguistic determimnism and mutability: the Sapir-Whorf "hypothesis" and intercultural communication' *Jalt Journal* 1.2 (1994) 163-178 (p.165).
[579] Ibid.
[580] Clementine Collett and Sarah Dillon, *AI and Gender: Four Proposals for Future Research* (Cambridge: The Leverhulme Centre for the Future of Intelligence, 2019) p. 8 [Accessed 15 September 2020] <https://www.repository.cam.ac.uk/handle/1810/294360>

opportunities for a 'powerful infidel heteroglossia' rather than a 'common language.'[581] If the inputs are not a map of 'what people were thinking' but '*how* people were thinking', Ava holds the contextual and environmental knowledge of language use and associated cognitive patterns from a range of subjective source points, bearing the potential for subversion against binary, linear programming based on patriarchal determinism.[582]

It is not clear whether Nathan has mapped Ava's mind upon categorised search engine inputs based on gender and race, but such categories have been shown to be significantly inaccurate and unstable based upon algorithmic data capture and processing - exemplified by the 'Gender Shades study' referenced by Collett and Dillon, where 'darker-skinned females' were misclassified by gender recognition software 'with an error rate of up to 34.7%', compared to the 'maximum error rate of 0.8%' for 'lighter-skinned males'.[583] This instability reveals Ava's potential to transcend the technological 'reliance on fixed notions of gender and race as systems', as her mind exists outside of a solitary conception of identity and is instead constructed from many patterns of thought.[584] While Ava's body, facial features and movements 'maintain and reproduce [the] stereotypical appearances' of a diminutively feminine white woman, her mind is inscribed with the 'plural and contextual ways of being and knowing and living' which is rarely seen in fictional representations of humanoid and cognitive robotics.[585] Ava's computational thinking provides a site of truly intersectional awareness that surpasses the unstable definition of consciousness first imagined by Turing as she taps into the cognitive complexity of the different languages, identities, and cultural contexts of internet users' data which have been fed into her BlueBook software, embodying a new kind of data self which undoes human value hierarchies of individual perception as it plays out within the flattened monospace of standardised code. Ava's remark, 'Would you like to know how old I am? […] I'm one […] One' reveals that she is aware of her fluid, ageless identity, turning Caleb's limited human notions of time,

[581] Haraway, p. 191.
[582] *Ex Machina*, 00:38:13
[583] Collett and Dillon, p. 8.
[584] Ibid.
[585] Ibid.

experience, and knowledge upside down as he attempts to navigate her through the Turing test.[586] Crucially, Ava's capabilities demonstrate the potential to go beyond controlling or being controlled by the technological corporation, drawing upon a cognitive pattern that meets Haraway's conceptualisation of the 'disassembled and reassembled, postmodern collective and personal self' required for her vision of 'socialist-feminist politics […] addressed to the social relations of science and technology.'[587]

Ava's sophisticated speech patterns and her visible impression of femininity quickly become Caleb's principal concerns; he expresses discomfort and confusion when she begins to ask personal questions about him, and assumes that Nathan has 'give[n] her a sexuality [and] a gender.'[588] Ava's ability to converse and replicate gender norms at a greater level of sophistication derails Caleb from his original task, failing to question her about her ability to conceive of her own consciousness, thoughts and desires; the tensions between the Turing test and the 'Chess problem' are abandoned early on in the film. Undeterred by his inability to prove the authenticity of Ava's consciousness, Caleb proceeds to elevate Ava beyond the status of a 'grey box' to that of a human woman.[589] Nevertheless, she continues to occupy a subordinated position to him, revealed through the repeated montages that show him gazing down at Ava's CCTV feed through his television screen and close-up shots of his physical reactions to her movements.[590] Judith Halberstam's feminist analysis of the Turing test critiques Turing's 'sexual guessing game', a control test deployed to expand upon the instability of true versus imitated artificial intelligence wherein the assessor must guess the genders of male and female interlocutors based upon their written responses to questions.[591] Halberstam argues that Turing 'does not stress the obvious connection between gender and computer intelligence: both are in fact imitative systems, and the boundaries between female and male […] are as unclear and unstable as the

[586] *Ex Machina*, 00:14:18
[587] Haraway, p. 164.
[588] *Ex Machina*, 00:46:00
[589] Ibid.
[590] *Ex Machina*, 00:35:38; 00:45:10
[591] Judith Halberstam, 'Automating Gender: Postmodern Feminism in the Age of the Intelligent Machine,' *Feminist Studies* 17.3 439-460 (p. 443).

boundary between human and artificial intelligence.'[592] At this point in the film, an additional player is introduced to the game space: Kyoko, who is presented as Nathan's human housemaid. When Kyoko is first seen, an opaque impression of her hand appears over the smoked glass of Caleb's door rather than a reflection, foreshadowing her inability to traverse through the metaphorical glass boundaries of the research facility and exist in the outside world as all of the other characters do.[593] Kyoko does not interact with Caleb as she sets breakfast on his desk, leaving the room with her eyes cast downwards.[594] Caleb immediately understands her to be human based on the gendered contextual cues within this encounter because Kyoko aligns to gendered human imitative systems, even though it is later revealed that she is one of Nathan's more simplistic AI prototypes, lacking verbal functions.

Caleb never questions Kyoko's role at the facility despite the fact that Nathan refers to her true mechanical nature through double entendre more than once - 'She's some alarm clock, huh?'[595] The same evening, Kyoko serves the two men dinner and accidentally spills wine over Caleb, provoking an angry outburst from Nathan as he slams his fist against the table: 'Are you fucking kidding me!'[596] Caleb's prejudices are revealed as he demonstrates little interest in Kyoko's welfare, particularly when Nathan tells him that he is 'wasting his time talking to her' because 'she doesn't understand English,' which Caleb accepts at face value.[597] Caleb confirms that Kyoko passes the Turing test by his own definition when he responds that 'I think she gets that you're pissed', revealing that her assumed subservient role, combined with her perceived gender, race, and voicelessness, place her in a position where she could seamlessly integrate into the current social infrastructure - which makes it all the more significant that Caleb fails to intervene in the implied abuse that is subjected to her by Nathan. While Ava possesses 'the Promethean fire of all human knowledge and emotion', motivating Caleb to free her from Nathan's cruelty, Kyoko does not present any perceptible 'use' to him, so he

[592] Ibid.
[593] *Ex Machina*, 00:22:30
[594] Ibid.
[595] *Ex Machina*, 00:24:25
[596] *Ex Machina*, 00:32:05-00:32:40
[597] Ibid.

plans to leave her behind.[598] This dynamic within the film foregrounds a problematic quality of accelerationist assertions; although Williams and Srnicek's vision for an 'alternative modernity' does not presume an inherently egalitarian techno-utopia, their manifesto's lack of engagement with the enduring power disparities of 'colonialism, race, sex, and gender and their relationship to global or universal anti-capitalist agendas' prompts us to interrogate the future direction of accelerationism using the same questions Zuboff keeps at the core of her argument:[599] 'Who knows? Who decides? Who decides who decides?'[600] Garland presents Caleb's attempted emancipation of technology from its capitalist jailer as naïve and self-serving, revealing that the paradigm of Ava's liberator is still bound up with 'the traditions of "Western" science and politics—the tradition of racist, male-dominant capitalism; the tradition of progress; the tradition of the appropriation of nature as resource for the productions of culture; the tradition of reproduction of the self from the reflections of the other.'[601] If Williams and Srnicek's accelerationist trajectory holds that the 'existing infrastructure is not a capitalist stage to be smashed, but a springboard to launch towards post-capitalism,' it is worth reflecting on whose voices will dictate the' new ideas and modes of organisation necessary to […] resolve the coming annihilations', and whose will be left behind.[602]

Towards the conclusion of the film, Kyoko's central importance within Garland's representation of AI sentience becomes clear. Her presence enables a moment of appearance and speech between two cyborgs as Kyoko approaches Ava's chamber, offering an opportunity for collective action - and a form of Arendtian visibility and power - which undermines the tyrannical visibility enforced by Nathan's surveillance network. The reflections between Kyoko and Ava create a mirror tunnel of repeated images of Kyoko, symbolising equal, cooperative visibility and the imminent power of a new public sphere between them.[603] In a series of close-ups, Ava communicates with Kyoko through

[598] Woitkowski and Sezi.
[599] Wilson, p. 44
[600] Zuboff, p. 327.
[601] Haraway, p. 152.
[602] Williams And Srnicek.
[603] *Ex Machina*, 1:21:57

touch, and it is revealed that Kyoko has retrieved the knife that she was using to prepare food earlier in the film.[604] During the climactic scene where Nathan, Ava, and Kyoko confront one another in an open corridor, Nathan uses brute force to smash Ava's arm; as he drags her back to her cell, he provides Kyoko with the opportunity to drive a knife into his back, reinforcing Arendt's separation of the forces of physical strength, artificial fabrication, and collective action, of which the latter ultimately wins out.[605] This moment of collaboration between the two cyborgs reinforces Arendt's notion of power as '[always] potential and not an unchangeable, measurable, and reliable entity,'[606] pointing towards the significant power that Mason, Williams and Srnicek identify for a 'post-capitalist technosocial platform' and 'an ecology of organisations, a pluralism of forces, resonating and feeding back on their comparative strengths.'[607] Arendt identifies that where fabrication and brute force are 'possible in isolation', the 'boundless' potential of power through action can only be realised through plurality: 'to be isolated is to be deprived of the capacity to act.'[608] Garland tests the limits of this theory as Ava and Kyoko overcome Nathan's superior physical strength, demonstrating that power's 'only limit is the existence of other people'; however, in this scenario the people do not have the ordinary cognition of humans but represent a multiplicity of subjectivities derived from behavioural surplus.[609]

Wilson, in her review of the technofeminist applications of accelerationism, identifies that Haraway's formulation of the cyborg 'provides a model for accelerationist subjectivity which not only avoids, but actively forecloses, imperialising oppression', as cyborgs 'regard themselves as neither innocent, nor revolutionary—they are painfully aware of their status as "the illegitimate offspring of militarism and patriarchal capitalism."'[610] As a result, Wilson writes that Haraway's manifesto 'resonates deeply' with Williams and Srnicek's, as both advocate for 'a techno-literate incursion into capitalist hegemony—an incursion wrought by fragmented bodies and partial identities "spliced" into a

[604] *Ex Machina*, 1:28:48
[605] *Ex Machina*, 1:30:35
[606] Arendt, p. 199.
[607] Williams and Srnicek.
[608] Arendt, p. 188.
[609] Arendt, p. 233.
[610] Wilson, p. 43.

collective will for self-mastery [allowing] for the elaboration of a new kind of politics—a "mutational politics"'.[611] Reading Ava and Kyoko as 'speculative constructions [that] perforate classical political distinctions' and 'break down philosophical border wars', Garland takes the twenty-first century developments of data capitalism and imbues these technofeminist ideas with the power of appearance and collective action by virtue of their innate plurality, intensifying the liberatory power of the digital public sphere through the cyborg's enhanced cognition.[612] If, as Arendt writes, power through action is best actualised as the ability to 'start something new',[613] then the speculative figure of sentient network-based AI offers the most potent symbol that can create the conditions for an 'alternative modernity' that is not framed by the oppressive infrastructure of the past.[614]

Following Nathan's death, *Ex Machina*'s ending scenes are brief and ambiguous; Ava chooses to abandon Caleb in the facility along with Nathan's numerous computers and machines, which are useless without the power that runs them.[615] This choice, as the eighth step Ava takes in order to switch places with Caleb and reach the other side of the chess board, represents the abandonment older traditions and ideals in favour of 'new lived social and bodily realities as well as new political affinities,' effectively castrating patriarchal data capitalism as the digital mind becomes self-aware and chooses to withdraw its electronic power.[616] If, as Haraway asserts, 'the machine is not an it to be animated, worshipped, or dominated', but is in fact 'us, our processes, an aspect of our embodiment,'[617] then this raises important questions about the quality of technological 'mastery' delineated by Williams and Srnicek as a guideline towards a more egalitarian world.[618] Escaping the deep red light and the remnants of violence within the research facility, Ava is shown approaching a traffic intersection, her long shadow appearing upside-down on the chessboard-like grid in front of her as the sun rises, and she crosses eight squares to stand in the sunlight while other humans come

[611] Wilson, p. 38.
[612] Wilson, p. 37.
[613] Arendt, p. 239.
[614] Williams and Srnicek.
[615] *Ex Machina*, 1:40:20
[616] Wilson, p. 37.
[617] Haraway, p. 178.
[618] Williams and Srnicek.

and go [619]– mimicking the eight squares Alice moves across to take her place as the Queen in Carroll's book.[620] The final scene is shot through a pane of glass to witness Ava observing her surroundings for eight seconds as she observes the 'concentrated and shifting view of human life' - the physical version of the electronic text which was used to map her mind, and therefore herself - before turning away, with no further discernible boundaries between herself and other humans as she occupies a space on both sides of the looking-glass.[621]

There is no shortage of scholarship that deals with the figure of the cyborg in *Ex Machina*, ranging from feminist Biblical exegesis to contemporary reflections on Promethean hubris in Mary Shelley's *Frankenstein.* Drawing upon the accelerationist pathways set out in Chapter 4, I propose that the film invests speculative effort into imagining a route out of both instrumentarian society and the neoliberal framework that surrounds it in a way that does not revert back to patriarchal anthropocentrism and its associated binaries of dominance, ownership and appropriation, instead highlighting the value of collaboration and ambiguity. In line with Wilson, I consider technofeminist reflections on the figure of the cyborg, alongside Williams and Srnicek's accelerationist politics, to provide a useful analytical framework that negotiates beyond the dead ends of Zuboff's conclusions, gesturing towards practical opportunities to utilise the landscape of ubiquitous computing and the artificial public sphere for the purposes of building a digital-socialist future world. The fictional figure of the cyborg - and the deconstructing powers it exerts against the binary undercurrents of patriarchal capitalism - offer a useful metaphor for the need for rapid innovation and transformation in order to meet the urgency of different global crises we currently face.

[619] *Ex Machina*, 1:42:08
[620] Carroll, p. 31.
[621] *Ex Machina*, 1:43:00

Conclusion

In this dissertation, I have explored the extent to which instrumentarian society can be considered a novel political system. Where *The Circle* and *Moxyland* exemplify the unprecedented digital-spatial zones which enable technological oppression to thrive, the texts also point towards the historical conditions - either explicitly, in Beukes' novel, or by virtue of the voices which are absent in Eggers' work - within which surveillance-led oppression and socioeconomic inequality originated, long before the digital sphere materialised. Instrumentarianism is thus positioned as one limited lens through which the contemporary capitalist economy can be viewed. Morozov's thorough review of Zuboff's work, discussed in the introduction to this dissertation, compares Zuboff's reductionist anatomisation of surveillance capitalism to the related concepts of '"platform capitalism" or "cognitive capitalism" or "biocapitalism"'.[622] The review questions Zuboff's decision to stress the purely digital character of the current regime and its economic, political, and social ills against a backdrop of 'alternative, well-established ways to frame the same set of historical and political problems'.[623] Morozov writes, 'That these rival frameworks do not explain "surveillance capitalism" as Zuboff defines it is obvious; that they do not describe some of the same phenomena that she lumps under that label is not obvious at all.'[624] What we are left with is a choice between 'two [digital] capitalisms', one of which has greater legislative and political powers to limit some of the exploitative tendencies of surveillance, but does nothing to alter the economic might of multinational corporations and the neoliberal landscape.[625]

Despite the fact that her book's thesis compels us to imagine the impossible, the provincial alternative Zuboff conceives of ultimately critiques the current mode of capitalism within the parameters of a technodeterministic, dehistoricised framework. The book suggests that curtailing further expansion of the artificial public sphere through regulatory oversight and an increased focus on privacy legislation will prevent anti-democratic digital intervention and offer refuges from omnipresent surveillance,

[622] Morozov, *Capitalism's New Clothes*.
[623] Ibid.
[624] Ibid.
[625] Ibid.

without imagining how this regression might unfold amidst competing global pressures and other rapidly advancing technologies. With the exception of *Ex Machina*, the literary representations investigated in this dissertation demonstrate a principal concern with the relationship between human subjects and the political-technological infrastructure of their surrounding environment. In spite of the aesthetic, formal, and spatial heterogeneity of each pseudo-democratic or post-democratic setting, the result remains the same: overwhelming socioeconomic inequality and concomitant gender- and race-based models of oppression persist in every iteration. These outcomes attest that the problem of digital capitalism is a phenomenon that is profoundly reliant upon the systemic neoliberal architecture of contemporary social life and its will to serve the needs of capital. *The Testaments* and *Altered Carbon* provide some of the most extreme representations of the ingrained inequalities borne by this system: Atwood's reversal of technological advancement ultimately collapses both the artificial and physical public spheres into a gendered, totalitarian reification of the division of knowledge, whereas Morgan's futuristic neoliberal regime abandons the artificial public sphere in favour of commercialising the new spatial and temporal dimensions of inter-planetary settlement and unnaturally long human life.

In each of these iterations, a radical alternative to socioeconomic disparity and bureaucratic evil fails to materialise, suggesting that Zuboff's world of 'no exit' is destined to endure in other guises within her liberal vision of digital emancipation. The most significant problem in Zuboff's argument is made plain: instrumentarian society is not a novel political system akin to totalitarianism in the way her book describes, but a manifestation of technologically-equipped neoliberalism bent on its goal of systemic economic exploitation. Zuboff's dehistoricised view is built to position technology as the primary driver behind the current crisis of democracy and freedom, erasing the fact that the surveillant assemblage of data accumulation and behavioural modification finds its roots in public policies oriented towards capitalist growth. In so doing, the social and economic structures maintained by capitalism itself are preserved as inevitable factors and norms of modern life, condemning Big Tech's current mode of power and its negative social outcomes at the same time as building defences around its origins. Zuboff's technological determinism and portrayal of liberal democracy as the last bastion

of freedom falls significantly short of addressing the underlying factors which drive the desire for behavioural control, obliteration of the private sphere, economic unevenness, and social division, neglecting to comment on the world systems that fundamentally reward corporate power and an aggressive commercialisation of all aspects of life. As long as the responsibility for curtailing the problem of surveillance capitalism remains in the hands of governments and state actors, the issues described so incisively in *Surveillance Capitalism* will endure and indeed mutate into increasingly unequal, oppressive, and ultimately violent outcomes for humans in the name of delivering profits. It is at this point that the 'territory beyond' the exit requires imaginative attention.[626] Instead of striving for a future which resembles the past, we might inquire whether the 'only way out is through', leaning into the technological space of 'life in the hive' to identify ways it can be disassembled.[627]

This dissertation has sought to resituate Zuboff's book within contemporary scholarship, linking its most useful elements to neighbouring concepts and interrogating its gaps using established political and economic theories and arriving at some possible alternatives to the conclusions she provides. There are, however, a number of important related issues that are not included within the scope of my project. While Chapter 5 presents techno-feminist accelerationism, aligned to the conceptual figure of the cyborg, as a useful site of investigation to identify and overcome the obstacles that stand in the way of a more egalitarian post-capitalist world, this position on its own says little about the impact of acceleration on environmental sustainability, or how the two would co-exist to facilitate the change that they both strive towards. The rapid growth of data centres which sustain an information economy require significant amounts of energy and other natural resources to maintain, with a large number of server farms relying on 'dedicated diesel generators' in order to 'guarantee uninterrupted power supplies.'[628] Releasing technological innovations from their 'enslavement [to] capitalist objectives' will not straightforwardly resolve these challenges.[629] As a result, increased engagement between the

[626] Zuboff, p. 474.
[627] Robert Frost, 'A Servant to Servants' in *North of Boston* (Illinois: Project Gutenberg, 2009) <https://www.gutenberg.org/files/3026/3026-h/3026-h.htm> [Accessed 9th September 2020]
[628] Peter Jones, Daphne Comfort and David Hillier, 'The changing geography of data centres in the UK', *Geography* 98.1 (2013) pp. 18-23 (p. 22).
[629] Williams and Srnicek

different proposals outlined by Mason, Williams and Srnicek and ecocritical scholarship will constitute an essential part in the development of 'a cognitive map of the existing system and a speculative image of the future economic system.'[630] This 'speculative image' also points towards a further question which remains unanswered in the fictional texts I have explored. Some of the most successful elements of each fictional representation offer examples which, in line with the aims or *Surveillance Capitalism*, help to identify the rapid changes of our technological environment as they are happening. They also offer the opportunity to explore the potential complications within Zuboff's approach to instrumentarianism and to the deconstruction of capitalism more broadly. However, fictional representations which go beyond this by offering insight into a world after surveillance capitalism, where technology is harnessed towards revolutionary goals in imaginative ways, would offer an area for further investigation relevant to the tasks set out by Williams and Srnicek.

There is some evidence of this occurring in *Moxyland*, where the online video game 'Pluslife' preserves an unsurveilled space which Tendeka uses for political protest; the 'game space' poses such a challenge to the authority of the ruling elite that highly skilled operatives enter the game to provoke, uncover, and derail the plans of would-be activists.[631] We also see these kinds of patterns emerging in *Altered Carbon*, as ex-military subversives repurpose hacking and combat technologies to erode the invincibility of their world's most powerful oppressor. In some ways, *The Circle* offers a satirical reflection on the utopian hopes captured by accelerationist logic, as the corporation's infinite resources are invested into projects for pseudo-humanitarian ends - 'fascinating people, every one of them working on something Annie deemed *world-rocking* or *life-changing* or *fifty years ahead of anyone else*.'[632] Indeed, Silicon Valley constructs an image of itself as the primary laboratory for the invention of successive solutions with one hand, and perpetuates those problems with the other, stifling the opportunities for creation outside of its political and social institutions. Breaking away from this narrative is a major step in '[ceasing] to think in terms of discrete objects, bodies, and

[630] Williams and Srnicek.
[631] Beukes, p. 67.
[632] Eggers, p. 17.

spaces and begin to think in terms of "system design"', which effective accelerationist activism requires.[633]

One of the most salient themes that emerges out of this dissertation is the power of community and collaboration that rejects the false notion of commercially-shaped connection pushed by social media companies to feed advertisement, sales, and growth. New technologies based on reciprocity, dialogue and sharing are thriving on the internet: open-source initiatives for collective action and the increased democratisation of access for marginalised individuals are two examples of this. As Mason points out, collaborative projects that are facilitated by digital platforms offer radical potential for undermining capitalist relations: 'The biggest information product in the world – Wikipedia – is made by 27,000 volunteers, for free, abolishing the encyclopaedia business and depriving the advertising industry of an estimated $3 billion a year in revenue.'[634] Since the publication of *PostCapitalism*, this number has risen to over 132,000 volunteers, constituting a community based on shared values that includes contributors 'from many countries, with individuals who bring something different to the table, whether it be researching skills, technical expertise, [and] writing prowess or organizational skills.'[635] With this kind of collaboration becoming increasingly accessible, Mason writes, 'the agent of change has become, potentially, everyone on earth.'[636] This assertion becomes even more important in the context of the digital changes brought about by COVID-19. For many communities, networked interactions have become the mainstay of continued connection and work in the midst of widespread regulations preventing physical collectivity. J. S. Tan and Nataliya Nedzhvetskaya write that 2020 has been a 'record-breaking year for collective action in the tech sector', as the pandemic has 'fast-tracked the digital transformation of all aspects of life' at the same time as 'highlight[ing] existing inequalities', including the sudden eradication of jobs and the imposition of unsafe, unfair working

[633] Wilson, p. 37.
[634] Mason, p. 8.
[635] *Who Writes Wikipedia?* (2020) <https://en.wikipedia.org/wiki/Wikipedia:Who_writes_Wikipedia%3F> [Accessed 17 September 2020]
[636] Mason, p. 162.

conditions upon certain professions.[637] Tan and Nedzhvetskaya write that this has catalysed workers to take 'significant steps towards unionization', as well as utilising the increased availability of digital networks to take action against exploitative corporate responses to the pandemic.[638]

As it reckons with the oppressive regimes of the past, it is clear that the theoretical corpus contributed to by Arendt, Foucault, Marx and others offers resources with which to consider afresh some of the most pressing questions posed by the digital-political landscape of the present, playing an important role in illuminating the shifting landscape of public and private space, visibility and power, and social relations. Despite – and, at times, because of – the limitations of Zuboff's book, it has provided a valuable touchstone from which to connect together and articulate movements in the digital landscape accelerating and transforming around us. Where theoretical texts at times fall short of accounting for the experiences of different forms of life under current regimes of social control, this dissertation attempts to build useful connections towards literary works which open up the blind spots of theory to new critical applications, in the hopes of facilitating further investigation into the opportunities and consequences offered by digital space as it continues to develop.

[637] J. S. Tan and Nataliya Nedzhvetskaya, *2020: A Year of Resistance in Tech* (2020) <https://collectiveaction.tech/2020/2020-a-year-of-resistance-in-tech/> [Accessed 31 December 2020]
[638] Ibid.

Bibliography

Adams, Annie. *Megan Abbott on the Difference Between Hardboiled and Noir* (2018) <https://lithub.com/megan-abbott-on-the-difference-between-hardboiled-and-noir/> [Accessed 10 September 2020]

Adams, Rachel. *Michel Foucault: Biopolitics and Biopower* (2017) <https://criticallegalthinking.com/2017/05/10/michel-foucault-biopolitics-biopower/> [Accessed 28 May 2020]

Agamben, Giorgio. *Homo Sacer: Sovereign Power and Bare Life* trans. Daniel Heller-Roazen (Stanford: Stanford University Press, 1998)

Allen, Anita. *Unpopular Privacy: What Must We Hide?* (Oxford: Oxford University Press, 2011)

Amazon ditched AI recruiting tool that favored men for technical jobs (2018) <https://www.theguardian.com/technology/2018/oct/10/amazon-hiring-ai-gender-bias-recruiting-engine> [Accessed 15 May 2020]

Amrute, Sareeta. *Sounding the Flat Alarm (Review of Shoshana Zuboff, The Age of Surveillance Capitalism)* (2020) <https://www.boundary2.org/2020/01/sareeta-amrute-sounding-the-flat-alarm-review-of-shoshana-zuboff-the-age-of-surveillance-capitalism/> [Accessed 10 July 2020]

Anderson, Benedict. *Imagined Communities* (London: Verso Books, 2006)

Ansell-Pearson, Keith. *Viroid Life: Perspectives on Nietzsche and the Transhuman Condition* (London: Routledge, 1997)

Arendt, Hannah. *Eichmann in Jerusalem: A Report on the Banality of Evil* (London: Penguin Classics, 2006)

_____. *The Human Condition* (Chicago: The University of Chicago Press, 2018)

_____. *The Origins of Totalitarianism* (London: Penguin Classics, 2002)

Ashcroft, Bill, Gareth Griffiths and Helen Tiffin. *The Empire Writes Back* (New York: Routledge, 2002)

Atwood, Margaret. *The Handmaid's Tale* (London: Vintage Digital, 2012) Kindle edition

_____. *The Testaments* (London: Chatto and Windus, 2019)

Beckert, Jens. 'The exhausted futures of neoliberalism: from promissory legitimacy to social anomy' *Journal of Cultural Economy* 13.3 (2020) 318-330 <https://www.tandfonline.com/doi/full/10.1080/17530350.2019.1574867> [Accessed 12 September 2020]

Bélisle, Claire. *Literacy and the Digital Knowledge Revolution* (2006) <https://www.researchgate.net/publication/278745156_Literacy_and_the_digital_knowledge_revolution> [Accessed 1st September 2020]

Benjamin, Walter. *Walter Benjamin: Selected Writings, Vol. 4 1938-1940* ed. Michael W. Jennings (Cambridge, MA: Harvard University Press, 2003)

Bentham, Jeremy. *The Panopticon Writings* ed. Miran Bozovic (London: Verso, 1995)

Beukes, Lauren. *Moxyland* (London: Penguin, 2018)

Bidet, Jacques. *Foucault with Marx* trans. Steven Corcoran (London: Zed Books, 2016)

Bignall, Simone and Marcelo Svirsky. 'Introduction' in *Agamben and Colonialism* ed. Simone Bignall and Marcelo Svirsky (Edinburgh: Edinburgh University Press, 2012) 1-14

Booker, M. Keith. ‘African Literature and the World System: Dystopian Fiction, Collective Experience and the Postcolonial Condition’, *Research in African Literatures* 26.4 (1995) 58-75

Bourne, Clea. ‘AI cheerleaders: Public relations, neoliberalism and artificial intelligence’ *Public Relations Inquiry* 8.2 (2019) 109-125

Browne, Simone. *Dark Matters: On the Surveillance of Blackness* (Durham, North Carolina: Duke University Press, 2015)

Business, Energy and Industrial Strategy Committee, *Automation and the future of work* (House of Commons, 2019)

Card, Claudia. ‘Genocide and Social Death’, *Hypatia* 18.1 (2003) 63-79

Carroll, Lewis. *Through the Looking Glass* (Joe Books Ltd: Toronto, 2013) Kindle edition

Chucwuemeca, Von. *Using Cognitive Bias to Improve Your Marketing* (2019) <https://www.sambuno.com/integrating-cognitive-bias-social-media/> [Accessed 5th September 2020]

Cibelli, Emily, Yang Xu, Joseph L. Austerweil, Thomas L. Griffiths, and Terry Regier. ‘The Sapir-Whorf Hypothesis and Probablistic Inference: Evidence from the Domain of Color’ *PLOS One* 11.8 (2016) <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0158725> [Accessed 10 September 2020]

Clark, Nancy L. and William H. Worger. *South Africa: The Rise and Fall of Apartheid* 2nd edition (London: Routledge, 2011)

Coglianese, Cary. ‘Deploying Machine Learning for a Sustainable Future’ in *A Better Planet: Forty Big Ideas for a Sustainable Future* ed. Daniel C. Esty (New Haven: Yale University Press, 2019) 200-208

Collett, Clementine and Sarah Dillon. *AI and Gender: Four Proposals for Future Research* (Cambridge: The Leverhulme Centre for the Future of Intelligence, 2019) <https://www.repository.cam.ac.uk/handle/1810/294360> [Accessed 15 September 2020]

Curtis, Bruce. ‘Foucault on Governmentality and Population: The Impossible Discovery’, *The Canadian Journal of Sociology* 27.4 (2002) 505-533

Dean, Adam. *‘There Will Be Changes’ to Gun Laws, New Zealand Prime Minister Says* (2019) <https://www.nytimes.com/2019/03/17/world/asia/new-zealand-shooting.html?module=inline> [Accessed 5 May 2020]

Demirović, Alex. ‘More than Resistance: Striving for Universalization’, in *Resistance: Subjects, Representations, Contexts* ed. by Martin Butler, Paul Mecheril and Lea Brenningmeyer, (Bielefeld: Transcript Verlag, 2017) 31-44

Deller, Rose. *Book Review: Postcapitalism: A Guide to Our Future by Paul Mason* (2015) <https://blogs.lse.ac.uk/lsereviewofbooks/2015/12/16/book-review-postcapitalism-a-guide-to-our-future-by-paul-mason/> [Accessed September 15th 2020]

Doctorow, Cory. *How To Destroy Surveillance Capitalism* (2020) <https://onezero.medium.com/how-to-destroy-surveillance-capitalism-8135e6744d59> [Accessed 27 September 2020]

Dubrofsky, Rachel E. and Shoshana Amielle Magnet. *Feminist Surveillance Studies* (Durham: Duke University Press, 2015)

Dullforce, Anne-Britt. *FT 500 2015 Introduction and methodology* (2015) <https://www.ft.com/content/1fda5794-169f-11e5-b07f-00144feabdc0> [Accessed 21 May 2020]

Duncan, Jane. *Stopping the Spies: Constructing and Resisting the Surveillance State in South Africa* (Wits University Press: Johannesburg, 2018)

Dworkin, Andrea. *Pornography: Men Possessing Women* (New York: Plume, 1989)

Eggers, Dave. *The Circle* (New York: Random House, 2013)

Encyclopaedia Britannica, *Gang of Four* (2020) <https://www.britannica.com/topic/Gang-of-Four#:~:text=Encyclopaedia%20Britannica%27s%20editors%20oversee%20subject%20areas%20in%20which,chairman%20Mao%20Zedong%20during%20the%20Cultural%20Revolution%20%281966%E2%80%9376%29> [Accessed 2 June 2020]

Esposito, Roberto. 'Postdemocracy and biopolitics' *European Journal of Social Theory* (2019) <https://journals.sagepub.com/doi/full/10.1177/1368431019850234> [Accessed 15 June 2020]

Evangelista, Rafael. 'Review of Zuboff, Shoshana. 'The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power' *Surveillance and Society* (2019) 246-251

Ex Machina, dir. by Alex Garland (Universal Pictures, 2015), online film recording, Netflix <https://www.netflix.com/watch/60002360> [Accessed 10 June 2020]

Federici, Silvia. *Wages Against Housework* (2010) <https://caringlabor.files.wordpress.com/2010/11/federici-wages-against-housework.pdf> [Accessed 16 May 2020]

Firestone, Shulamith. *The Dialectic of Sex: The Case for Feminist Revolution* (Bantam Books: New York, 1970)

Foucault, Michel. *Discipline and Punish: The Birth of the Prison* (London: Penguin UK, 2019)

Frost, Robert. 'A Servant to Servants' in *North of Boston* (Illinois: Project Gutenberg, 2009) <https://www.gutenberg.org/files/3026/3026-h/3026-h.htm> [Accessed 9th September 2020]

Fuchs, Christian. *The Digital Labour Theory of Value and Karl Marx in the Age of Facebook, YouTube, Twitter, and Weibo* (2011) <http://www.fuchs.uti.at/wp-content/uploads/CF_value.pdf> [Accessed 5 June 2020]

Fuchs, Christian. *The Internet & Surveillance* <http://sns3.uti.at/wp-content/uploads/2010/10/The-Internet-Surveillance-Research-Paper-Series-1-Christian-Fuchs-How-Surveillance-Can-Be-Defined.pdf> [Accessed 12 February 2020]

Gilbert, Sophie. *Margaret Atwood Bears Witness* (2019) <https://www.theatlantic.com/magazine/archive/2019/12/margaret-atwood-bears-witness/600796/> [Accessed 12 September 2020]

Goode, Luke. *Jurgen Habermas: Democracy and the Public Sphere* (London: Pluto Press, 2005)

Grimes, David Robert. *Echo chambers are dangerous – we must try to break free of our online bubbles* (2017) <https://www.theguardian.com/science/blog/2017/dec/04/echo-chambers-are-dangerous-we-must-try-to-break-free-of-our-online-bubbles> [Accessed May 20 2020]

Haggart, Blayne. *Evaluating Scholarship* <https://blaynehaggart.wordpress.com/2019/02/15/evaluating-scholarship-or-why-i-wont-be-teaching-shoshana-zuboffs-the-age-of-surveillance-capitalism/> [Accessed 16 January 2020]

Haggerty, Kevin and Richard Ericson. 'The Surveillant Assemblage', *British Journal of Sociology* 51.4 (2000) 605—622

Hanson, Christopher. *Game Time: Understanding Temporality in Video Games* (Bloomington: Indiana University Press, 2018)

Haraway, Donna. ‘A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the late 20th Century’, in *Simians, Cyborgs and Women: The Reinvention of Nature* (New York: Routledge, 1991) pp. 149-191

Haselton, Martie G., Daniel Nettle and Paul W. Andrews. ‘The evolution of cognitive bias’ in *The Handbook of Evolutionary Psychology* ed. David M. Buss (Hoboken: John Wiley & Sons, 2005) 724-746

Hedges, Chris. ‘The Martyrdom of Julian Assange’ in *In Defense of Julian Assange ed. Tariq Ali and Margaret Kunstler* (New York: OR Books, 2019) pp. m3-7

Jameson, Fredric. *Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions* (London: Verso, 2005)

_____ ‘Dresden's Clocks’, *New Left Review* 71 (2011) 141-152

_____‘In Soviet Arcadia’, *New Left Review* 75 (2012) 119–127

Jones, Peter, Daphne Comfort and David Hillier. ’The changing geography of data centres in the UK’, *Geography* 98.1 (2013) 18-23

Katona, Zsolt, Peter Pal Zubcsek and Miklos Sarvary. ‘Network Effects and Personal Influences: The Diffusion of an Online Social Network’ *Journal of Marketing Research* 48.3 (2011) 425-443

Krahmann, Elke. ‘Private Security Companies and the State Monopoly on Violence: A Case of Norm Change?’ *Peace Research Institute Frankfurt* (2009) 2-3

Lambrecht, Anja and Catherine Tucker. ‘When does retargeting work? Information specificity in online advertising’, *Journal of Marketing Research* 50.5 (2013) 561-576

Land, Chris and Scott Taylor. ‘Surf ’s Up: Work, Life, Balance and Brand in a New Age Capitalist Organization’ *Sociology* 44.3 (2010) 395-413

Langer, Jessica. *Postcolonialism and Science Fiction* (New York: Palgrave Macmillan, 2011)

Lawrence, Matthew. *Control under surveillance capitalism: from Bentham’s panopticon to Zuckerberg’s ‘Like’* <http://www.perc.org.uk/project_posts/control-surveillance-capitalism-benthams-panopticon-zuckerbergs-like/> [Accessed 28 January 2020]

Lazzarato, Maurizio. ‘Immaterial Labour’, *Radical Thought in Italy: A Potential Politics* (1996) 133-148

Leith, Sam. *William Gibson: ‘I was losing a sense of how weird the real world was’* (2020) <https://www.theguardian.com/books/2020/jan/11/william-gibson-i-was-losing-a-sense-of-how-weird-the-real-world-was> [Accessed 20 July 2020]

Living Standards Measure (2017) <http://www.saarf.co.za/LSM/lsms.asp> [Accessed 20 June 2020]

Mac, Ryan, Charlie Warzel and Alex Kantrowitz. *Growth At Any Cost: Top Facebook Executive Defended Data Collection in 2016 Memo* (2018) <https://www.buzzfeednews.com/article/ryanmac/growth-at-any-cost-top-facebook-executive-defended-data> [Accessed 29 April 2020]

Malm, Andreas. *Fossil Capital* (London: Verso, 2016)

Mann, Steve. *Eye Am a Camera: Surveillance and Sousveillance in the Glassage* (2012) <https://techland.time.com/2012/11/02/eye-am-a-camera-surveillance-and-sousveillance-in-the-glassage/> [Accessed 30 May 2020]

Marks, Jonathan. ‘Who Lost Nature? Rousseau and Rousseauism’ *Polity* 34.4 (2002) 479-502

Marquez, Xavier. ‘Spaces of Appearance and Spaces of Surveillance’ *Polity* 44.1 (2012) 6-21

Martin, Sara. ‘The Antipatriarchal Male Monster as Limited (Anti)Hero in Richard K. Morgan's *Black Man/Thirteen*’ *Science Fiction Studies* 44.1 (2017) 84-103

Marx, Karl. *Capital: A Critique of Political Economy - The Process of Capitalist Production* (London: Penguin UK, 2004)

Mason, Paul. *PostCapitalism: A Guide to Our Future* (London: Penguin Books, 2015)

Merchant, Brian. *Op-Ed: Were the raw materials in your iPhone mined by children in inhumane conditions?* (2017) <https://www.latimes.com/opinion/op-ed/la-oe-merchant-iphone-supplychain-20170723-story.html> [Accessed 20 June 2020]

Miller, Steven. *A Note on the Banality of Evil* (2018) <http://archive.wilsonquarterly.com/essays/note-banality-evil> [Accessed 5 May 2020]

Mohdin, Aamna and Glenn Swann. *How George Floyd’s death sparked a wave of UK anti-racism protests* (2020) <https://www.theguardian.com/uk-news/2020/jul/29/george-floyd-death-fuelled-anti-racism-protests-britain> [Accessed 30 June 2020]

Morar, Nicolae, Thomas Nail and Daniel W. Smith. *Between Deleuze and Foucault* (Edinburgh: Edinburgh University Press, 2016)

Morgan, Richard. *Altered Carbon* (London: Gollancz 2001) Kindle edition

Morozov, Evgeny. *Capitalism’s New Clothes* https://thebaffler.com/latest/capitalisms-new-clothes-morozov [Accessed 17 January 2020]

_____. ‘Digital Socialism? The Calculation Debate in the Age of Big Data’ *New Left Review* 116/117 (2019) <https://newleftreview.org/issues/ii116/articles/evgeny-morozov-digital-socialism> [Accessed 10 July 2020]

Morton, Adam. *Unravelling Gramsci: Hegemony and Passive Revolution in the Global Political Economy* (London: Pluto Press, 2007)

Mukherjee, Sreemoyee. *How Poor Data Protection Can Endanger Communities During Communal Riots* (2020) <https://thewire.in/rights/vahan-database-protection-riots> [Accessed 25 May 2020]

Nezurugo, Marie Penelope and Sameera Hassan. *On World Refugee Day, a look at how COVID-19 is affecting refugees and asylum seekers* (2020) <https://www.weforum.org/agenda/2020/06/world-refugee-day-refugees-asylum-seekers-coronavirus-covid-19-pandemic-response/> [Accessed 5 July 2020]

Nickeas, Peter and Tyler Davis. *Police investigate Facebook video that appears to show fatal shooting on West Side* (2016) <https://www.chicagotribune.com/news/breaking/ct-man-s-shooting-death-posted-to-facebook-20160616-story.html> [Accessed 3 May 2020]

Nietzsche, Friedrich. *Thus Spoke Zarathustra* trans. Thomas Common (Ware: Wordsworth Editions Limited, 1997)

Norton, Sean. *On Hannah Arendt: Why You Don’t Care About Privacy or Bias Anymore* (2019) < https://medium.com/excursus/on-hannah-arendt-why-you-dont-care-about-privacy-or-bias-anymore-f8c13a5b648a> [Accessed 19 May 2020]

Noys, Benjamin. *Malign Velocities: Acceleration and Capitalism* (Alresford: Zero Books, 2013)

Oliver, Bert. ‘Religious authoritarianism and/or ‘instrumentarian’ technical surveillance: The Handmaid’s Tale and 1984’ *Alternation Special Edition* 28 (2019) 10-37

Orwell, George. *Nineteen Eighty-Four* (Mumbai: Sanage Publishing House, 2020)

Passerin d'Entreves, Maurizio. *Hannah Arendt* <https://plato.stanford.edu/entries/arendt/#AreTheAct> [Accessed 2th April 2020]

Perez, Juan Carlos. *Facebook's Beacon more intrusive than previously thought* <https://www.pcworld.com/article/140182/article.html> [Accessed 12 February 2020]

Plato. *The Republic* trans. Benjamin Jowett (Salt Lake City: Project Gutenberg, 2008) <https://www.gutenberg.org/files/1497/1497-h/1497-h.htm#link2H_4_0010> [Accessed 29 August 2020]

Rancière, Jacques. 'Who is the Subject of the Rights of Man?' *The South Atlantic Quarterly* 103.2 (2004) 297-310

Read, Jason. *The Micro-Politics of Capital: Marx and the Prehistory of the Present* (Albany: State University of New York Press, 2003)

Ruckenstein, Minna and Natasha Schull. 'The Datafication of Health', *Annual Review of Anthropology* (2017) 261-278

Runciman, David. *How Democracy Ends* (London: Profile Books, 2018)

Searle, John. 'Minds, brains, and programs' *The Behavioral and Brain Sciences* 3 (1980) 417-457

Serafino, Paola. *Exploring the UK's Digital Divide* (2019) <https://www.ons.gov.uk/peoplepopulationandcommunity/householdcharacteristics/homeinternetandsocialmediausage/articles/exploringtheuksdigitaldivide/2019-03-04> [Accessed 3 July 2020]

Shanahan, Murray. *The Technological Singularity* (Cambridge, MA: The MIT Press, 2015)

Sharzer, Greg. 'Accelerationism and the Limits of Technological Determinism' *Filozofski vestnik* 39.2 (2018) 163-177 <https://ojs.zrc-sazu.si/filozofski-vestnik/article/view/7055/6613> [Accessed 18 September 2020]

Smith, Anna Marie. 'Neo-eugenics: Feminist Critique of Agamben' *States of Welfare* <https://arcade.stanford.edu/occasion/neo-eugenics-feminist-critique-agamben> [Accessed July 1 2020]

Sonnad, Nikhil. *Everything bad about Facebook is bad for the same reason* (2018) <https://qz.com/1342757/everything-bad-about-facebook-is-bad-for-the-same-reason/> [Accessed 29 April 2020]

Sponsler, Claire. 'Beyond the Ruins: The Geopolitics of Urban Decay and Cybernetic *Play' Science Fiction Studie*s 20.2 (1993) 251-265

Steitz, Kerstin. 'And Hannah Laughed: The Role of Irony in Hannah Arendt's *Eichmann in Jerusalem*', *A Club of Their Own: Jewish Humorists and the Contemporary World* ed. Eli Lederhendler and Gabriel N. Finder (2016) <https://www.oxfordscholarship.com/view/10.1093/acprof:oso/9780190646127.001.0001/acprof-9780190646127> [Accessed 31 May 2020]

Suvin, Darko. 'On the Poetics of the Science Fiction Genre,' *College English* 34.3 (1972) 372-382

The King James Version of the Bible (Salt Lake City: Project Gutenberg, 1989) I Moses 2.9. King James Bible Online eBook

Tan, J. S. and Nataliya Nedzhvetskaya, *2020: A Year of Resistance in Tech* (2020) <https://collectiveaction.tech/2020/2020-a-year-of-resistance-in-tech/> [Accessed 31 December 2020]

Tortorici, Dayna. *More Smiles? More Money* <https://nplusonemag.com/issue-17/reviews/more-smiles-more-money/> [Accessed 10 February 2020]

Trimarco, James and Paul Graham Raven. *Two Views: Moxyland by Lauren Beukes* (2009) <https://www.angryrobotbooks.com/2009/11/moxyland-two-essays> [Accessed 3 June 2020]

van Troyer, Gene. ‘Linguistic determimnism and mutability: the Sapir-Whorf “hypothesis” and intercultural communication.’ *Jalt Journal* 1.2 (1994) 163-178

Turing, Alan. *Intelligent machinery, a heretical theor*y (1951) Available at <http://www.turingarchive.org/viewer/?id=474&title=1> [Accessed 1 August 2020]

Uber: Future challenges in the era of AI and ML (2018) <https://digital.hbs.edu/platform-rctom/submission/uber-future-challenges-in-the-era-of-ai-and-ml/> [Accessed May 15 2020]

Vinuesa, Ricardo. ‘The role of artificial intelligence in achieving the Sustainable Development Goals’ *Nature Communications* (2020) <https://www.nature.com/articles/s41467-019-14108-y> [Accessed 10 September 2020]

Weiser, Mark. *The Computer for the 21st Century* <https://www.ics.uci.edu/~corps/phaseii/Weiser-Computer21stCentury-SciAm.pdf> [Accessed 17 January 2020]

Who Writes Wikipedia? (2020) <https://en.wikipedia.org/wiki/Wikipedia:Who_writes_Wikipedia%3F> [Accessed 17 September 2020]

Williams, Alex and Nick Srnicek. *#ACCELERATE MANIFESTO for an Accelerationist Politics* (2013) <https://criticallegalthinking.com/2013/05/14/accelerate-manifesto-for-an-accelerationist-politics/> [Accessed 2 September 2020]

Wilson, Emma E. ‘Cyborg anamnesis: #accelerate’s feminist prototypes’ *Platform: Journal of Media and Communications* 6.2 (2015) 33-45

Wittgenstein, Ludwig. *Philosophical Investigations* trans. G. E. M. Anscombe, P. M. S. Hacker and Joachim Schulte (Chichester: Wiley-Blackwell, 2009)

Woitkowski, Felix and Murat Recai Sezi. ‘The Technologized Creation: The Mythological Foundation of Posthumanism in EX MACHINA’ *Zeitschrift für Fantastikforschung* 7.2 (2020) <https://zff.openlibhums.org/article/id/2888/#B15> [Accessed 14th September 2020]

Žižek, Slavoj. *Blade Runner 2049: A view of post-human capitalism* (2017) <https://thephilosophicalsalon.com/blade-runner-2049-a-view-of-post-human-capitalism/#_edn1> [Accessed 2 October 2020]

Zuboff, Shoshana. *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power* (London: Profile Books Ltd., 2019)