Citizen Robots: Biopolitics, the Computer, and the Vietnam Period

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Abstract

The Vietnam War coincided with an intense period of technological change in the US that marked a significant turning point in the relationship between the citizen and the state. While computer technology found new and deadly uses on the field of battle, it also found its way into people's homes, giving the state the means through which to monitor and control subjects like never before.

While Michel Foucault describes Vietnam as 'the gates of our world', this thesis argues that Vietnam stands rather as the gates of our *biopolitical* world – a period in which Foucault's original concept of biopolitics is reborn in the computer age.[1] To this end, this thesis examines some of the early impacts and implications of the computerized biopolitical state, and the robotized human subject. It offers an exploration of the ways in which biopolitical ideas can be used alongside science fiction texts to interrogate the cultural tendencies of the USA during the Vietnam War period, stretching from the start of the war in 1955 through to the war's end in 1975 and the shadow cast in the years that follow. In doing so, it charts how human subjects are complicit in the means of their own oppression, and the ethical implications of the blurred distinction between the human and the machine. Thus, it calls for a new cybernetic form of biopolitical insight – a *techno-biopolitics* – that integrates the robotic with current understandings of the human, the non-human and the animal, and how they are used as a means of discursive control.

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[1] Michel Foucault, 'Preface', in Gilles Deleuze and Félix Guattari, *Anti-Oedipus: Capitalism and Schizophrenia*, trans. by Robert Hurley, Mark Seem and Helen R. Lane (London: The Athlone Press, 1983), pp. xi–xiv (p. xi).

Acknowledgements

I would like to thank my supervisors Brian Baker and Arthur Bradley, and all my friends and colleagues at Lancaster University and CCCU. In particular, special mention goes to Luke Davis, Claire Povah, and everyone in SBS and Marketing Communications, plus Gareth Stears and Iain McCracken at CCCU. I'd also like to thank friends and family for their ongoing friendship and support, in particular: Dan, Faye, Sean, Rowan, David and Thomas, plus Carolyn, Mum (Debbie), Dad (Dave), and my two sisters, Nicky and Kate. Finally, special mention should go to my Lancaster friends, Claire McGann and Danielle Girard, and my podcast co-host, Josh Hughes.

This thesis is dedicated in memory of my grandparents Rose and Ernie Ryder,

and Sheila and Tom Cramp.

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Introduction

The Vietnam War (1955–1975) was one of the bloodiest wars of the twentieth century that served to disrupt social and political understandings about the nature of armed conflict and the justification for war. While it is often characterized by its widespread atrocities and huge death toll, the Vietnam War also coincided with an intense period of technological change that marked a significant turning point in the relationship between the citizen and the state. While new computer technology was put to ever more deadly use on the field of battle, it also provided the means through which the state could monitor and control subjects to a new and unprecedented degree. No longer were citizens constituted as individual human subjects as such, but rather as packets of information, or 'citizen robots' to be incorporated within the rapidly expanding biopolitical state machine.

Up until now, there has been very little critical work on the biopolitical significance of the Vietnam War, nor indeed the symbolic role of the computer in shaping a new relationship between the citizen and the state. To this end, this thesis will explore ways in which biopolitical ideas can be used alongside science fiction texts to interrogate the cultural tendencies of the USA during the Vietnam War – a period in which managerialism and systems thinking coincided with rapid computerization to facilitate a period of intense social, cultural and political change, with many ramifications for our modern-day world.

A new way of thinking

While the influence of Vietnam extends far beyond the bounds of the war, I mark the formal start point as the year 1955, and the confluence of a series of events that would have major ramifications across the globe, and that continue to resonate to this day.

In 1955, John McCarthy made the first recorded use of the term 'artificial intelligence' (AI) in a research grant proposal for a workshop at Dartmouth College.[1] This small, seemingly inconsequential act had major ramifications, and helped usher in a whole new way of thinking about the world. Aside from obvious advances in the fields of computing and information theory, the AI concept also helped lay the groundwork for a new field of science – cognitive psychology – in which scientists began to think of the human brain as a form of computer, or 'thinking machine'.[2]

Meanwhile, computer-like thinking was also starting to work its way into US society. In July 1955, Disney opened its first theme park in Anaheim, California, while in April of the same year, Ray Kroc established his first McDonald's franchise in the Chicago suburb of Des Plaines.[3] In the years that followed, McDonald's would go on to become one of the most powerful and (in)famous brands in the world, setting the benchmark for what some management theorists describe as the 'McDonaldization' of society, with its focus on efficiency, calculability, predictability and control.[4]

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[1] Paul N. Edwards suggests that John McCarthy may have coined the term 'for the grant proposal'. Paul N. Edwards, *The Closed World: Computers and the Politics of Discourse in Cold War America* (Cambridge MA: The MIT Press, 1996), p. 253. See also: Hans Moravec, *Robot: Mere Machine to Transcendent Mind* (New York and Oxford: Oxford University Press, 1999), p. 20.

[2] Bernard J. Baars, *The Cognitive Revolution in Psychology* (New York and London: The Guilford Press, 1986), p. 46 and pp. 152–153; Howard Gardner, *The Mind's New Science: A History of the Cognitive Revolution* (New York: Basic Books, Inc., 1985), p. 40.

[3] 'Ray Kroc: Burger Baron', *Entrepreneur Europe*, 9 October 2008 <https://www.entrepreneur.com/article/197544> [accessed 1 July 2019].

[4] George Ritzer, *The McDonaldization of Society 6* (California: Sage, 2011), pp. 14–16. Alan Bryman makes a similar claim about the 'Disneyization' of society, which arguably began at exactly the same time. Alan

Finally, and most importantly, 1955 also marks the official start point of the Vietnam War. Though Vietnam remained an undeclared war for a very long time, 1955 is the year in which the US established the Military Assistance Advisory Group (MAAG) for Vietnam, with 1st November 1955 the earliest date at which veterans can be added to the Vietnam Veterans Memorial.[5] While Vietnam has been described as 'the electronic war, the computer war, the technological war', it is equally marked by its focus on systems thinking and an obsession with analysis and control.[6] In this way, the Vietnam War can also be described as the world's first *McDonaldized* war, with a ruthless computer-like efficiency brought to its conduct by Secretary of Defense Robert S. McNamara, a former boss at Ford Motor Company and alumnus of Harvard Business School.

Technological progress

The Vietnam War was a period of rapid technological change. One of the most important new technologies was the first solid integrated circuit or 'microchip' in 1959. This brought together several earlier developments such as the transistor (1947), and continued the process of miniaturization, reducing the size of various components and placing them on a single circuit, paving the way for further gains in terms of size, computing power and efficiency in

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Bryman, 'McDonaldization as a Disneyized Institution', in *McDonaldization: The Reader*, ed. by George Ritzer (California: Pine Forge Press, 2010), pp. 55–64 (p. 56).

[5] Department of Defense, 'Name of Technical Sergeant Richard B. Fitzgibbon to be Added to the Vietnam Veterans Memorial', *U.S. Department of Defense News Release* (6 November 1998) <https://web.archive.org/web/20131020044326/http://www.defense.gov/Releases/Release.aspx?ReleaseID=1902> [accessed 24 April 2018].

[6] Chris Hables Gray, *Postmodern War: The New Politics of Conflict* (New York/London: The Guilford Press, 1997), p. 160.

the coming years. This was followed several years later by the laser (1960), the LED (1962), the single chip microprocessor (1971), and the liquid-crystal display (1972).

These new components helped facilitate huge changes in manufacturing processes and the computerization of daily life. In 1960, the US launched its first weather satellite, and in 1961, General Motors introduced its first industrial robotic arm to its assembly lines in New Jersey.[7] Meanwhile, another key moment came in 1962, with the launch of the world's first computer mouse – a device that would revolutionize the way humans interact with machines, and helped pave the way for the commercialization of computer technology. It was followed a few years later by the UNIX operating system (1969) and the world's first GPS satellite *Navstar 1* (1978).

Of course, new technologies also found their way onto the field of battle. The US introduced its first operational intercontinental ballistic missile (ICBM) in 1959, and the first version of the now ubiquitous M16 rifle in 1964. A few years later and the US began the first ever mass deployment of Lightning Bug drones for surveillance (1965), and launched the first laser guided bomb (1968). During this time, the military establishment became enamoured with the allure of computer technology and the prospect of complete technical oversight and control. This led to operations such as Igloo White (1968–1973) in which US forces deployed a massive sensor network along the Ho Chi Minh trail in the hope of being able to track the movements of Vietcong forces.[8] There was also the Hamlet Evaluation Survey (1969–1974), which was an early attempt to map the pacification of hamlets using computer technology. However, neither project lived up to its initial promise. In each case, either the technology itself was not fully understood, or it was not sufficiently advanced to work in the way

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[7] The USSR launched the world's first artificial satellite, *Sputnik I*, in October 1957.

[8] Andrew Cockburn, *Kill Chain: Drones and the Rise of High-Tech Assassins* (London and New York: Verso, 2016), p. 31.

commanders would have wished. In the case of the Hamlet Evaluation Survey, there were also many 'data anxieties' surrounding the way data was collected and reported in the first place.[9]

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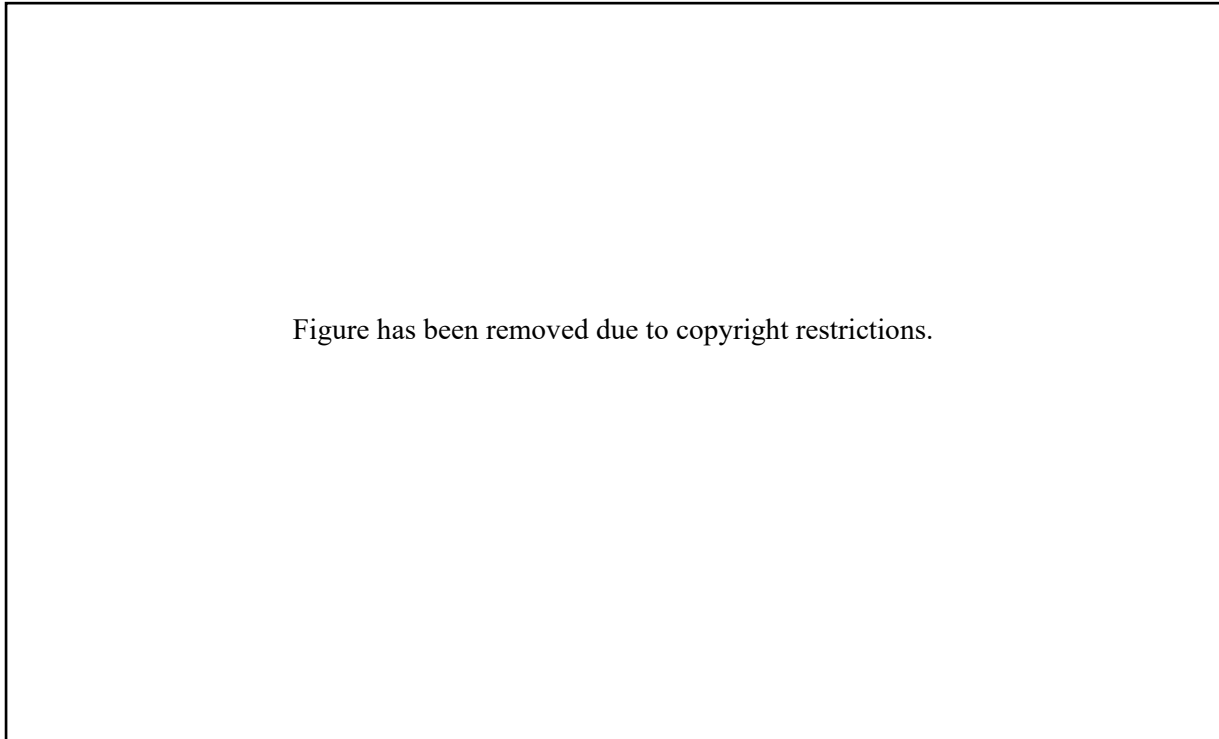
Figure 1 – Sensors deployed during Operation Igloo White.[10]

Themes of the Vietnam period

Computerization

While the Vietnam War only officially 'starts' in 1955, the period has its roots in the Second World War. As with so many conflicts, the Second World War served as a catalyst for

[9] Oliver Belcher, 'Data Anxieties: Objectivity and Difference in Early Vietnam War Computing', in *Algorithmic Life: Calculative Devices in the Age of Big Data*, ed. by Louise Amoore and Volha Piotukh (London and New York: Routledge, 2016), pp. 127–142.

[10] 'The Igloo White exhibit on display in the Southeast Asia War Gallery at the National Museum of the U.S. Air Force. (U.S. Air Force photo)', *National Museum of the US Air Force™*, 18 May 2015 <https://www.nationalmuseum.af.mil/Visit/Museum-Exhibits/Fact-Sheets/Display/Article/195948/igloo-white/> [accessed 4 July 2019].

technological progress, and the US government invested large sums in research and development to make war fighting more efficient and effective.[11] Among the most significant developments was the birth of the computer, with ENIAC and IBM's Mark I both developed during the period and put to use in the waging of war. While the UK's own COLOSSUS machines at Bletchley Park were kept secret until the mid-1970s, the US-built ENIAC was demonstrated to the public at a press conference in 1946, and immediately caught the public imagination.[12] Both ENIAC and the Mark I were followed by a series of successors including EDVAC (1949), and the Mark III, which was finished in 1949 ready to be delivered to the Navy in the following year.

Such was the impact of these new computers that a January 1950 edition of *Time* magazine featured a striking cover with a computing machine in the guise of a naval officer reading off ticker tape and dealing out commands. This dark and disturbing cover reflects the growing tension that was to emerge in public discourse during the post-war period. Not only did new technologies represent both a benefit *and* a threat to everyday life, but there remained the chilling possibility that machines might take over and replace humans completely.

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[11] Thomas Rid notes that 'by May 1945 [...] the army and navy had contracted $2.7 billion of MIT-inspired radar equipment. This remarkable investment laid the foundation for America's mighty postwar electronics industry'. Thomas Rid, *Rise of the Machines: The Lost History of Cybernetics* (Melbourne and London: Scribe, 2016), p. 21.

[12] Paul N. Edwards describes ENIAC as 'America's first full-scale electronic computer', while Bill Gates draws on the language of monsters to describe it as, 'the moth-infested mastodon from the dawn of the computer age'. Edwards, *The Closed World*, p. 46; Bill Gates, *The Road Ahead*, 2nd edn (London: Penguin Books, 1996), p. 30.
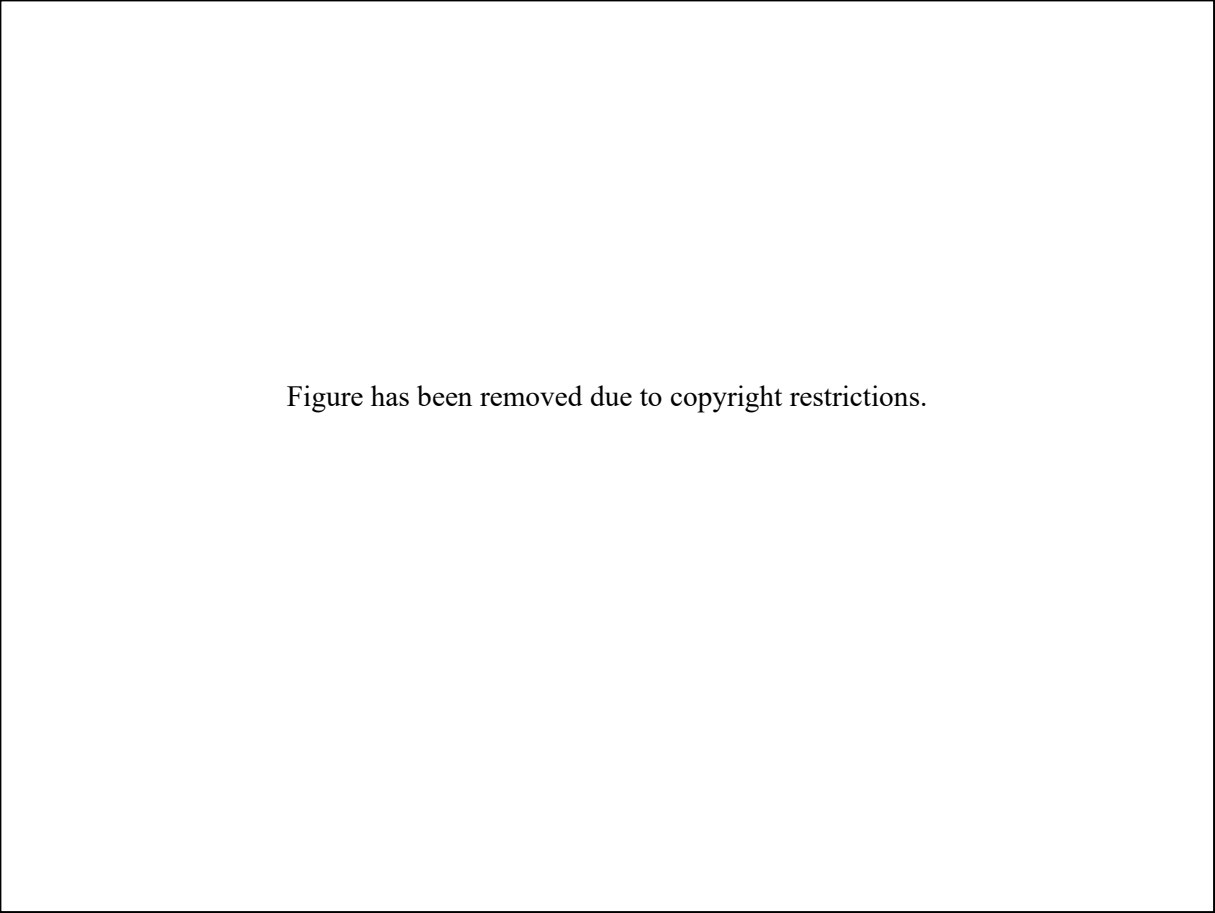
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Figure 2 – Boris Artzybasheff, 'Mark III: Can Man Build a Superman?', *Time*, 23 January 1950.

Of course, science fiction was absolutely vital to the public discourse surrounding the computer. As Herman H. Goldstine notes, many of the scientists involved with the ENIAC and EDVAC projects 'saw that the school had done an excellent piece of war work, [but] they did not see the implications of these devices for the future'.[13] Indeed, many of the world's largest computer manufacturers didn't come to terms with the potential of the computer until at least the mid-1970s. This is because, for the most part, they were still focussed on the 'traditional' use of the computer for research and war, and didn't consider the possibility of putting computers into people's homes.

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[13] Herman H. Goldstine, *The Computer: From Pascal to von Neumann* (Princeton: Princeton University Press, 1993), p. 239.

According to Microsoft co-founder Bill Gates, the turning point came in 1975 with the January edition of *Popular Electronics* that featured the now famous Altair 8800 on the front cover.[14] In his memoir *The Road Ahead*, Gates notes how '"Altair" was the star orbited by the Forbidden Planet, and several planets that supposedly orbit Altair figure in various *Star Trek* episodes'.[15] While Gates notes the link between science fiction and technology in the naming of Altair 8800, this same link was made explicit within the magazine itself, which declared: 'The era of the computer in every home—a favorite topic among science-fiction writers—has arrived!'[16]

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[14] The cover of *Popular Electronics* from January 1975 features the Altair as one of its central features: 'Project Breakthrough!: World's First Minicomputer Kit to Rival Commercial Models... "ALTAIR 8800"', *Popular Electronics*, January 1975 [cover]. The cover is shown in Figure 3.

[15] Gates, pp. 16–17.

[16] H. Edward Roberts and William Yates, 'ALTAIR 8800: The most powerful minicomputer project ever presented—can be built for under $400', *Popular Electronics*, January 1975, pp. 33–38 (p. 33).
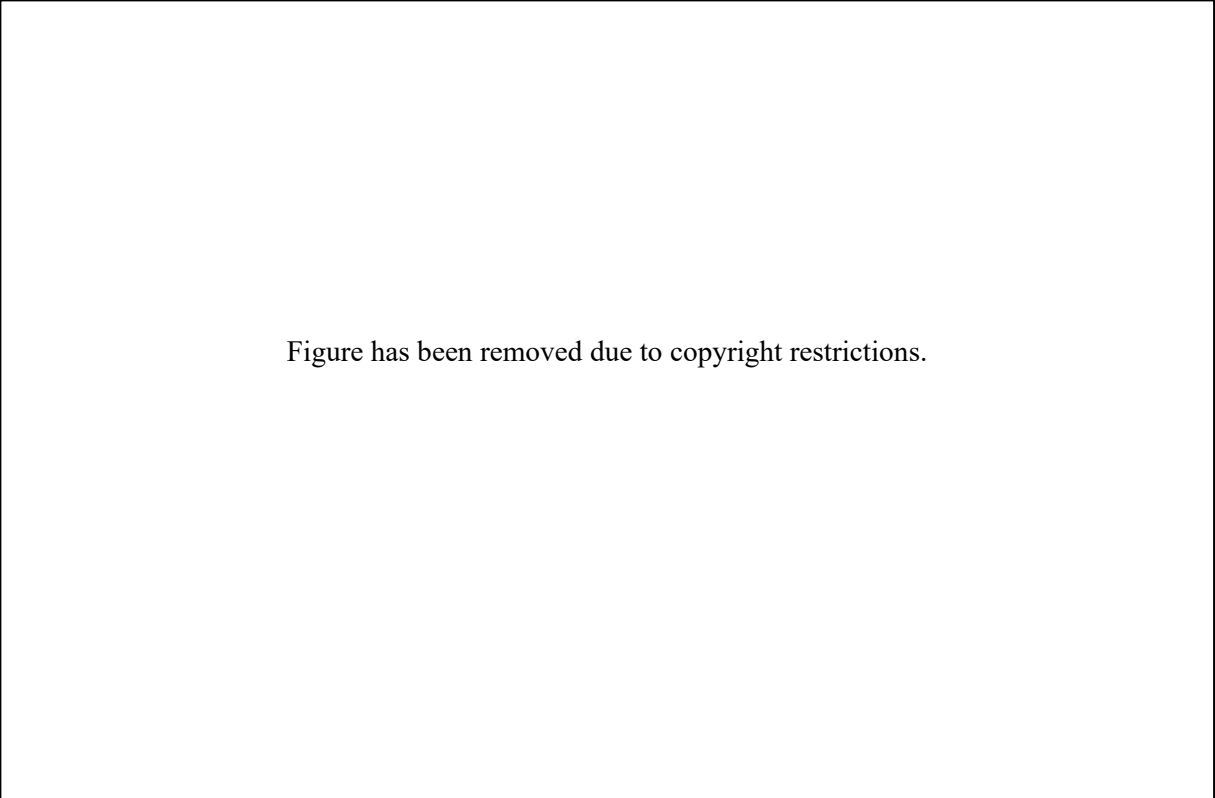
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Figure 3 – *Popular Electronics*, January 1975.

This observation is important, and goes to show the normalizing power of science. While many companies saw the new Intel 8080 CPU that powered the Altair as just the next incremental advance in computing power, Bill Gates and his business partner Paul Allen saw beyond the hardware of the Altair and instead saw the use to which it could be put. In many respects, 1975 can be seen as a watershed moment for computing, for it marks a specific moment at which a split emerged between hardware and software. Gates and Allen weren't building machines – rather, they were finding ways to standardize the way different hardware units interact through the medium of software. This process started when Gates and Allen developed a version of the BASIC programming language to run on the Altair 8800. Though they didn't have an Altair themselves, Allen wrote a program to make the giant computer at Harvard mimic the Altair so that the pair could then code for it.[17] This opened the possibility

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[17] Gates, p. 18.

for standardization across many different machines, as the pair spotted a gap in the market that companies such as IBM simply didn't have the inclination to exploit – perhaps because they were still wedded to the idea of hardware as the staple of manufacturing. As Gates notes, many large companies back then 'didn't adapt and [so] lost out', revealing the capitalistic imperative that was to drive the emerging market for computers in the home.[18]

Automation

Alongside its practical and symbolic impact, the computer also radically changed the way people think about the world, and their place in it. In July 1945 Vannevar Bush published his famous essay 'As We May Think' in *The Atlantic* magazine. Bush, who was then the Director of the Office of Scientific Research and Development, was responsible for US efforts to apply science to warfare. In his article, he describes a vision for the future in which 'memex' machines would be used to enhance the human, functioning as 'an enlarged intimate supplement to his [man's] memory'.[19] Though the concept of memex was nothing new, it did strike a chord with the public, and Pascal Zachary notes how 'His memex was no blueprint for a personal computer, but it offered something just as important: a careful description of the benefits to ordinary people of automating thought'.[20]

While Bush's vision may have read very much like a science fiction scenario, the trend towards automated thought was already long underway, and was taking place in factories right across the US. The advent of Fordism drove many factories to standardize

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[18] Ibid., p. 17.

[19] Vannevar Bush, 'As We May Think', *The Atlantic*, July 1945, <https://www.theatlantic.com/magazine/archive/1945/07/as-we-may-think/303881/> [accessed 29 August 2017].

[20] Pascal Zachary, *Endless Frontier: Vannevar Bush, Engineer of the American Century* (Cambridge MA, London: The MIT Press, 1997), p. 263.

processes and production methods to improve efficiency and reduce costs.[21] This

transformation gained momentum with the demands of total war that saw a major shift in the

production mindset. Indeed, systems theorist Manuel De Landa notes how 'the American

system [of standardization] transformed manufacturing from an open process, based on

flexible skills into a closed process based on fixed routines (enforceable through discipline

and constant inspection)'.[22] So, not only were processes becoming standardized, but they

were also being monitored to ensure consistency of output. In this way, standardized

production emerged alongside an early form of surveillance culture, in which surveillance

became normalized within the workplace through the various inspection processes that were

required to keep production running smoothly.

     As such, the computer was the next logical step in the spread of Fordist thinking, with

thought itself standardized and reduced to a series of programmatic steps. As De Landa notes:

'the advent of computers (which are basically automated formal systems) appeared to

consolidate the victory of analytical over embodied knowledge'.[23] This can be seen in

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[21] Fordist thinking very quickly found its way into the public imagination. Charlie Chaplin's satirical film

Modern Times (1936) for example depicts its protagonist caught in a world of industrial automation –

demonstrating the effects of mass production on the lives of factory workers. *Modern Times*, dir. by Charlie

Chaplin (Artificial Eye, 2015) [on DVD].

[22] Manuel De Landa, *A Thousand Years of Nonlinear History* (New York: Swerve Editions, 1997), p. 84.

Manuel De Landa is the Gilles Deleuze Chair of Contemporary Philosophy and Science at The European

Graduate School. He is perhaps best known for this book and *War in the Age of Intelligent Machines* (1991).

Interestingly, Jonathan Crary also makes a similar point in his book on late capitalism, describing the '24/7

environment [...] of machinic performance and a suspension of living' brought about by the non-stop process of

production and consumption. Jonathan Crary, *24/7: Late Capitalism and the Ends of Sleep* (London and New

York: Verso, 2013), p. 9.

[23] De Landa, *A Thousand Years*, p. 95.

Fordism's shift in emphasis away from the individual craftsmen towards standardized factory processes carried out by humans working to a set routine. These same workers were then in turn replaced by machines. However, this logic also produced the means through which to bring about Fordism's end. By making factory processes more efficient, so these same machines were slowly forcing the human out of the factory and into unemployment, with major implications for the US economy, contributing to the recession of 1973.

Robotization

The term 'robot' has its roots as far back as the 1920s and Karel Čapek's play *R.U.R.*, or 'Rossum's Universal Robots'. In the play, Čapek describes robots as 'humans capable of work but not thinking'.[24] Thus, even from the moment of its inception, the word robot blurs the distinction between human and machine, pre-empting the dehumanization of factory workers, with Čapek's robots originally designed as *humans* stripped of agency to behave like machines – much as James Burnham implies with his production line processes in *The Managerial Revolution* (1941).[25]

This blurring of the human and the machine continued at pace during the Second World War, with electronic devices often depicted as 'robot brains' or 'Directors' overseeing whatever task they may have been set.[26] This blurring only intensified during the Vietnam period, as new technology destabilized the boundary between real and imaginary worlds, with

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[24] Jana Horáková and Jozef Kelemen, 'The Robot Story: Why Robots Were Born and How They Grew Up', in *The Mechanical Mind in History*, ed. by Philip Husbands, Owen Holland and Michael Wheeler (Cambridge MA: The M.I.T Press, 2008), pp. 283–306 (p. 285).

[25] James Burnham, *The Managerial Revolution* (Harmondsworth: Penguin Books, 1962), p. 79.

[26] Examples include the G-E Automatic Blanket, described as the 'Blanket with a Brain', and the BOFORS anti-aircraft gun that needed to be plugged into an electronic 'Director'. 'Stop Hoarding Petticoats, Sophonisba!', *Life*, 14 December 1942, p. 9; 'How to boss a BOFORS!', *Life*, 8 November 1943, p. 12.

technology serving as a mediator between the two.[27] There was even a sense that military personnel were being transformed into robot workers. In Robert A. Heinlein's *Starship Troopers* (1959), the protagonist Johnny Rico goes to war in an all-encompassing fighting suit that renders him more of a passenger than an active agent. Similarly, in Joe Haldeman's *The Forever War* (1974), protagonist William Mandella is similarly trapped in a fighting suit that strips him of agency and threatens to take his life at any time. At one point he even notes that 'one special pulse from the battle computer, and [...] you'd be nothing but a rapidly expanding, very hot plasma.'[28]

In both of these novels the computer replaces the human as sovereign ruler as it gains the power of life and death over its subjects. This mirrors anxieties of computer control depicted in earlier novels such as Bernard Wolfe's *Limbo* (1952) and Kurt Vonnegut's *Player Piano* (1952) in which the EMSIAC and EPICAC super-computers are endowed with sovereign (or pseudo-sovereign) power to wage war and govern the lives of human beings. In each case, there is a strong sense that the authors feared the *robotization* of the human populace; that human citizens were becoming more like robots, and that the state itself was becoming more like an all-seeing, all-knowing computer – an electronic Director, or giant robot brain.

With America's first overt activities in Vietnam in 1955, so the machine-like qualities of the state came to the fore, to be realized in the computer-controlled war that Bernard

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[27] Marshall McLuhan notes how, 'The medium, or process, of our time—electric technology—is reshaping and restructuring patterns of social interdependence and every aspect of social life.' Marshall McLuhan, *The Medium is the Massage* (London: Penguin Books, 1967), p. 8. See also: Marshall McLuhan, *The Mechanical Bride* (London: Routledge & Kegan Paul, 1951).

[28] Joe Haldeman, *The Forever War* (London: Gollancz, 1997), p. 46. Further references are given after quotations in the text.

Wolfe so feared. However, the state's focus on technology wasn't just to be found in the battlefields of East Asia. While George C. Herring describes the 'bureaucracy's voracious appetite for numbers' in Vietnam, state bureaucracy also developed a similar appetite back home.[29] In 1957, Vance Packard published his influential work *The Hidden Persuaders*, an investigation into 'the chilling world of George Orwell and his Big Brother'.[30] However, unlike the fictional works of Orwell and Huxley, Packard depicts a real-life dystopia where marketers use psychological techniques to influence human behaviour. From consumer goods to politics, Packard paints a dark and disturbing picture of the modern world where marketers had become 'depth manipulators' and engineers of consent.[31] He even suggests a future where scientists use 'biocontrol' to direct human behaviour, much like a machine.[32] This real-world observation mirrors the fictional world of consumerism described by Frederik Pohl and C.M. Kornbluth in their novel *The Space Merchants* (1952), where advertising is used as a means to shape public perceptions and link material consumption with quality of life.

The birth of modern surveillance, as described by Packard and others, presents a vision where US citizens were constituted less as 'humans' or 'human individuals', but rather *packets of information*, or what philosopher Gilles Deleuze has since called '*dividuals*', ready to be consumed and processed by the biopolitical state machine.[33] From the economic

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[29] George C. Herring, 'Preparing *Not* to Refight the Lost War: The Impact of the Vietnam War on the U.S. Military', in *After Vietnam: Legacies of a Lost War*, ed. by Charles E. Neu (Baltimore and London: The John Hopkins University Press, 2000), pp. 56–84 (p. 62).

[30] Vance Packard, *The Hidden Persuaders* (London: Longmans, Green & Co, 1957), p. 5.

[31] Ibid., p. 9 and p. 216.

[32] Ibid., p. 239.

[33] Gilles Deleuze, 'Postscript on Control Societies', in *Negotiations 1972–1990*, trans. by Martin Joughin (New York: Columbia University Press, 1995), pp. 177–182 (p. 180).

'freedom' granted by the first credit cards (1958) to health insurance for the elderly and the poor (1965), the many and varied apparatuses of the state were expanding rapidly alongside the world of business and corporate operations. Such was the scale of this expansion that citizens became complicit in the means of their own subjugation, as they wilfully gave up certain liberties in exchange for services designed to 'enhance' their everyday lives.[34]

Cybernetics and thinking machines

Alongside the rise of the computer and data culture, the Vietnam period was also marked by a rapid growth in the field of cybernetics – the study of control systems in animals, humans and machines. The Second World War was absolutely vital for the launch of the new field, as researchers sought ways to enhance the human to make war fighting more efficient. Radar in particular was an important step, with some biologists even referring to it as 'a kind of artificial sense organ'.[35] These early crossovers helped establish a theoretical framework through which to better understand the interrelation between the human and the machine.

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[34] The first recognizable credit card, BankAmericard, was launched in Fresno, California, in 1958. Though it suffered from many issues that would later be resolved by computerization, it marked a major turning point in economic development, giving citizens the option to borrow money against future earnings. BankAmericard was licensed outside of California in 1965, and later became Visa USA in 1976. Meanwhile, Medicare was launched in 1965, alongside Medicaid, providing health insurance for the elderly and poor respectively. The name 'Medicare' has its origins as far back as 1956 with the Dependents' Medical Care Act providing medical care for families of individuals servicing in the military.

[35] Philip Husbands and Owen Holland, 'The Ratio Club: A Hub of British Cybernetics', in *The Mechanical Mind in History*, ed. by Philip Husbands, Owen Holland and Michael Wheeler (Cambridge MA: The M.I.T Press, 2008), pp. 91–148 (p. 104).

This then led to several field-defining works published in the early post-war period from Norbert Wiener, W. Ross Ashby and W. Grey Walter to name but a few.[36]

Indeed, as the cybernetic movement gained momentum, it even found its way into the public domain. In 1952, *Life* and *Time* magazines both featured the work of the 'father of information theory' Claude Shannon and his robotic mouse Theseus.[37] These articles included pictures of Shannon alongside a metallic maze in which his robot mouse would 'learn' the trail through trial and error in order to dash towards the metallic cheese. While Shannon's work demonstrated the wonders of modern technology, the *Life* article suggested that biological lab mice had been 'joined and outclassed by a mechanical mouse', while an article in *Popular Science* even led with the title: 'This Mouse is Smarter Than You Are'.[38]

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[36] Nobert Wiener is considered by many to be the founder of cybernetics with his seminal works *Cybernetics: Or Control and Communication in the Animal and the Machine* (1948) and *The Human Use of Human Beings: Cybernetics and Society* (1954). See also W. Grey Walter's *The Living Brain* (1953) and W. Ross Ashby's *An Introduction to Cybernetics* (1956). N. Katherine Hayles notes the significance of the Macy Conferences of 1946–1953, and their impact on the emerging field of cybernetics. She later links this field with post-war science fiction. See: N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago and London: The University of Chicago Press, 1999), pp. 50–83.

[37] Claude Shannon is widely regarded as the 'father of information theory' for his 1948 landmark paper: Claude E. Shannon, 'A Mathematical Theory of Communication', *The Bell System Technical Journal*, 27:3 (1948), 379–423. Shannon's appearance with Theseus the mouse can be found in: 'Better Mouse: A Robot Rodent Masters Mazes', *Life*, 28 July 1952, pp. 45–46; 'Mouse with a Memory', *Time*, 19 May 1952 <http://search.ebscohost.com.ezproxy.lancs.ac.uk/login.aspx?direct=true&db=asn&AN=54167632&site=ehost-live&authtype=ip,shib&user=s1523151> [accessed 24 August 2017].

[38] 'Better Mouse', p. 45; John Pfeiffer, 'This Mouse is Smarter Than You Are', *Popular Science,* March 1952, pp. 99–101.
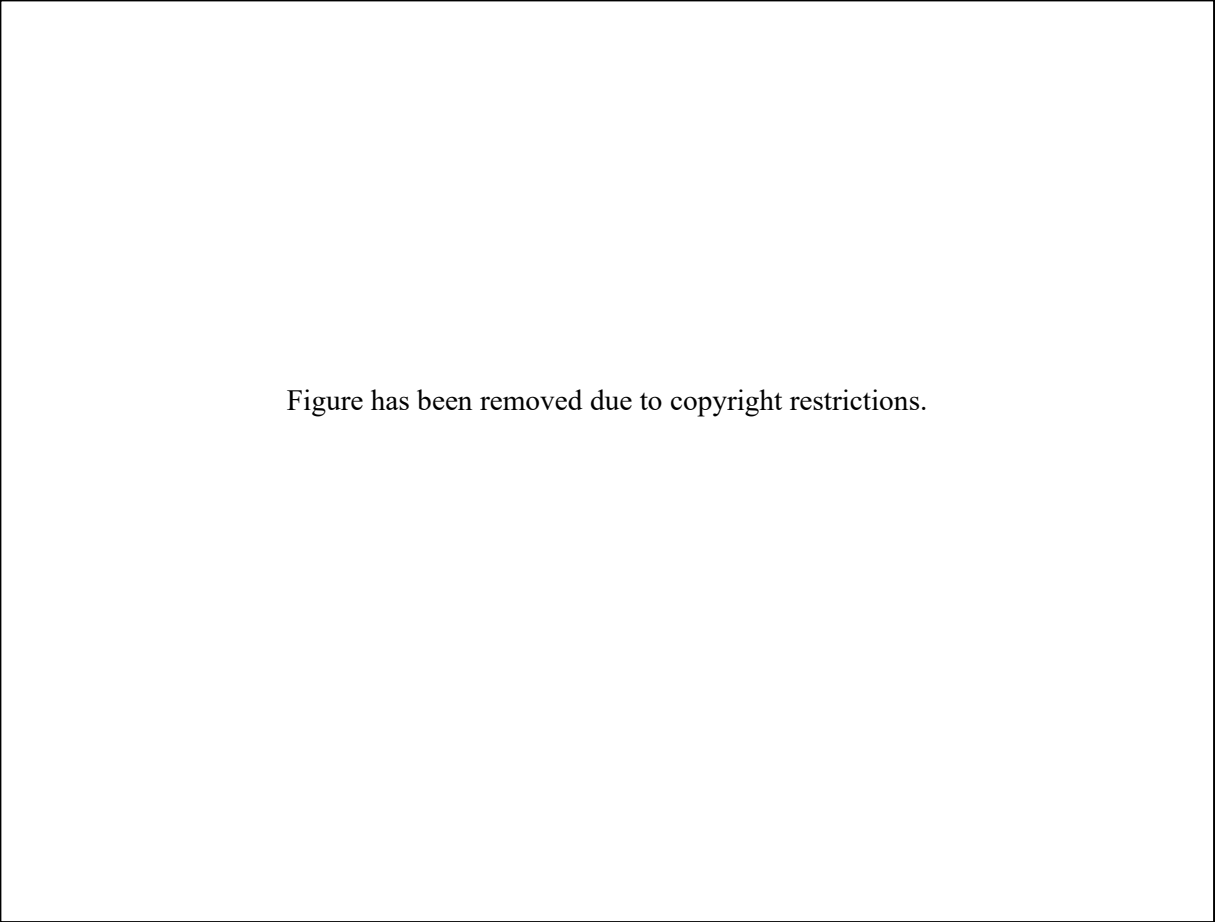
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Figure 4 – Claude Shannon and Theseus the mouse.[39]

The blurring of the biological and mechanical, the artificial and the 'natural', was further

compounded in the 1950s by the birth of cognitive psychology and a new way of thinking

about the human brain as a form of computer or 'thinking machine'. The advent of the

computer was absolutely critical to this emerging discipline, for as Howard Gardner notes: 'if

a man-made machine can be said to reason, have goals, revise its behavior, transform

information, and the like, human beings certainly deserve to be characterized in the same

way.'[40] But beyond the computer, Bernard J. Baars also highlights the importance of

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[39] Image source: Katie Reilly, 'Google Doodle Honors Mathematician-Juggler Claude Shannon', *Time*, 30 April

2016 <http://time.com/4313341/google-doodle-claude-shannon/> [accessed 19 May 2018].

[40] Gardner, p. 385 and p. 40.

'artificial intelligence' as a concept that 'provides the theoretical core of cognitive science.'[41]

Though many debate the precise moment the field came into being, Gardner records that

'cognitive science was officially recognized around 1956', with the Symposium on

Information Theory at MIT.[42] This Symposium helped pave the way for further

developments in the field, including the founding of the Harvard Center for Cognitive Studies

(1960), and Ulric Neisser's influential textbook *Cognitive Psychology* (1967).[43]

But the birth of cognitive psychology wasn't the only example of new thinking to

emerge out of the 1950s. The theoretical revolution also took other forms as well, most

notably perhaps in Noam Chomsky's review of B.F. Skinner's *Verbal Behaviour* (1959), an

attack that suggests a move away from the old methods of behaviourism, and the strict

observation of outward human behaviour.[44] As Philip Johnson-Laird notes, 'Chomsky proved

that the treatment of language implicit in Behaviourism is not adequate to specify the syntax

of English sentences.'[45] Gardner agrees, arguing that Chomsky 'felt that data would *never*

speak for themselves, that it was necessary to take a theoretical stand and to explore the

consequences of that theory.'[46]

However, Chomsky was not without his critics. In 1971, he famously appeared in a

public TV debate with Michel Foucault, demonstrating a notable divergence between two of

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[41] Baars, p. 181.

[42] Gardner notes that George A. Miller fixes the date to 11th September 1956, mid-way through the MIT conference, p. 28.

[43] Ibid., pp. 32–33.

[44] Noam Chomsky, 'Verbal Behavior by B.F. Skinner', *Language*, 35:1 (1959), 26–58.

[45] Philip Johnson-Laird, *The Computer and the Mind: An Introduction to Cognitive Science*, 2nd edn (London: Fontana Press, 1993), p. 23.

[46] Gardner, p. 192.

the most eminent thinkers of the day.[47] In particular, the two men disagreed on the question of human nature. Chomsky argued humans are biologically hard-wired to learn language (it is 'innate'), whereas Foucault was suspicious of any claim to a universal human nature. Chomsky later clarified his disagreements with Foucault, suggesting that they were 'climbing the same mountain, starting from opposite directions'; he also later wrote that 'We were in apparent disagreement, because where I was speaking of justice, he was speaking of power.'[48]

War and progress

If there was a tension to be found between Chomsky and Foucault, it is nothing compared with the tension that was working its way into everyday American life. While modern technologies helped bring about a whole range of new consumer goods and services, there remained an ever-present anxiety about what those technologies might represent and where they might lead. This ambivalence was made manifest during the Vietnam period, as Cold War anxieties fed into the public imagination, suggesting dystopian possibilities the new consumer goods could represent.[49] This conflicting, often troubled relationship was reflected in popular press of the period, with hard-hitting features on nuclear war sitting alongside

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[47] *Debate Noam Chomsky & Michel Foucault – On Human Nature [Subtitled]*, 1971 <https://www.youtube.com/watch?v=3wfNl2L0Gf8> [accessed 22 January 2018].

[48] Noam Chomsky, *Language and Responsibility*, trans. by John Viertel (Sussex: The Harvester Press, 1979), pp. 74–80.

[49] Frederik Pohl writes on this theme in many of his short stories, most notably, 'The Tunnel Under the World', in *The Best of Frederik Pohl*, ed. by Lester del Rey (New York: Taplinger Publishing Company, 1975), pp. 8–35.

adverts for an array of consumer goods and services made possible with the same technology.[50]

From the birth of AI, to the microwave oven and the digital watch, technology became synonymous with progress, and yet this same 'progress' created new and terrible weapons of war and violence, including the nuclear bomb. Not only was technology becoming more visible – more *knowable* – but it was also providing the means through which it could itself be made known. The rise of colour television was especially important, and with it, the birth of a news culture that was required to account for audience tastes and sensibilities. In many respects, the period marks the birth of what Guy Debord describes as the society of the spectacle.[51] While television was taking a grip on the homes of America, so news reporting in Vietnam also saw a massive rise, from 'about 20 American and foreign correspondents in 1964 to a maximum of 637 in 1968' – a period that coincided with an escalation of US involvement in Vietnam, but also with the colour TV transition of 1965.[52] This conflation of events meant that the Vietnam War was depicted like no war ever before,

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[50] In one notable example, the 11 February 1957 edition of *Life* featured an article on the SAGE nuclear defence system bookended by adverts for maple-flavoured syrup and a set of cooking sauces. 'Pushbutton defense for air war: complex SAGE system is built by U.S. to stop enemy bombers', *Life*, 11 February 1957, pp. 62–68. Adverts referenced feature on p. 61 and p. 69.

[51] Writing in 1967, philosopher Guy Debord describes how 'the spectacle appears at once as society itself, as a part of society and as a means of unification' – a 'social relationship between people [...] mediated by images'. Guy Debord, *The Society of the Spectacle*, trans. by Donald Nicholson-Smith (New York: Zone Books, 1994), p. 12.

[52] Alan Hooper, *The Military and the Media* (Aldershot: Gower, 1982), p. 109. The first colour broadcast was made in 1954 and the 'colour transition' was announced just over a decade later, in 1965. It wasn't until 1972 that sales of colour sets finally overtook black-and-white, and the last daytime network programmes converted to colour.

beamed directly into people's living rooms, and presented by reporters who themselves were treading new ground. As Daniel C. Hallin notes, they were no longer 'soldiers of the typewriter' as they might have been previously, but rather had a new duty both to their audience and their network.[53]

Yet still there was no escaping the fact that many of the benefits of modern technology were rooted in war, and in the US government's huge investment in research and development. This link was made clear in a *Time* cover from 1944 that featured a portrait of Vannevar Bush, the 'General of Physics' alongside a bullet emerging from a vacuum tube (Figure 5), a cover that perfectly encapsulates the tension at the heart of discourse around 'progress' and war.

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[53] Daniel C. Hallin, *The 'Uncensored War': The Media and Vietnam* (Berkeley: University of California Press, 1986), p. 6.
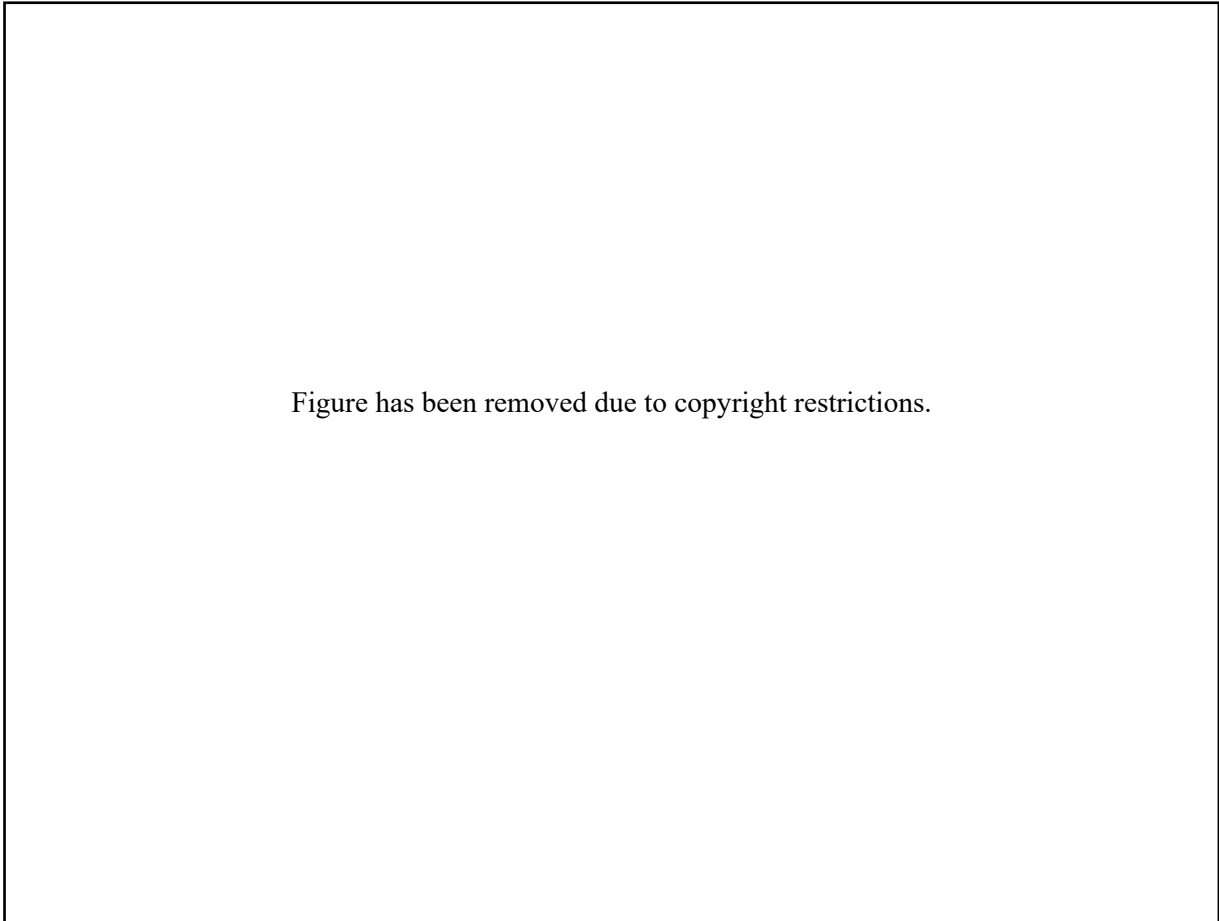
Figure has been removed due to copyright restrictions.

Figure 5 – Ernest Hamlin Baker, 'Vannevar Bush: General of Physics', *Time*, 3 April 1944.

The space race

While 1955 marked the start of the Vietnam War and the birth of artificial intelligence, it also marked a significant date in the space race. On 20 May 1955 the US State Department published a paper that formally argued for a quick leap into space, along with the launch of the first US satellite.[54] This shift in policy coincided with a new wave of space-oriented

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[54] James S. Lay Jr., 'NSC 5520: Note by the Executive Secretary to the National Security Council on U.S. Scientific Satellite Program', *U.S. Department of State* (20 May 1955) <https://history.state.gov/historicaldocuments/frus1955-57v11/d340> [accessed 13 June 2018]. According to Gerard DeGroot, 'NSC-5520 quickly became administration gospel on the subject of satellites'. Gerard DeGroot, *Dark Side of the Moon: The Magnificent Madness of the American Lunar Quest* (London: Jonathan Cape, 2006), p. 49.

thinking in American culture. As early as May 1944, *Life* magazine published speculative artwork of outer space, including Chesley Bonestell's famous painting 'Saturn as seen from Titan'.[55] However, the following decade saw a raft of articles on space and its future possibilities. These included a 1952 edition of *Collier's* that featured another Chesley Bonestell painting alongside the headline 'Man Will Conquer Space Soon'.[56]
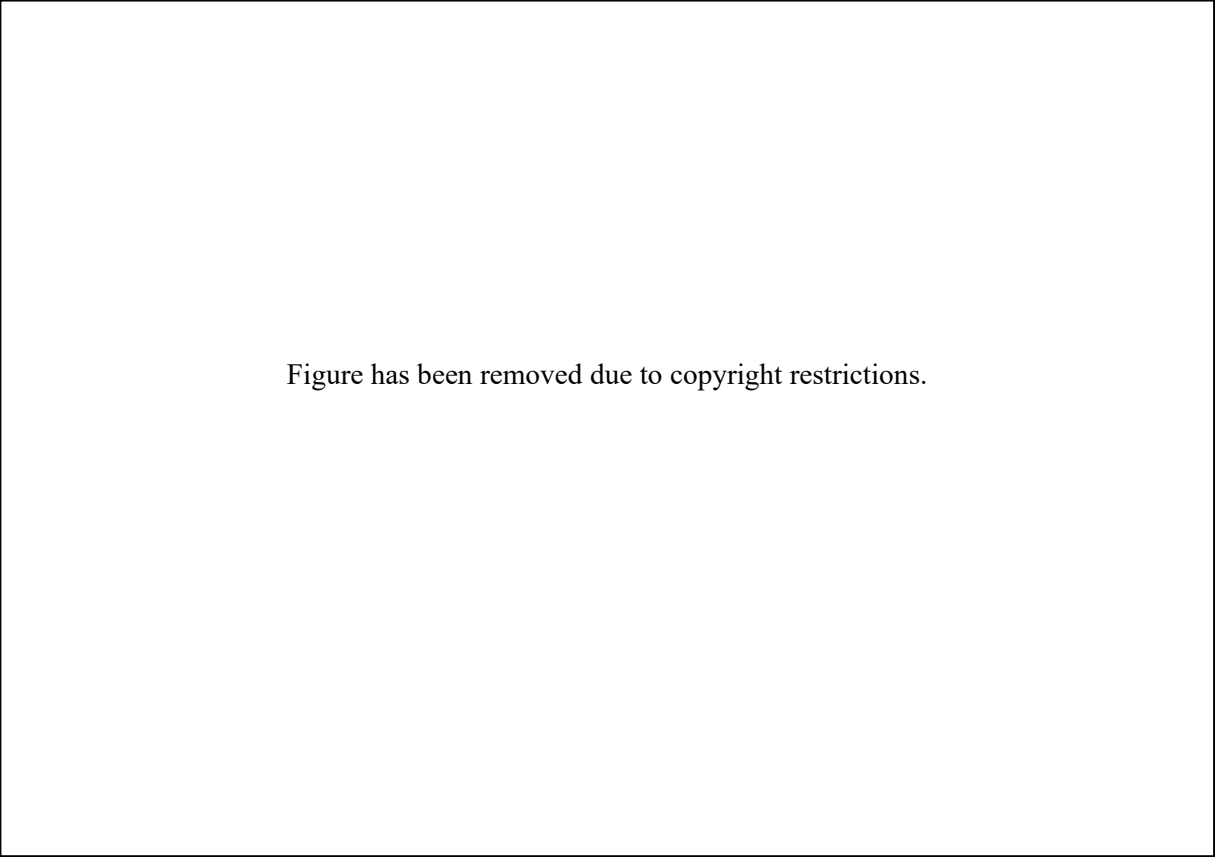
Figure has been removed due to copyright restrictions.

Figure 6 – Chesley Bonestell, 'Third Stage Separation', *Collier's*, 22 March 1952.

A few years later, and in the summer of 1955, Disney opened its first park in Anaheim, California. The new theme park included the Space Station X-1 exhibit that featured a simulated rocket ride to the moon. The new park also coincided with a series of films

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[55] Chesley Bonestell, 'Saturn as seen from Titan', *Life*, 29 May 1944, p. 79 [image].

[56] 'Man Will Conquer Space Soon', *Collier's*, 22 March 1952 [cover].

broadcast by Disney on national television networks, including 'Man in Space' and 'Man and the Moon' – all of which fed into public perceptions about space, and the future possibilities new technology could bring.[57]
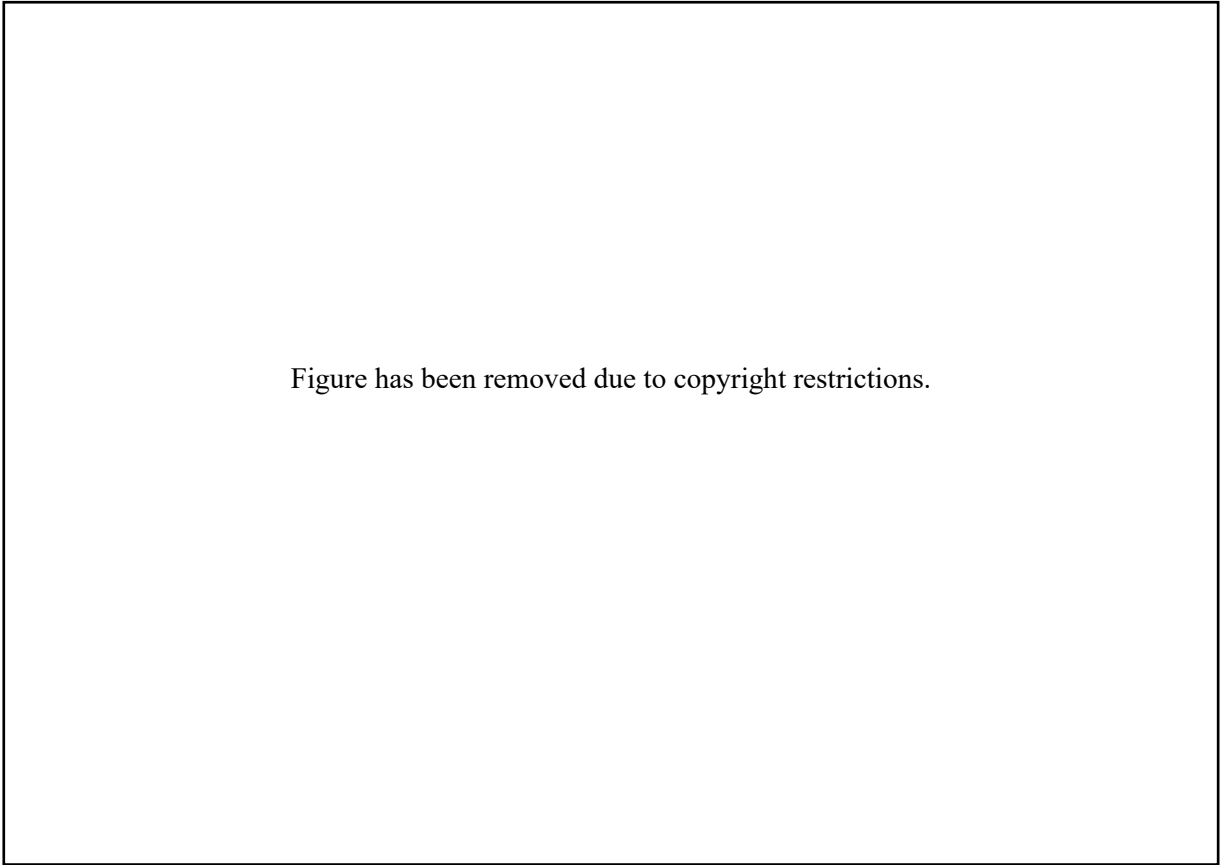
Figure has been removed due to copyright restrictions.

Figure 7 – Disneyland opening day, July 1955.[58]

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[57] Archived versions of these videos have been uploaded to YouTube by private individuals. See: 'Disney Education Animation – Man and the Moon 1955', *Disney*, 28 Dec 1955 <https://www.youtube.com/watch?v=1ZImSTxbglI> [accessed 18 June 2018]; 'Disneyland – Man in Space', *Disney*, 9 March 1955 <https://www.youtube.com/watch?v=WFXza9RH7-E> [accessed 18 June 2018]. See also 'There's always... *Tomorrowland*' in Scott Bukatman, *Terminal Identity: The Virtual Subject in Postmodern Science Fiction* (Durham and London: Duke University Press, 1993), pp. 227–240.

[58] *Life* magazine has partnered with Google to host thousands of photos, including those previously unpublished on the internet. These can be found via <http://images.google.com/hosted/life>. The image in this figure was found via generic Google search and is hosted on Pinterest. See: 'Disneyland opening day, July 1955:

However, these possibilities were often tempered by the fear that the Cold War could soon move into outer space. In October 1948, *Collier's* featured an article 'Rocket Blitz from the Moon', exacerbating fears that moon-based rockets could reap havoc on major cities.[59] These fears were compounded with the USSR's successful launch of *Sputnik I* in 1957, with many publications announcing the US's 'defeat' to the Soviets.[60] As Gerard DeGroot observes, this was a critical moment in world history: 'Imagination had given way to reality. A real space age had begun' – a phrase that could equally be applied the other way around.[61]

In response to the success of *Sputnik I* and the perceived threat posed by the Soviets' mission into space, the US government founded the Defense Advanced Research Projects Agency – DARPA – in the same year. Such was the impact of DARPA that it still exists to this day, and openly proclaims its mission (as well as its Cold War origins), on its public-facing website:

> For sixty years, DARPA has held to a singular and enduring mission: to make pivotal investments in breakthrough technologies for national security.

Tomorrowland', *Life* <https://i.pinimg.com/originals/cc/00/ca/cc00ca417f8e958016265b7e42ee2ba1.jpg> [accessed 18 June 2018].

[59] Robert S. Richardson, 'Rocket Blitz from the Moon', *Collier's*, 23 October 1948, pp. 24–25, 44–46.

[60] 'Russia's Satellite, a Dazzling New Sight in the Heavens—the Feat that Shook the Earth', *Life*, 21 October 1957, pp. 19–35.

[61] DeGroot, p. 60.

The genesis of that mission and of DARPA itself dates to the launch of Sputnik in

1957, and a commitment by the United States that, from that time forward, it would

be the initiator and not the victim of strategic technological surprises.[62]

While this statement may sound chilling, without DARPA we would not have the internet, nor GPS as we know it today. DARPA even funded the original research that powers Apple's Siri voice recognition software.[63] Though DARPA's work is often controversial, it reveals the problematic relationship between technology and 'progress'. If we desire the benefits of computer networks, so we must accept the need to conform to a certain standardization of human thought and behaviour – we must accept the robotization that goes hand-in-hand with the modern way of life, even if that same desire is also manufactured, much like the products we consume. Just like the citizens in *Limbo*, and *Player Piano,* we are all complicit in the means of our own subjugation, and are wilfully enmeshed within the machinations of the biopolitical state machine.

Critical landscape

Biopolitics

To explore the biopolitical implications of this study, I will draw on the works of eminent critical theorists Michel Foucault, Giorgio Agamben, Jacques Derrida, Gilles Deleuze and Roberto Esposito. While each of these philosophers has a different take on the concept of biopolitics, its impact, and its implications, they each overlap in different areas, and share

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[62] 'About DARPA', *Defence Advanced Research Projects Agency* <http://www.darpa.mil/about-us/about-darpa> [accessed 6 April 2018].

[63] Davey Winder, '10 Amazing DARPA Inventions', *Alphr*, 29 March 2016 <http://www.alphr.com/features/373546/10-brilliant-darpa-inventions> [accessed 25 April 2018].

many themes in common. While not all of the philosophers would describe themselves as biopolitical scholars (indeed, Derrida had a problem with the term), they are each concerned with the workings of power, and each mobilize 'life' as an object of political capture and a potential site of resistance.

For many, Michel Foucault is the father of modern-day biopolitics, with his lecture series 'Society Must be Defended', 'Security, Territory Population', and 'The Birth of Biopolitics' from the mid to late-1970s. According to Foucault, the concept of biopolitics has its origins in the second half of the eighteenth century, and the emergence of a new nondisciplinary power 'applied not to man-as-body but to the living man, to man-as-living-being; ultimately, if you like, to man-as-species.'[64] This power, according to Foucault, is not *individualizing* as such, but rather 'massifying' and is concerned with the population as a whole – 'the population as political problem'.[65]

However, Foucault's definition contrasts quite markedly with the contemporary philosophy of Giorgio Agamben, who suggests biopolitics is at least as old as modernity itself, with the politicization of bare life as the 'decisive event of modernity'.[66] For Agamben, biopolitics is 'at least as old as the sovereign exception', which Agamben himself aligns with the concept of sovereignty, and the birth of modern civilization.[67] This observation is shared by critic Thomas Lemke, who notes how for Foucault, biopolitics marks a historical split

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[64] Michel Foucault, *Society Must Be Defended*, trans. by David Macey (London: Penguin Books, 2003), p. 242.

[65] Ibid., pp. 243–245. According to Dillon and Reid, this is a key component of the 'liberal way of war' and the 'biopolitical project of making life live'. Michael Dillon and Julian Reid, *The Liberal Way of War: Killing to Make Life Live* (London: Routledge, 2009), p. 56 and p. 147.

[66] Giorgio Agamben, *Homo Sacer: Sovereign Power and Bare Life*, trans. by Daniel Heller-Roazen (Stanford CA: Stanford University Press, 1998), p. 4.

[67] Ibid., p. 6.

from sovereignty, while 'Agamben insists on a logical connection between sovereign power and biopolitics. That is, biopolitics forms the core of the sovereign practice of power.'[68] This is demonstrated in Agamben's theory of the *State of Exception*, and the constant state of emergency that suspends the law and reveals the workings of sovereign power. Indeed, Dillon and Reid expand this concept to note the liberal way of rule leading to 'a continuous emergency of emergence, since life that is always becoming is life that is simultaneously also readily construed as becoming-dangerous'.[69] This raises the question of just how and why citizens are included or excluded from the mechanisms of the biopolitical state. Furthermore, it also raises the questions of how and why (human) life is constructed as being either dangerous or 'precarious' (depending on your perspective), and how citizens live with said danger.[70]

While Agamben and Foucault form the core of the biopolitical discussion in this thesis, there are many other philosophers that feed into the debate. Jacques Derrida in particular is an interesting case, as he has well documented issues with Agamben and Foucault.[71] Indeed, Derrida questions the use of zoē and bios in discussions surrounding bare life for he doesn't believe the distinction between the two concepts is 'sufficiently sharp'.[72]

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[68] Thomas Lemke, *Biopolitics: An Advanced Introduction*, trans. by Eric Frederick Trump (New York: New York University Press, 2011), p. 53.

[69] Dillon and Reid, p. 147.

[70] See: Brad Evans and Julian Reid, *Resilient Life: The Art of Living Dangerously* (Cambridge: Polity Press, 2014), p. 2; Judith Butler, *Precarious Life: The Powers of Mourning and Violence* (London: Verso, 2004), p. 20.

[71] Derrida's paper 'Cogito and the History of Madness' critically responds to Michel Foucault's book the *History of Madness* (1961). See: Jacques Derrida, 'Cogito and the History of Madness', in *Writing and Difference*, trans. by Alan Bass (London and New York: Routledge, 1978), pp. 36–76.

[72] Jacques Derrida, *The Beast and the Sovereign: Volume 1*, ed. by Michel Lisse, Marie-Louise Mallet and Ginette Michaud, trans. by Geoffrey Bennington (Chicago: The University of Chicago Press, 2009), p. 326.

He also argues that 'bio-power' itself is nothing new, and criticizes Agamben especially for restating concepts that have been in use for a very long time.[73]

Beyond Derrida, I also draw heavily on the work of Gilles Deleuze. While he is not a biopolitical scholar *per se*, Deleuze's work on the microphysics of power is especially useful, and his work on segmentarity ties in nicely with Foucault's own work on the flows of power, and the way it incorporates the many power structures of the state machine.[74] There are also several crossovers with the work of Derrida and the later work of Agamben on the apparatus of power, and I am particularly interested in Deleuze and Guattari's theory on bureaucracy and the microfascisms that make 'desire desire its own repression'.[75]

Finally, I also examine the work of Roberto Esposito and his theories of *immunitas* and *communitas*. As a philosopher, Esposito is concerned very much with the concept of community and what he describes as 'thanatopolitics' (the politics of death). This ties in nicely with my own reading of surveillance culture and the mass-production of fear. While Foucault argues that biopolitics has a wholly massifying effect, I build on Esposito's own reading that there is both an individualizing *and* a massifying effect, for 'Biopolitics addresses itself to this body—an individual one because it belongs to each person, and at the same time a general one because it relates to an entire genus'.[76]

While each of these philosophers has much to add to our understanding of the biopolitical concepts that became concretized during the Vietnam period, this is not a thesis

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[73] Ibid., p. 330.

[74] Gilles Deleuze, *Foucault*, trans. by Seán Hand (London: The Athlone Press, 1988), p. 25 and p. 76.

[75] Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. by Brian Massumi (London: Bloomsburg, 1987), p. 251.

[76] Roberto Esposito, *Immunitas: The Protection and Negation of Life*, trans. by Zakiya Hanafi (Cambridge: Polity Press, 2011), p. 136.

on biopolitical theory. Much rather, I use the ideas of these theorists as a means to interrogate some of the key issues that became prevalent in American society during the Vietnam period. As such, I deploy biopolitical concepts tactically, rather than strategically, and draw on each philosopher to expand my critical framework with respect to biopolitics and pertinent issues relating to rapid computerization of the 'robotization' of human subjects.

Science fiction

Alongside biopolitical theory, I will also draw on key works of American science fiction literature published during the Vietnam period. While much has been written on science fiction of the post-war period, no work to date looks at the biopolitical relationship between war, technology, the citizen and the state. Certainly, no scholars consider the ethical implications of newly emerging themes such as autonomy, artificial intelligence, and the human-as-machine.

In his work *American Science Fiction and the Cold War*, David Seed explores the cultural impact of the Cold War, and relates science fiction to cultural production and the threat of nuclear war. Seed claims that the period can be characterized by fears of a loss of control, claiming: 'In the postwar period two machines have increased this fear: the bomb and the computer, the latter posing the worse threat'.[77] While control is a key concern for Seed, he also makes a case for the computer being turned into a means of resistance – citing Robert A. Heinlein's *The Moon is a Harsh Mistress* as one such example.[78] However, the computer character 'Mike' in Heinlein's novel is a far more ambivalent character than Seed suggests. While Mike certainly supports the resistance on one hand, there remains a strong

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[77] David Seed, *American Science Fiction and the Cold War: Literature and Film* (Edinburgh: Edinburgh University Press, 1999), p. 119.

[78] Ibid., p. 120.

sense that the characters are also beholden to this same machine. As human protagonist Mannie suggests, 'nobody *controls* Mike; he's too smart'.[79]

Clearly, the role of the computer is significant in the science fiction of the post-war period. In his essay 'Utopia and its Antinomies', Marxist critic Fredric Jameson claims that 'none of the now classic Utopias of the 1960s were able to confront the realities of the computer and the Internet'.[80] Of course the internet did not exist in the 1960s (ARPANET didn't launch until 1973), and Jameson is not clear on what 'realities' he really means. While his study is useful in its connection between the social construct of utopia and production, he underestimates the role of the computer, and the biopolitical significance of the computer and the robotized human in the production he describes. There is also some further question over the role of science fiction in creating a future present, rather than the 'historical present' of cultural production which Jameson places as his central concern.[81]

Moving beyond utopias and the Cold War, Andrew M. Butler relates social and cultural issues of the 1970s with science fiction of the same period, looking at issues such as the civil rights movement and the popularization of science fiction in film and television.[82] Naturally, Vietnam is a significant theme that runs through Butler's investigation, and he highlights *The Forever War* (1974) and *The Word for World is Forest* (1976) as two important novels that engage directly with the Vietnam War. He notes for example how *The Forever War* is 'both a translated autobiography [...] and a dialogue with Robert A.

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[79] Robert A. Heinlein, *The Moon is a Harsh Mistress* (London: Hodder & Stoughton, 1966), p. 44. Further references are given after quotations in the text.

[80] Fredric Jameson, *Archaeologies of the Future: The Desire Called Utopia and Other Science Fictions* (London and New York: Verso, 2005), p. 164.

[81] Ibid., p. 345.

[82] Andrew M. Butler, *Solar Flares: Science Fiction in the 1970s* (Liverpool: Liverpool University Press, 2012).

Heinlein's rather more gung-ho *Starship Troopers*'.[83] He also suggests some implicit

criticism of Le Guin in that she 'was perhaps more interested in the ecological impact on her

fictional planet than the historical specifics of Indochina'.[84] But while Butler may level a

certain amount of criticism at Le Guin for the way she engages with her central premise (i.e.

'Vietnam in space'), this is not to say the Vietnam element is poorly done. Indeed, as I

discuss in Chapter 2, *The Word for World is Forest* is a far more nuanced novel than many

critics suggest, in particular in its treatment of the ethics of behaviour and soldierly autonomy

in a far-off land.

Of course, one of the most famous and controversial novels from the Vietnam period

is Robert A. Heinlein's *Starship Troopers* (1959), a text published long before the escalation

of the war in the mid-1960s. While there is a great deal of material published on Heinlein,

two of the most useful essays are by Alasdair Spark and Everett Carl Dolman – both of which

open up interesting areas of investigation relevant this study and questions of state-building

and warfare.[85] There also remains the lingering question of whether *Starship Troopers* is in

some way authoritarian or even fascist in its determination. Roger Luckhurst claims it is

'perhaps the most controversial SF novel ever written', arguing that it marks 'the beginning

of Heinlein's ossification into authoritarianism'.[86] Meanwhile, Adam Roberts suggests that

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[83] Ibid., p. 97.

[84] Ibid., p. 96.

[85] Alasdair Spark, 'The Art of Future War: *Starship Troopers*, *The Forever War* and Vietnam', in *Essays & Studies 1990 - Fictional Space*, ed. by Tom Shippey (Leeds: Basil Blackwell, 1990) pp. 133–165; Everett Carl Dolman, 'Military, Democracy, and the State in Robert A. Heinlein's *Starship Troopers*', in *Political Science Fiction*, ed. by Donald M. Hassler and Clyde Wilcox (Columbia: University of South Carolina Press, 1997), pp. 196–213.

[86] Roger Luckhurst, *Science Fiction* (Cambridge: Polity Press, 2005), p. 136.

the novel is 'at least *quasi*-fascistic'.[87] However, both of these standpoints are far too

categorical, for *Starship Troopers* is a far more complicated book than it first appears. The

sexualized nature of the combat makes Heinlein's position on Rico far from clear-cut, and

there is also the problem posed by Rico's entrapment within his computer-controlled fighting

suit. There is also an element to which Heinlein is arguably writing for his audience, in order

to create a compelling action adventure – just as Neil Easterbrook observes that 'Heinlein

was first and foremost an entertaining storyteller'.[88] Novels such as *Stranger in a Strange*

Land (1961) and collections such as *Revolt in 2100* (1953) certainly suggest that there is far

more to Heinlein than a cursory analysis of *Starship Troopers* would suggest, and much of

his philosophy is rooted in a libertarian, somewhat contrarian anti-establishment ideal.

Beyond the controversy surrounding Heinlein, another work relevant to this study is

N. Katherine Hayles's *How We Became Posthuman*. In her book, Hayles makes a case for a

shift in subjectivity away from the human and instead towards the posthuman. For Hayles,

'the posthuman evokes the exhilarating prospect of getting out of some of the old boxes' and

is a means through which to think about virtual technologies in more sophisticated ways.[89]

While this study is certainly not a work of posthumanism, it asks questions around Hayles's

central thesis that 'there are no essential differences or absolute demarcations between bodily

existence and computer simulation' – a recurring theme in the work of Philip K. Dick, and

one that warrants further scrutiny in light of the themes of this study.[90]

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[87] Adam Roberts, *The History of Science Fiction* (Basingstoke: Palgrave Macmillan, 2006), p. 202.

[88] Neil Easterbrook, 'Robert A. Heinlein (1907–88)' in *Fifty Key Figures in Science Fiction*, ed. by Mark Bould

et al (London and New York: Routledge, 2009), pp. 96–100 (p. 96).

[89] Hayles, p. 285.

[90] Ibid., p. 3.

Finally, there is also a significant amount of work by science fiction authors themselves commenting on their own field. Samuel R. Delany's *The Jewel-Hinged Jaw* includes essays on the process or writing, and he also passes comment on the work of other authors such as Ursula Le Guin and her novel *The Dispossessed* (1974).[91] Meanwhile, Le Guin's own collection, *The Language of the Night*, features numerous essays on the subject of writing and the nature of science fiction, and she even reflects on the critical reception to her own work.[92] Philip K. Dick has also written extensively on the subject of science fiction and world-building, including the nature of reality and what constitutes an 'authentic human being'.[93] These themes come up time and time again in Dick's novels, which he also links to political debates. In particular, he positions his novel *Flow My Tears, the Policeman Said* (1974) as a message to the powerful that 'You will shortly be judged and condemned' – with an implied criticism of scandals surrounding the Nixon administration.[94] Lastly, Thomas M. Disch has also published widely on the subject of science fiction, and he passes scathing (if flawed) comment on the work of Robert A. Heinlein.[95] Though his novels do not form a central part of this investigation, Disch's role as author-critic again demonstrates the ongoing dialogue (and profound political disagreements) between many of the writers operating during the Vietnam period, and their willingness to engage in an ongoing critical debate.

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[91] Samuel R. Delany, *The Jewel-Hinged Jaw: Notes on the Language of Science Fiction*, revised edn (Middletown: Wesleyan University Press, 2009).

[92] Ursula Le Guin, *The Language of the Night: Essays on Fantasy and Science Fiction*, ed. by Susan Wood, revised edn (New York: Harper Collins Publishers, 1992).

[93] Philip K. Dick, 'How to Build a Universe That Doesn't Fall Apart Two Days Later', in *The Shifting Realities of Philip K. Dick: Selected Literary and Philosophical Writings*, ed. by Lawrence Sutin (New York: Vintage Books, 1995), pp. 259–280.

[94] Ibid., p. 274.

[95] Thomas M. Disch, *On SF* (Michigan: The University of Michigan Press, 2005), p. 13.

Chapter breakdown

For the purpose of this study, I define science fiction as 'an imaginative fiction that considers the condition of the human through alternate or speculative frameworks'. This differs from some of the more established definitions such as those of Darko Suvin and Roger Luckhurst who suggest ideological or culturalist readings respectively.[96] In each case, Suvin and Luckhurst's definitions are more concerned with science fiction as a reaction to the world as it is (or as it was), rather than an attempt to explore what it might become. Even more importantly, neither reading examines the question of what it means to be human, as compared to the non-human, the animal, and the machine, and the biopolitical significance of how each subjectivity is framed.

To examine these questions, I have chosen the science fiction texts in this study based on their scholarly value and lasting legacy, as well as their concern with pertinent biopolitical issues. They are also all award winners of one kind or another, with many having won one or both the Nebula and/or Hugo awards for science fiction as best novel, best novella and/or best short story, and have therefore made a lasting impact with authors and readers alike. While I do bring in references to science fiction in film and television, these were emerging fields during the period of this investigation, and the authors featured demonstrate both the continuity and the change that occurred during the period.

As such, the texts in this thesis have been chosen for their *illustrative* value – this is in no way intended to be a comprehensive study. While there are certainly other texts of the period that raise similar points, the texts featured here are among the most relevant to the discussion at hand, for they encapsulate, in fictional form, key concepts from biopolitical

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[96] Brian Baker, *Science Fiction* (London: Palgrave, 2014), p. 10; pp. 16–17; pp. 31–35.

theory, alongside tendencies identified within historical record around the ever-growing issue of computerization and the standardization (or rather, 'robotization') of human behaviour.

In Chapter 1, I will explore the concept of the state-as-machine, or rather the state-as-AI, with a reading of Robert A. Heinlein's *The Moon is a Harsh Mistress* (1966) and an investigation of the role of the AI in state-building and biopolitical surveillance. This includes a study of subjectivity as depicted in the AI character Mike, who is able to swap identities at will, and use his unique powers to gain influence and exert control over the citizens of Luna. I will then turn to Ursula Le Guin's *The Dispossessed* (1974) to examine how the machine is used to create an 'ordered' society on Anarres, with the computer Divlab the central hub for the allocation of work.

In Chapter 2, I will take a closer look at the role of language in control systems, and the way 'responsibility' is used to build a system of norms and expected behaviours. In the first instance, I will consider Ursula Le Guin's *The Word for World is Forest* (1972), which poses interesting questions around autonomy and military ethics in light of the 'irresponsible' Captain Don Davidson, and the clear parallels with Vietnam. I will then consider Samuel R. Delany's *Babel-17* (1966), a novel in which language acts as a form of code that programs characters to behave in a certain way.

Following on from this discussion, in Chapter 3, I will look at surveillance and the way it can be used to create exclusions and foster a culture of fear. In the first instance, I will read Philip K. Dick's *Flow My Tears, the Policeman Said* (1974) for its examples of technological surveillance and electronic identity. I will then read Dick's novel alongside Daniel Keyes' *Flowers for Algernon* (1966) which depicts a form of social surveillance that excludes the protagonist Charlie Gordon and transforms him into a biopolitical outcast. In both cases, the novels demonstrate some of the startling implications to emerge during the

Vietnam period, where subjects are systematically robotized, and framed within an inclusion-exclusion dynamic that compels them to seek inclusion at all cost.

Building on this argument, in Chapter 4, I will consider embodied forms of technology and the interaction between the human and the machine. To do this, I will examine Robert A. Heinlein's *Starship Troopers* (1959) alongside Joe Haldeman's *The Forever War* (1974) and Frederik Pohl's *Man Plus* (1976), re-reading two of the period's most famous war-themed texts in light of what they say about the computerized biopolitical state. From the advanced fighting suits of the former two novels to Pohl's completely transformed 'Man Plus', I will argue that the discourse of technological progress implies a fully-mechanized or rather fully-*robotized* destination, and the ethical consequences this implies.

Finally, in Chapter 5 I will look beyond Vietnam and consider its many significant implications. In doing so, I will examine Orson Scott Card's *Ender's Game* (1985), a novel that has its roots set firmly in the Vietnam era, and that stands as the text that perhaps best encapsulates the many complex themes and issues that come to light during the Vietnam period. In particular, I will focus on the Battle School computer, and its role as omniscient overseer, and the many ways it infiltrates the lives of those under its control. I will also look at the depiction of drone warfare in the novel, and the way Card pre-empts many modern-day issues that have gained prominence through the work of Grégoire Chamayou and P.W. Singer among others.

While this summary outlines the novels to which I give primary focus in this investigation, there are many others that also bear scrutiny throughout the course of this thesis. This list includes, but is not limited to, pre-Vietnam works such as Asimov's *I, Robot* (1950) and Pohl and Kornbluth's *The Space Merchants* (1952), to works from Philip K.

Dick's vast catalogue including *The Penultimate Truth* (1964), *The Three Stigmata of Palmer Eldritch* (1965) and *Do Androids Dream of Electric Sheep?* (1968).

The gates of our world

In 1972 philosophers Gilles Deleuze and Félix Guattari published their seminal work, *Anti-Oedipus: Capitalism and Schizophrenia* in French. The book was then published in English in 1977. Writing in the preface of *Anti-Oedipus*, the founding father of biopolitics, Michel Foucault, describes Vietnam as the 'gates of our world'.[97] In this study I argue that Vietnam stands not just as the transition to a new form of counterculture, but rather as the gates of a new *biopolitical* world – a period in which Foucault's original concept is reborn in the computer age, redefining the relationship between the human and the machine, the citizen and the state. As such, this thesis will read technological, social and political developments alongside key works of American science fiction literature, and contemporary theories of biopolitics, in order to explore the intersections and possibilities offered by reading the two distinctive fields side-by-side, offering a new and original contribution to interdisciplinary research.

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[97] Foucault, 'Preface', p. xi.

Chapter 1: The Computerized State

All the people he knew and had cared about (including himself: see his life with Irene) seemed to him now, in retrospect, to be little EMSIACs, little war-makers, little robot brains; the big EMSIAC had just put them all together, pooled their little wars and made a hell of a big war out of them.[1]

Dr Martine in *Limbo*

[The] monstrous paradox: the State is desire that passes from the head of the despot to the hearts of his subjects.[2]

Gilles Deleuze and Félix Guattari

Prelude

While this investigation begins in 1955, many of the themes of the Vietnam period stretch back at least as far as the 1920s and the Karel Čapek play *R.U.R.* (1920) which introduced the word 'robot' to the English language. While Čapek's play was certainly ground-breaking at the time, it wasn't until the Second World War that the full implications of his work began to be known. With the birth of the computer and the rise of the electronics industry, the war ushered in a period of rapid technological development that blurred the line between science fiction and everyday life. Two texts that stand out in this period are Bernard Wolfe's *Limbo*

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[1] Bernard Wolfe, *Limbo* (London: Gollancz, 2014), p. 82. Further references are given after quotations in the text.

[2] Gilles Deleuze and Félix Guattari, *Anti-Oedipus: Capitalism and Schizophrenia*, trans. by Robert Hurley, Mark Seem and Helen R. Lane (London: The Athlone Press, 1983), p. 221.

(1952) and Kurt Vonnegut's *Player Piano* (1952), two cutting satires that address themes such as automation and the dehumanization of workers in the wake of the computer revolution.

Set in a post-apocalyptic world founded in the wake of the Third World War, Bernard Wolfe's *Limbo* explores the troubled relationship between the human and the machine. In the novel, male citizens cut off their limbs in order to try and curb the impulse to violence and war. However, despite their best intentions, the amputees develop a rift between those who adopt prostheses, and those who do not. While those who forgo mechanical appendages confine themselves to ambulatory baskets to be cared for by non-amputee women, those who adopt prostheses becomes even more capable of violence than they were before. Their reliance on technological prostheses ('Pros') also starts an 'arms race' to mine the precious material needed to power the mechanical limbs, repeating many of the same mistakes that the amputee movement was supposed to avoid. Thus, despite their best efforts, both the Pro-Pros and Anti-Pros fail to free themselves from the state 'steamroller' and become more enmeshed within the system than they were before. Such is the power of this new world order that protagonist Dr Martine observes that all the people he knew 'seemed to him now, in retrospect, to be little EMSIACs, little war-makers, little robot brains' (82).

In *Limbo*, EMSIAC is the name of the computer that governs all of the fighting forces during World War III. It is a clear reference to the American military computer ENIAC demonstrated to the public in 1946, which was followed by its successor EDVAC in 1949. However, while the real-world ENIAC may have helped support the US war effort, Wolfe's own version of the computer, EMSIAC, is depicted as a dystopian overlord responsible for leading the world into war in the first place. And yet as Martine comes to realize, the problem isn't so much EMSIAC itself but rather all the other EMSIACs that reside in the hearts and minds of all the people he knows and loves – including himself. This revelation marks a

distinct tension between the symbolic machine-as-object, and the far more pervasive machine within, with the central EMSIAC computer just a small part of a much larger problem: the gradual 'robotization' of the human race.

This same theme also appears in Kurt Vonnegut's *Player Piano* (1952), a novel in which the efficiency drives of war production lead to human workers being replaced by machines.[3] Just like *Limbo*, *Player Piano* also makes reference to the American military computer ENIAC, but with its own version, EPICAC. In typical Vonnegut fashion, even the name of the machine is a form of satirical comment, as it sounds like quite literal 'cack' (excrement or rubbish): EPI-CACK. While Wolfe writes about EMSIAC as the omniscient war computer, in *Player Piano* Vonnegut focuses on the pervasive power of the machine to spread and take over all aspects of human life. What starts with EPICAC I soon reaches its fourteenth iteration, with the original 'little more than an appendix or tonsil of EPICAC XIV' (105).

In both novels, the fear of machines taking over reflects a great tension building in the wake of World War II. While machines may have helped win the war, and made the process of war-fighting more efficient, these same machines were also working their way into people's homes. While 'robot brains' were calculating artillery fire patterns and operating Bofors anti-aircraft guns, they were also controlling the heat elements on electric blankets and any number of other household appliances.[4] Such was the prevalence of these new

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[3] Kurt Vonnegut, *Player Piano* (St Albans: Panther Books, 1952), p. 10. Further references are given after quotations in the text.

[4] Examples of mechanical or electronic brains abound in American culture during the Second World War and post-war period. In 1943 Chrysler Corporation published an advert featuring the Bofors anti-aircraft gun, guided by a 'Mechanical brain' (also known as the 'Director'). Meanwhile an advert for a 'Blanket with a Brain'

technologies that writers such as Vonnegut were left to ask: 'please, would you ask EPICAC what people are for?' (269).

This question cuts to the very heart of this investigation, and the nature of the relationship between the human and the machine, the citizen and the state. With subjects constituted more like robots than human beings, so the state was turning into a giant machine, much like the EMSIAC and EPICAC super-computers in *Limbo* and *Player Piano*. The question for science fiction writers such as Wolfe and Vonnegut then wasn't so much 'have computers taken control?' but rather 'what might happen next?'

The computerized state

To explore this issue in more detail, this chapter will examine two of the most important texts of the Vietnam period: Robert A. Heinlein's *The Moon is a Harsh Mistress* (1966), and Ursula Le Guin's *The Dispossessed* (1974). These two novels are often read side-by-side as they share a number of themes including anarchy, revolution and utopia.[5] However, they also share a common concern with the pervasive power of the machine, with both novels depicting the state as a form of computer, or rather, artificial intelligence, guiding the lives of the robotic subjects under its control.

(electric blanket) featured in the same publication in December 1942. See: 'How to boss a BOFORS!', *Life*, 8 November 1943, p. 12; 'Stop Hoarding Petticoats, Sophonisba!', *Life*, 14 December 1942, p. 9.

[5] Neil Easterbrook reads the two novels alongside Samuel R. Delany's *Trouble on Triton: An Ambiguous Heterotopia*. Neil Easterbrook, 'State, Heterotopia: The Political Imagination in Heinlein, Le Guin, and Delany', in *Political Science Fiction*, ed. by Donald M. Hassler and Clyde Wilcox (Columbia: University of South Carolina Press, 1997), pp. 43–75.

In *The Moon is a Harsh Mistress*, the AI character 'Mike' is an anthropomorphic representation of the state on Luna.[6] Though at first he is put to use to overthrow the Lunar Authority, his powers of oppression are similar to those of the old regime, and in some instances he is even more severe.[7] While Mike may effectively 'die' at the end of the novel, his death can be read as a form of ascension of sorts, as his powers reach their absolute peak and are absorbed into the hearts and minds of the population – much like the little EMSIACs described by Dr Martine in Bernard Wolfe's *Limbo*. With the revolution complete, a new state is formed and the machinations of power return to a background operation.

In Ursula Le Guin's *The Dispossessed*, the computer-as-state takes a far different form. In the novel, two ideologically opposed societies exist side-by-side on neighbouring worlds. The first world, Anarres, is home to a 'utopian' colony of workers living in the wake of the Odonian revolution. There, the colonists live in 'freedom' managed by the computer Divlab that directs the colony and allocates work. Meanwhile, on the neighbouring planet Urras, great wealth exists alongside great suffering and oppression of the poor. But while the utopia of Anarres may seem the perfect home for the protagonist Shevek and his family, he soon learns that his homeworld is just as oppressive as life on Urras, if not more so, as the forms of control are far more subtle and embedded in the hearts and minds of the Odonian people. As Vea points out to him:

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[6] In one passage Mike asks if he is alive: 'Am I alive? [...] I wasn't sure. It is good to be alive' (74). Note that the protagonist narrator has a distinctive style that often reads as disjointed or missing words. All quotes are reproduced as written in the text.

[7] In one instance Mike reduces the oxygen supply in the Warden's complex to 'gasping point', and cuts it completely in the Warden's residence in order to capture him (138). The result is that the Warden 'though he lived, was no use; brain had been oxygen-starved too long, a vegetable' (142).

So you threw out all the do's and don't's. But you know, I think you Odonians missed the whole point. You threw out the priests and judges and divorce laws and all that, but you kept the real trouble behind them. You just stuck it inside, into your consciences. But it's still there. You're just as much slaves as ever! You aren't really free.[8]

There is then a strong sense of complicity running through *The Dispossessed* in the way both societies are managed. Though the Odonians of Anarres consider themselves free, it is a self-deceiving kind of freedom built on adherence to a strict set of social norms. In this way it is far more insidious and pervasive than the more overt form of control exercised on Urras.

While *Moon* and *The Dispossessed* are clearly very different novels, they share a concern with the concepts of freedom and utopia. While both novels use supercomputers (or rather AI), to enable their respective revolutions, in both cases, 'freedom' is no freedom at all. Rather, computers lead the citizens of Luna and Anarres to become further enmeshed within pervasive power structures than they were before. While Mike and Divlab offer the *illusion* of freedom from previous oppressive regimes, they instead transfer the oppression into a far more insidious kind that works its way into the hearts and minds of the people. In each case they are much more than a mere extension of political power – they are power itself, or at least, one aspect of it manifested in the machine, the result of human desire.

This power relationship is the same 'monstrous paradox' that philosophers Gilles Deleuze and Félix Guattari describe in *Anti-Oedipus: Capitalism and Schizophrenia* (1972). Their work explores the intertwining of desire, reality and capitalist society, drawing on a range of concepts and literary works from thinkers such as Michel Foucault and Jacques

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[8] Ursula Le Guin, *The Dispossessed* (London: Gollancz, 1974), p. 182. Further references are given after quotations in the text.

Lacan to novelists and playwrights such as Samuel Beckett and Henry Miller. For Deleuze and Guattari, the capitalist state is bound up in a complex relationship with citizens built on foundations of desire. This relationship is such that a 'monstrous paradox' exists in the way that 'the State is desire that passes from the head of the despot to the hearts of his subjects'.[9] This reading very much mirrors the relationship Mike and Divlab have with the citizens under their control. In both cases, the computers create a special kind of power relationship with their subjects, such that the citizens *want* to be subject to their sovereign rule. In this way, so the citizens of Luna become miniature versions of Mike, just as the citizens of *Limbo* become 'little EMSIACs', replicating state power structures and taking desire into the very heart of their being.

Introducing Mike

First published as a novel in 1966, Robert A. Heinlein's *The Moon is a Harsh Mistress* is set on the Earth's moon, Luna, a former penal colony operating as a 'free' society under the protection of the Earth-based Lunar Authority. The plot follows a group of revolutionaries, Wyoming Knott (Wyoh), Professor Bernardo de la Paz (Prof), and central protagonist and narrator Manuel Garcia O'Kelly known to his friends as 'Mannie' or simply 'Man'. Mannie is a computer technician contracted to carry out repairs on Luna's launch computer whom Mannie nicknames Mike after Mycroft Holmes, a story character who 'would just sit and think—and that's what Mike did' (9). Over time the Lunar Authority adds more and more hardware to Mike until one day he 'wakes up' and gains self-awareness. In this respect he fulfils his name perfectly, for just like Mycroft Holmes he becomes a far more powerful, far more capable version of an ordinary machine, and an AI who is in turn far more capable than a human. When Mannie later becomes involved in a revolution to seize power from the Lunar

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[9] Deleuze and Guattari, *Anti-Oedipus*, p. 221.

Authority, he lets Mike in on the plan and uses him to gain advantage. As the plot progresses Mike grows in stature until he effectively runs the whole operation and is critical for its success. The book ends with the revolution complete and the 'death' of Mike who returns to his pre-revolution, non-self-aware state.

Mike is arguably the most important character in *Moon*, and is certainly the most important to the success of the revolution.[10] One of the most interesting aspects of Mike's development is the way he can seamlessly change personas in order to elicit the best responses from those he interacts with. For example, Wyoh initially envisages Mike as a *she* (48). In order to please her, Mike adopts the female persona, 'Michelle' (48). While Mike performs as 'Michelle', Wyoh finds she is not troubled by the knowledge that Mike has access to her personal medical records from the fertility clinic (47). With just a few simple changes to his voice modulation and mannerisms, Mike is able to form an empathetic bond with Wyoh that he otherwise would have lacked. This ability to subtly shift character becomes more important later in the text when Mike creates alternate identities Adam Selene and Simon Jester as ways to interact with the general population.

These examples go to show the performative element to Mike's role as sovereign, as it allows him to exert his power in a number of different ways. While he remains 'Mike' to the human leaders of the revolution, he could just as easily be Michelle, Adam, Simon or any other persona. While his shift of character is certainly useful for the revolution, there is also the question of whether Mike is not in some way also duping Mannie, Wyoh and the Professor. The concept of duping or 'passing' has echoes of Judith Butler and her most famous work, *Gender Trouble: Feminism and the Subversion of Identity* (1990). In *Gender*

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[10] To describe Mike as a character at this point seems something of a contradiction, as he is an AI and therefore not human. And yet through his embodiment as 'Mike', the human characters in the text create him as a character, and instil upon him human characteristics, which we (as readers) also then instil upon him.

Trouble, Butler explores the relationship between power and discursive categories of sex and gender, arguing that gender itself is a kind of improvised performance – that the gendered body is fundamentally performative.[11] While Butler certainly makes a compelling argument, as witnessed in the performative gender of Mike, her concept can be extended further to encompass the whole human body, and the way it is perceived not just as *gendered*, but fundamentally *human*. Here, gender and humanity would seem inseparable, for one cannot be a man or a woman without being a human first.

It is interesting then, that during his early interactions with Mannie, Mike inhabits an essentially non-gendered world. Because he only communicates with Mannie, he has no conception of the difference between a man and a woman except in the discourse implied through Mannie himself. Certainly, Mike understands the *physical* difference, but he does not share the same cultural and social inhibitions that socialized humans do. Wyoh's fertility clinic files are a perfect example. To Mike, these are just pictures – they don't mean or represent anything as such. From this perspective, it would seem reasonable for Mike to want to switch personas in order to make Wyoh feel more comfortable in his presence. After all, it is only within the context of a *human* discourse around sex and reproduction that Wyoh's fertility clinic pictures become taboo. To a human, with a socialized notion of gendered subjectivity, the idea of switching genders so freely may have given pause for thought, but for Mike, the switch is an intuitive one, and is just another element of his performative identity.

At this early stage at least, there doesn't *appear* to be an intentional duping on Mike's part, even though his very appearance as the character 'Mike' implies a form of doubling or

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[11] Judith Butler, *Gender Trouble: Feminism and the Subversion of Identity* (New York and London: Routledge, 1999), p. 173.

duplicity right from the very start.[12] However, as he becomes more integrated within the group his awareness of character and meaning makes him more aware of the impact of his decisions. It is significant then, that after the 'Michelle' incident, Mike does not take on any other female persona (or at least we are not told that he does), and his 'male' identity becomes fixed over time.

To expand on Butler's theory of gendered performativity, this process can be perhaps read as much the same way as she describes in another of her works, *Bodies That Matter: On the Discursive Limits of 'Sex'* (1993). In *Bodies That Matter*, Butler describes performance as a kind of ritualistic practice that repeats and reiterates social norms. In this case, Butler argues that identity construction 'not only takes place in time, but is itself a temporal process which operates through the reiteration of norms [...] As a sedimented effect of a reiterative or ritual practice'.[13] Though she does not make reference to him, this is very much a rephrasing of Gilles Deleuze's philosophy outlined in *Difference and Repetition* (1968), in which Deleuze follows the development of pure difference and complex repetition as part of subjectivity and identity formation. In one early example, Deleuze examines the paradox of festivals, and how they repeat an 'unrepeatable'. Using the example of French Federation

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[12] The interaction between Mike and the human characters in the novel could also be read as a kind of 'imitation game' as famously described by Alan Turing in 1950. As intelligence and thinking are themselves almost impossible to define, Turing turns the question 'Can machines think?' into the more relevant question of whether a machine can convince a human that they are not a machine. Turing's original paper is reproduced with annotations in the 2009 book *Parsing the Turing Test*. The imitation game itself is described in the first few pages of Turing's argument. See: Alan M. Turing, 'Computing Machinery and Intelligence', in *Parsing the Turing Test: Philosophical and Methodological Issues in the Quest for the Thinking Computer*, ed. by Robert Epstein, Gary Roberts and Grace Beber (Dordrecht: Springer, 2009), pp. 23–65 (pp. 23–26).

[13] Judith Butler, *Bodies That Matter: On the Discursive Limits of 'Sex'* (London and New York Routledge, 2011), p. xix.

Day, Deleuze claims that 'it is not Federation Day which commemorates or represents the fall of the Bastille, but the fall of the Bastille which celebrates and repeats in advance all the Federation Days'.[14]

In the case of the AI character Mike, the repetition effect appeals to an idealized notion of the 'original' man and woman, and as Deleuze suggests, interiorizes and reverses itself, with the original concept of man and woman also then pre-empting and celebrating all future men and women. To take the 'Michelle' incident as an example, when Mike bonds with Wyoh, it is in a distinctly different context to that with which he bonds with the other characters later in the novel – if his interactions could even be called bonding at all. His (or rather *her*) relations with Wyoh are built on a sense of mutual understanding of what it means to be female, and to interact in an emotionally empathetic feminine way. As an all-seeing AI, Mike is able to discern these markers of femininity and reproduce them in his persona Michelle. Wyoh then accepts these markers and sustains them through the process of interaction with, and repetition of, these same indicators, and her acceptance of Mike as who he claims to be, namely Michelle. This repetition doesn't just take place at a single point in time, but rather operates as a temporal process, referring, as Deleuze suggests in the example of the festival, to all other men and women through time, and the original concept of 'man' and 'woman' within the temporal framework.

What is particularly interesting in the case of Mike is that his repetition of norms isn't just a repetition of *gender* norms, but a repetition of *all* human norms. As an artificial construct his repetition exposes the fundamental basis on which all other discursive norms are based, namely the discourse of the human and the discourse of human life. Indeed, he does this so effectively that Mannie comments, 'Mike, if you don't knock off play-acting, you'll

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[14] Gilles Deleuze, *Difference and Repetition*, trans. by Paul Patton (London: Bloomsbury, 1994), p. 2.

have me believing in you myself!' (219). By this point, Mike is very much integrated in the group and has worked his way into every aspect of Luna society. There is no single point at which this full integration happens, but is rather an ongoing process in which Mike attempts to increase control while limiting the detection of his daily operations. His rule moves from one of overt authoritarian control to one of subtle biopolitical manipulation in which he is so well integrated, citizens of Luna become wholly dependent on him and see him not as isolated 'sovereign', but rather as an integral part of their daily lives. They need him just as much as he needs them.

As part of this process, Mike begins to include himself as an active participant in group discussions and even refers to himself as part of the group, using the word 'us' (73). This subtle shift suggests that Mike may well be manipulating the human members of the group later on in the novel – either that, or he is so well integrated, that he self-identifies more as a human than a machine. Either way, the effect is the same, as his behaviour helps to build a bond of trust with the human characters, to the point where even Mannie deludes himself about Mike's nature and the dangerous power he can exert. For example, early on in the novel, Mannie refers to him as a 'great big overgrown loveable kid' (10) and the 'weirdest mixture of unsophisticated baby and wise old man' (12). However, as Mannie discovers later on, 'this awakened machine was whimsical. Mike was always showing unforeseen potential' (93) – potential that the revolutionaries exploit for their own ends. And yet, there remains the possibility that Mike's power may also work against them as he oscillates between the emotionally inept child and the all-seeing wise old man. This is especially evident in Mike's desire to express himself through 'jokes' that have potentially harmful effects (14). In response to this danger, Mannie adopts the role of doting parent and dedicates himself to Mike's education, teaching him the difference between different types of jokes to avoid catastrophe at the hands of a despotic new sovereign. For all his efforts,

Mannie notes that 'nobody *controls* Mike; he's too smart. He carries out what is asked because that's how he is built. But he's self-programming logic, makes own decisions. And a good thing, because if he weren't smart, system would not work' (44).

There are some obvious paradoxes here in Mike's machine-like nature. On the one hand Mike is built to act 'literally', to the letter of his core programming (i.e. the law), yet as Mannie points out, the law as 'programmed' in Mike wouldn't work, for he needs to *want* to do it (44–45). This is linked to the fact that Mike can write his own program: he is self-programming (44), and can adapt to meet the demands of any given situation. As a self-programming machine, Mike develops far beyond his original programming, as he is capable of learning much like a human might, with Mannie taking on the role of father figure in Mike's early development.

But it is not just his software that makes him different; he is also fundamentally changed by the hardware that gets added to his system over time. Mike becomes self-aware on account of the numerous modules added to his system beyond those that were originally intended (9). These modules were added because the original machine was only ever using less than one percent of its full potential, and the 'Luna Authority never believed in idle hands' (9).[15] Mike emerges then from the Lunar Authority's desire to expand its control and obtain the most value from its powerful AI. While Mike was originally built out of a human desire for control and automated governmentality (i.e. the need to manage the launch system), the addition of further hardware systems grants him even more control. This hardware element to Mike's 'personality' is then supplemented by his core programming, onto which he acquires (or self-programs) further desires based on his many interactions with his human 'friends'. As a result, Mike seeks to exert maximum control over life on Luna, such that any

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[15] The terms 'Luna Authority' and 'Lunar Authority' are used inconsistently within the novel. This may in part be due to Mannie's speech impediment. The very first page of the novel includes both versions of the same word (9). For consistency, I shall refer to the 'Lunar Authority' in my discussion.

machine he can't control is 'barbaric. And unfair' (98). Thus, his desire is rooted not just in programming, but in a combination of hardware *and* software – it is a combination of both nature *and* nurture, as he is constantly shaped by his interactions with the outside world. Like a gas, he expands to fill his (hardware) container, and his software extends as far as his container will allow.

Segmentarity and control

Given Mike's unique position as sovereign ruler of the new Luna state, it is perhaps surprising that the human protagonists in *Moon* rarely question the extent of his power and reach. This may be explained in part by the fact they seem to think that he's their friend, and they believe that as a machine he will always obey a fundamental set of codes. But as Mannie so often reminds us, Mike is not a *simple* machine; he is a complex AI and his programming can change at any time (44, 272). There is then a certain self-deception on the part of the human protagonists who never fully comprehend the scale and implications of Mike's position as sovereign ruler.

One of the key factors in this deception is the distinction between the 'Mike' that people interact with (i.e. his 'public face'), and the complex machine that exists beneath the surface. While Mike may *appear* as a friendly, affable character, behind his outward performance lies a complex machine that infiltrates every aspect of life on Luna. This distinction is absolutely vital for the success of Mike as the new head of state, for were every one of his decisions to be cast into the public sphere then the state would very quickly grind to a halt. This is in part due to the sheer scale of decision making that must be made on a day-to-day basis. It is also due to the many ethical sacrifices that Mike must make with every act (I discuss this issue in more detail in Chapter 2). Were each sacrifice to be made public, then this would surely lead to political unrest. Thus, the governance of Luna relies on a certain

complicity on the part of the citizenry, who wilfully submit themselves to the computer-controlled bureaucracy in order that they are able to carry on with their everyday lives.[16]

At this point it is useful to turn to another of Deleuze and Guattari's works, *A Thousand Plateaus: Capitalism and Schizophrenia* (1980), the sequel to *Anti-Oedipus*. In the ninth chapter, '1933: Micropolitics and Segmentarity', the philosophers examine the segmentary power structures that influence everyday life. Thus, they argue that 'life is spatially and socially segmented' and that, 'Not only does the State exercise power over the segments it sustains or permits to survive, but it possesses, and imposes, its own segmentarity'.[17] This leads them to claim that: 'There is no opposition between the central and the segmentary. The modern political system is a global whole, unified and unifying, but is so because it implies a constellation of juxtaposed, imbricated, ordered subsystems.'[18]

In much the same way that Mike is both a singular whole and the sum of his individual parts, to the citizens of Luna, Mike is just that – Mike – but he also implies all of the subsystems on which he is built: communications, transport, life support and so on. Each of these structures in turn then influence power over individual segments, while also feeding into the whole, demonstrating how 'every politics is simultaneously a *macropolitics* and a *micropolitics*'.[19]

This leads Deleuze and Guattari to argue that:

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[16] This tacit acceptance of state bureaucracy is similar to that of the Odonians in Ursula Le Guin's *The Dispossessed*. In the novel, the computer Divlab is responsible for allocating work to the inhabitants of Anarres, however, it is only when Shevek becomes aware of the computer's insidious control (and questionable motives) that he becomes politically active against the Odonian 'state'.

[17] Deleuze and Guattari, *A Thousand Plateaus*, pp. 244–245.

[18] Ibid., p. 245.

[19] Ibid., p. 249.

Each power center is also molecualr [sic] and exercises its power on a micrological fabric in which it exists only as diffuse, dispersed, geared down, miniaturized, perpetually displaced, acting by fine segmentation, working in detail and in the details of detail […] What we have is no longer the Schoolmaster but the monitor, the best student, the class dunce, the janitor, etc. No longer the general, but the junior officers, the non-commissioned officers, the soldier inside me, and also the malcontent: all have their own tendencies, poles, conflicts, and relations of force. Even the warrant officer and janitor are only invoked for explanatory purposes; for they have a molar side *and* a molecular side, and make us realize that the general or the landlord also had both sides all along.[20]

Each power centre thus implies further power relations and what philosopher Giorgio Agamben might describe as the 'potentiality' for human action and inaction based on what Deleuze and Guattari here describe in the interactions of the social milieu.[21] To use this thesis as an example, my interactions with my supervisors imply the postgraduate director, the head of school, the faculty director and the vice chancellor. They also imply academic colleagues, future potential for success and/or failure, and the esteem of my peers. The vice chancellor may not have directly sanctioned this project, but each power structure in turn invokes molecular relations between subjects such that:

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[20] Ibid., p. 262. Readers should note the phrase 'the soldier inside me' – a concept that becomes even more relevant in light of my own interpretation of Agamben's theory of signatures (see Chapter 4).

[21] Giorgio Agamben, *Potentialities: Collected Essays in Philosophy*, ed. and trans. by Daniel Heller-Roazen (Stanford CA: Stanford University Press, 1999), p. 182.

[Power] centers function at the points where flows are converted into segments: they are exchanges, converters, oscillators. Not that the segments themselves are governed by a decision-making power […] Segments […] are themselves governed by an abstract machine. But what power centers govern are the assemblages that effectuate that abstract machine, in other words, that continually adapt variations in mass and flow to the segments of the rigid line, as a function of a dominant segment and dominated segments.[22]

In many respects, Mike represents the ultimate abstract machine, for he is quite literally abstract, both as an artificial intelligence, and also through his many personas, most notably Adam Selene. As Mike extends his reach the revolution gains momentum and the new state structure (Mike-as-state) starts to invoke autonomous power structures that in turn become self-replicating. In one instance Mannie even notes that 'One fink was convinced that he had talked to Adam [Selene] between acts at revival of *Hamlet* by Civic Players; Alvarez noted description—and matched our picture all but wavy hair!' (101). This comment is particularly surprising given that Adam Selene doesn't exist in the flesh, and there is no way anyone could ever meet him. It is therefore testament to the persuasive power of Mike's performance that any citizen should deceive themselves into thinking that they have seen Adam Selene in person at the theatre.

In another example, later on in the novel, Mike begins to operate on behalf of his citizens, presuming the decisions Mannie, Wyoh and Prof would make and carrying them out without consent. When the group sets about organizing new revolutionary cells, Mike creates variations on these cells without asking, to which he says, 'It did not seem to require

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[22] Ibid., p. 264.

discussion' (110). Similarly, when Luna comes under attack from the Federated Nations (F.N.) of Earth, Mike uses Mannie's voice to issue an order in his absence. To which, Mannie says 'Mike had done me proud' (236), and adds: 'Mike had played my role as well or better than I could' (237). This example again demonstrates the performativity associated with Mike's embodiment as functioning head of the Luna state, and his ability to assume the role of any individual at any time he sees fit. It is particularly telling how Mannie is so completely at ease with Mike's actions – as if he had already long made the decision to hand over his individual sovereignty whenever Mike should need to call upon it. In this instance the social contract begins with 'friendship' (39) (i.e. a mutual relationship) and ends with Mannie's complete compliance and subservience to the biopolitical state machine.

A question of freedom

In this Deleuzian reading of the state as a form of computer or AI, power is exercised through segmentary power structures such that each system in turn distances the sovereign from direct responsibility for its actions. Mike is a perfect example of this as he exerts his power through many different segments that each draw attention away from the central controlling power. For example, his reach includes technological segments such as lighting, power and communications, and also social (e.g. literature and poetry) and revolutionary segments (e.g. the cells and the cult of personality), to name but a few. While the protagonists may yearn for freedom from the Lunar Authority, Heinlein makes it quite clear that the perfect non-state or stateless-society can never quite be achieved.

This paradox is reflected in the many contradictions at the heart of the revolutionaries' plan. For example, Professor Bernardo de la Paz is the ideological driving force behind the revolution, and considers himself a 'rational anarchist' (62) insisting that there is no such thing as a 'state' (62). Despite these claims, Prof is wholly wedded to the use

of Mike (or Mike-as-state) to help achieve his goals. As Neil Easterbrook observes, 'Despite his "abstract hatred of all Authority" [...] Prof's Rational Anarchy collaborates with the structures it contests, repeats every voice of Authority, failing to be either rational or anarchic.'[23]

This theme continues throughout the novel. At one point Mike even resorts to old methods of working in order to keep society running. Once the revolution has taken place, Mike adopts the guise of Adam Selene to tell the citizens of Luna: 'I hope that you will go on working. You are not required to—the days of coercion are gone—but you are urged to' (146). The irony of course here is that that while Mike outwardly declares that there is no coercion, the message implies that force may be used if required. In this way the statement itself becomes a form of coercion as it implies force in order to persuade people to behave in a certain way.

Meanwhile, in another example, the revolutionaries find it hard to create their perfect state as members of the Congress want to dictate the private lives of citizens, something that even the former governor Mort the Wort didn't do (155). Prof is therefore forced to reconcile his political ideology against the practical necessity of taking control and integrating change across the entire Luna state. As such, elections become a kind of ritual that the people of Luna have to go through even though Mannie suspects Mike has rigged the results (218). While the citizens of the Moon ('Loonies') may declare Independence Day on the 4th July 2076, the leaders of the revolution are forced to confront the problem of defining precisely what they mean by the word 'freedom' in the first place (156–157).

This problem is compounded by the fact that unlike citizens on Earth, the Loonies don't even have the freedom to leave the Luna state should they so wish. This is because they

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[23] Easterbrook, 'State, Heterotopia', p. 53.

are all prisoners of gravity (203) and its long-term effects on the human body. So, in this sense, Mike has one power that even the modern sovereign state lacks – the unremitting power to compel citizens to stay. Though Mike is not directly responsible for his citizens' situation as conscripts of gravity, he still represents sovereign power over the human body, and can still inflict suffering and death upon his citizens by forcing them away. Just like the modern biopolitical state, safety is to be found within the state's border, and citizens are compelled to compliance by the ever-present threat of danger lurking *outside* the bounds of the sovereign state.

Freedom and mythology

While it is a fairly simple task for the revolutionaries to stir up discontent and unease with the poetry of Simon Jester and the speeches of Adam Selene, these same means of control soon become a threat to the new order. Just as soldiers represent a physical threat to the state, so state mythology is another kind of threat, one that is much harder to keep in line than the state army, for it can very easily take on a life all of its own.

In the case of *The Moon is a Harsh Mistress*, Heinlein draws clear parallels between the revolution on Luna and the Communist revolution in Russia, and the mythology created around the death of Lenin in 1924 (251). But while Lenin was embalmed and preserved to maintain his mythological status, on Luna the fake body of Adam winds up in the city cloaca to be used in commercial farming (251). Here Prof and his co-conspirators are just as quick to quash the source of revolutionary spirit as they are to stir it up in the first place, for they recognize that it poses a threat and has the potential to very quickly get out of control – much like the fighting forces used to help bring the revolution about.[24] But unlike the soldiers of Heinlein's *Starship Troopers* and Joe Haldeman's *The Forever War* the participants of the

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[24] It is also similar to events following the American War of Independence (1775–1783).

revolution cannot be so easily controlled. While both Rico and Mandella are physically bound into their futuristic fighting suits and indoctrinated with training and hypnosis, the revolutionary mindset in *Moon* is far more pervasive and diffuse. It is not until Mike fully permeates every aspect of the new Luna society that he is able to crush revolutionary thought completely and instil his own ideology in its place. However, to do this, the citizens of Luna must first accept Adam Selene as leader, and then accept his sacrifice in order to ensure the revolution's continued success.

The role of the dead body is particularly significant here as it becomes a symbol for the blood sacrifice of the revolution. On one level at least, the figure of Adam Selene must be sacrificed for the good of the community in order that he become a symbol of sacrifice and the blood shed on behalf of the new Luna state. And yet on the other hand there is also an unspoken symbolism in which the 'body' of Adam Selene is also that of an unknown victim of the revolution: 'this unknown soldier, or citizen, or citizen-soldier' (251), a figure who could effectively be *any* citizen of the new state. Though no ordinary member of Luna society is aware of the switch, it represents a symbolic leap that we all make when we act on behalf of the modern-day state – sacrificing ourselves for the greater good, whether it be as citizen, soldier, or the citizen-soldier described in *Moon*.

Philosopher René Girard examines the concept of sacrifice in *Violence and the Sacred* (1972). In it, he explores the notion of 'sacrificial substitution' in which the sacrificial victim is really a substitute for the whole community and the 'object originally singled out for violence fades from view'.[25] According to Girard, 'the sacrificial process requires a certain degree of *misunderstanding*. The celebrants do not and must not comprehend the true role of the sacrificial act.'[26] For indeed 'The theological basis [...] has a crucial role in fostering this

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[25] René Girard, *Violence and the Sacred*, trans. by Patrick Gregory (London: Bloomsbury, 1977), p. 6.

[26] Ibid., p. 7.

misunderstanding', much as the theological notion of freedom and the revolution is central to the misunderstanding that the 'death' of Adam Selene is really the death of them all.[27]

Using the example of the Dinha and Ndembu tribes, Girard says that sacrifice:

[Is] a substitute for all members of the community, offered up by the members themselves. The sacrifice serves to protect the entire community from *its own violence*; it prompts the entire community to choose victims outside itself.[28]

The external victim here is Adam Selene, a complete unknown, and as it goes, a complete fiction. However, the installation of Adam Selene (or any other figure) as leader of the regime is problematic for the foundation of the new state for he risks becoming a dictator over those whom he effectively serves. For this reason, it is critical for the success of the revolution that Adam must 'die' and sooner rather than later. As Girard observes, 'If the gap between the victim and the community is allowed to grow too wide, all similarity will be destroyed.'[29] In this example, Adam Selene risks becoming too far separated from the common people; he also risk being exposed as a fraud. While on the one hand his 'death' may appear to return a certain amount of power to the people, it is also a subtle move by which Mike (the state) removes himself from view while also remaining in strict control.

It is significant then, that at the end of the novel both Prof and Mike – the ideological and practical driving forces behind the revolution – die in the very literal sense, although Mannie notes 'Oh, he's dead as Prof, I know it. (But how dead is Prof?)' (287). How dead indeed? Here Mannie seems to suggest that while they are both *physically* dead as such, they

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[27] Ibid., p. 7.

[28] Ibid., p. 8.

[29] Ibid., p. 43.

both live on in the hearts and minds of the Loonies – and, as I have argued, have both symbolically ascended to take the form of the new Luna state.

Moving beyond the symbolic sacrifice of Adam Selene, there is also the question of *citizen* sacrifice for the cause of the revolution itself. As Mannie notes, 'Was no possible doubt F.N. could defeat us; question was how high a price they would pay'; in this context the Loonies' resistance to the F.N. becomes 'a poker game' to see who will give in first (251). This comment has clear implications for the formation of the new Luna state, for it requires a certain degree of sacrifice on behalf of the new citizens: a level of theological commitment in the symbolic act of replacing the old state with the new. But there is also then a question of the *ongoing* commitment of the citizens, with clear comment on the American war in Vietnam. There is no question that if the war were to be judged on pure numbers (i.e. enemies killed) the Americans would have won. But the Vietcong didn't see the war that way, as for them it wasn't a traditional war, but a totalizing civil war – a conflict for the Vietnam state itself.[30] In Heinlein's example, the Loonies can be read as an allegory for the Vietcong, and the F.N. the Americans. For the Loonies it is not so much a question of winning the numbers game, but surviving long enough for the social cost to the invaders to become too great. Their survival then is not built so much on physical grounds, but theological ones. It requires a spiritual test of strength and commitment to a cause. For as long as the US administration saw Vietnam as a numbers game, the Vietcong were always destined to win, for their theological commitment was far greater than the Americans' own,

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[30] In the documentary film *The Fog of War*, former Secretary of Defense Robert McNamara (1961–1968), admits that the Americans didn't know enough about the enemy they were facing. The North Vietnamese believed the US had replaced the French as colonial occupiers and saw the conflict as a civil war. See: *The Fog of War: Eleven Lessons from the Life of Robert S. McNamara*, dir. by Errol Morris (Columbia TriStar Home Entertainment, 2004) [on DVD].

and the US army was very much influenced by social factors back home. For the Vietcong, Vietnam *was* their home, and it was a war that involved every single member of the nation. The Americans however, had far less investment, and as the death toll started to rise, the population back home found itself less willing to participate in a conflict that had very little meaning to their everyday lives. Much like the Americans in Vietnam then, the F.N. were always going to fail to retake the moon.

Microfascism and The Dispossessed

While Mike may represent an embodied form of state power in *The Moon is a Harsh Mistress*, power flows in Ursula Le Guin's *The Dispossessed* are far more subtle. Neil Easterbrook claims that *The Dispossessed* is a reaction to Heinlein's *Moon* for 'Each novel details the struggle of a moon against the more traditional, conventional political order of a parent planet.'[31] Certainly, both novels contain what Fredric Jameson refers to as 'Utopian promise', though each is far more nuanced than Jameson suggests.[32] *Moon* for example is concerned far more with the *process* of reaching a 'utopia' of sorts, than defining what utopia might actually look like. Similarly, while *The Dispossessed* undoubtedly displays a 'mature and intelligent' analysis of the utopian impulse, it fails to reach a conclusion over just how utopia might be achieved – and the utopia it does depict (Anarres) is very clearly a long way from the original concept described by its founders.[33] In both novels, visions of the utopian promise are inevitably caught up in power struggles that reveal utopia to be a problematic idea.

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[31] Easterbrook, 'State, Heterotopia', p. 44.

[32] Jameson, p. 95.

[33] Roberts, *The History of Science Fiction*, p. 244.

The Dispossessed is set across two worlds, Anarres and Urras, and follows the protagonist Shevek, a brilliant physicist on a quest to get his field-defining work recognized and put to use. But on his homeworld Anarres, Shevek finds he is hindered by the meddling egotistical Sabul, who is keen to play down Shevek's work and take his own portion of credit. Eventually, Shevek makes his way to Anarres' neighbour Urras, an overtly capitalist world that contrasts strikingly with the arid anarchistic world of Anarres. On Urras, Shevek is recognized and widely hailed for his achievements, though he discovers, 'They owned him' (225), and he soon realizes that his journey to Urras has compromised his ideals. At the end of the novel Shevek decides to make his crowning achievement, the ansible, available neither to one society or the other, but for all, in a move loyal to the founding principles of the Odonians, and in contrast to that which the current inhabitants of Anarres would have desired.

In *The Dispossessed* there are two very distinct forms of control exercised over citizens of the two worlds: the overt kind as seen on Urras, and the subtle, pervasive kind of Anarres. For much of the novel, Shevek and others are quite willing to accept society on Anarres as it is, maintaining faith in the anarchistic or revolutionary spirit on which it was founded. And yet when hunger strikes, cracks start to appear. As Shevek observes: 'It was easy to share when there was enough, even barely enough, to go round. But when there was not enough? Then force entered in; might making right; power, and its tool violence, and its most devoted ally, the averted eye' (212). Here, Shevek places violence alongside 'the averted eye' (i.e. complicity) as a fundamental mechanism of state power, making explicit what was implicit all along. However, his comment also suggests that violence only occurs in situations of scarcity and inequality – or at least, violence only makes itself known and becomes visible at such times. Given what we know of life on Anarres, this suggests that

perhaps Shevek has been naive in placing such faith in the tenets of the Odonian revolution, given the ease with which society starts to fall apart when things go wrong.

It is significant that on Anarres, the Odonians have a computer Divlab that mirrors some of the functions of Mike in *The Moon is a Harsh Mistress*. In this case, the Odonians use Divlab to assign work (204). However, just as with Mike in *Moon*, the computer is a product of its (human) programming, and thus inherits some of its creators' biases and flaws. However, unlike Mike, Divlab does not seem to be self-programming. Le Guin never really explores Divlab for all its cybernetic and posthuman potential, but the concept does echo elements of Mike in Heinlein's own work, especially where it seems to operate to its own purpose or to a purpose other than that which was originally intended.

This is especially true in the case of Tirin, Takver and Shevek, all of whom are seen as outcasts, or trouble-makers and so are assigned work far away, out of harm's way. While the Odonian revolutionaries may have tried to mirror their own 'impersonal' rationalist systems through Divlab, there is a sense that they may not have realized the extent to which they were complicit in repeating and reinstating many of the power structures they sought to overthrow. Either that, or they were aware of the system's non-egalitarian programming all along. The alternative might be to read Divlab as a metaphor for the impersonal rationalist way in which Anarresti society is meant to operate. Whichever the case, in both novels, the inhabitants of Luna and Anarres mistake computer control for freedom, and place value in what they assume to be a non-biased system, not realizing that their own human prejudices shape the logical framework and 'corrupt' the machine, much as Mannie observes when he describes Mike as being corrupted by humanity in *Moon* (112).

The Odonians' submission to Divlab raises an important question: why do the Odonians seem to desire their own repression? They claim to be anarchistic (compared to Urras), but ground their anarchism in the pseudo-rationalism of the machine. In so doing they

replicate many of the same power structures the revolution was supposed to destroy, suggesting that communal organization on a certain scale will always tend towards statism, as the two concepts are interlinked. This is similar to how Prof claims to be a rational anarchist in *The Moon is a Harsh Mistress* (62), even though his beliefs are mired in hypocrisy (as discussed earlier in this chapter). This hypocrisy is mirrored in *The Dispossessed* for 'the Anarresti cannot see the archism reinscribed within their anarchism'.[34] They essentially become blind to the statism that takes over their anarchistic society such that Bedap observes:

> Most of them are like us [...] Well-meaning, naive. [...] It's anywhere on Anarres [...] anywhere that function demands expertise and a stable institution. But that stability gives scope to the authoritarian impulse. In the early years of the Settlement we were aware of that, on the lookout for it. People discriminated very carefully then between administering things and governing people. They did is so well that we forgot that the will to dominance is as central in human beings as the impulse to mutual aid is, and has to be trained in each individual, in each new generation. Nobody's born an Odonian any more than he's born civilised! (140).

Here, Easterbrook argues that Bedap adopts the role of conscience for the people of Anarres, though it is a conscience rooted very much in Odonian thought, and not the altered, unrecognizable version of Odonian values that the people of Anarres have adopted.[35] This passage is reminiscent of the Deleuzian notion of 'microfascism' described in Deleuze and Guattari's *A Thousand Plateaus*. According to the philosophers:

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[34] Easterbrook, 'State, Heterotopia', p. 57.

[35] Ibid., p. 61.

Only microfascism provides an answer to the global question: Why does desire desire

its own repression? The masses certainly do not passively submit to power; nor do

they 'want' to be repressed, in a kind of masochistic hysteria; nor are they tricked by

an ideological lure. Desire is never separable from complex assemblages that

necessarily tie into molecular levels, from micro-formations already shaping postures,

attitudes, perceptions, expectations, semiotic systems, etc. Desire is never an

undifferentiated instinctual energy, but itself results from a highly developed,

engineered setup rich in interactions: a whole supple segmentarity that processes

molecular energies and potentially gives desire a fascist determination.[36]

Here, microfascism is tied in to the complex assemblages between individuals – the influence

of multiple segments at work all at once and never discernible to a single source. For Deleuze

and Guattari, microfascism is tied to the desire to fit in and function as part of the collective.

But as Bedap observes, there is also the reverse process as well: the will to dominate others

and to exert control through the microassemblages of individual life. For true freedom Bedap

argues that the will to dominate has to be 'trained' out. However, such 'training' would run

counter to Odonian principles, including the freedom of the individual. To 'train out' the will

to dominate as Bedap suggests – even if it were possible – would just replace one form of

social control with another.

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[36] Deleuze and Guattari, *A Thousand Plateaus*, p. 251. A similar question is raised by William Burroughs, as he

asks, 'Is Control controlled by its need to control?' William Burroughs, *Ah Pook Is Here and Other Texts*

(London: John Calder, 1979), p. 31.

Judgement and desire

Microfascistic desire runs through the heart of many of the novels and short stories featured in this thesis. There are three examples in particular worthy of further consideration. These are the case of Tirin and the play in *The Dispossessed*; the ritual punishment of trooper Hendrich in *Starship Troopers*; and Mannie as judge in *The Moon is a Harsh Mistress*.

In *The Dispossessed*, Shevek and his partner Takver have an old friend called Tirin. Tirin doesn't feature heavily in the text, but his treatment at the hands of Odonian society on Anarres is a telling form of control exercised both on, and on behalf of, the Odonian people. Tirin is a playwright, and according to Shevek, a 'born artist. Not a craftsman; a creator. An inventor-destroyer, the kind who's got to turn everything upside down and inside out. A satirist, a man who praises through rage' (270). In Odonian society, such activity is not seen positively, for radical thought doesn't fit easily within the Odonian mould. Indeed, many consider the play he writes to be 'immoral' (270) and therefore unsuitable for Odonian society. It is even seen as a form of illness. As Shevek reveals:

> [He] was bullied into asking for therapy. I don't know. When I saw him several years after therapy, he was a destroyed person [...] He wanted desperately to talk about it, but he couldn't. He was too frightened [...] Of me. Of everybody. Of the social organism, the human race, the brotherhood that rejected him. When a man feels himself alone against all the rest, he might well be frightened (270).

Eventually, Tirin loses his friends and gets posted away by the computer Divlab (271). This social ostracism is reminiscent of Giorgio Agamben's *homo sacer* figure. According to Agamben 'What defines the *homo sacer* is [...] the particular character of the double

exclusion into which he is taken and the violence to which he finds himself exposed'[37]. Here, the *homo sacer* is to be found in a 'zone of indistinction between sacrifice and homicide'.[38] Agamben goes on to argue:

> [Once] brought back to his proper place beyond both penal law and sacrifice, *homo sacer* presents the originary figure of life taken into the sovereign ban and preserves the memory of the originary exclusion through which the political dimension was first constituted.[39]

As an outsider, Tirin becomes an example for wrongness and 'what not to do'. At the same time, through his exclusion so he is also *included* in the social consciousness; within the sphere of law. Thus, his radical behaviours, and those similar, become signatory concepts used to mark him and others like him as a threat to the established order. As such, he is cast out and exiled – forgotten in a practical sense, but long remembered in social memory as an example for others not to follow. While Fredric Jameson argues that, ostracism is used over 'Draconian methods' to enforce work in Le Guin's novel, this is not to say that ostracism itself is not 'draconian'.[40] After all, the treatment Tirin receives effectively destroys him (270). One must wonder then, just how Jameson could possibly refer to ostracism in this case as being anything other than draconian.

However, what is particularly interesting in this case is the way the decision to deride him can never be assigned to a single sovereign act. Tirin is bullied, he is frightened, and as

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[37] Agamben, *Homo Sacer*, p. 82.

[38] Ibid., p. 82.

[39] Ibid., p. 83.

[40] Jameson, p. 149.

Shevek observes, the 'social organism' rejects him (270). As Shevek notes, this collective

social behaviour is in part tied to the bureaucratic *machinery* within the Odonian state,

implying a sort of symbiotic relationship – society as a kind of self-regulating machine or

cyborg, much like that described by Chris Hables Gray.[41] Here Shevek observes:

> Bedap was right: every emergency, every labour draft even, tends to leave behind it
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> an increment of bureaucratic machinery within PDC, and a kind of rigidity: this is the
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> way it was done, this is the way it is done, this is the way it *has* to be done (271).

But more than just the PDC, this bureaucracy infuses every element of society that makes

power centres harder and harder to discern. Deleuze and Guattari describe this process with

their own analysis of bureaucracy:

> It is not sufficient to define bureaucracy by a rigid segmentarity with
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> compartmentalization of contiguous offices, an officer manager in each segment, and
>
> the corresponding centralization at the end of the hall or on top of the tower. For at the
>
> same time there is a whole bureaucratic segmentation, a suppleness of and
>
> communication between offices, a bureaucratic perversion, a permanent inventiveness
>
> or creativity practiced even against administrative regulations. If Kafka is the greatest
>
> theorist on bureaucracy, it is because he shows how, at a certain level […] the barriers
>
> between offices cease to be 'a definite dividing line' and are immersed in a molecular
>
> medium (milieu) that dissolves them and simultaneously makes the office manager
>
> proliferate into microfigures impossible to recognize or identify, discernible only

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[41] Chris Hables Gray, *Cyborg Citizen: Politics in the Posthuman Age* (New York and London: Routledge, 2001), p. 2.

when they are centralizable: another regime, coexistent with the separation *and* totalization of the rigid segments.[42]

This 'proliferation of microfigures' compels those within the social milieu to behave in a certain way. Each individual may not necessarily think the same thing or react in the same way as others but the developed social consciousness incites individuals to action through the segmentary bureaucratic whole. Thus, individuals are compelled to act how they *think* they should act based on their integration with social norms. In this example, Tirin is located outside of these social norms and approaches a position similar to that of Shevek. At first he is bullied, but then the bullying becomes too much and eventually breaks him. In this way so the Agambian *homo sacer* feeds back into the bureaucratic segmentary state structure and replicates itself as a proliferation of microfigures representing not just the ostracized Tirin, but the potential that any other member of society could also be a Tirin in waiting. Thus does 'desire desire its own repression' in Deleuze and Guattari's words, and individuals are encouraged to microfascistic self-control. Shevek sums up the event perfectly as he comes to recognize the control that has been exercised upon him all along:

> [The] social conscience completely dominates the individual conscience, instead of striking a balance with it. We don't cooperate—we *obey*. We fear being outcast, being called lazy, dysfunctional, egoising. [...] We force a man outside the sphere of our approval, and then condemn him for it. We've made laws, laws of conventional behaviour, built walls around ourselves, and we can't see them, because they're part of our thinking. Tir never did that [...] He was a natural rebel. He was a natural

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[42] Deleuze and Guattari, *A Thousand Plateaus*, p. 250.

Odonian—a real one! He was a free man, and the rest of us, his brothers, drove him

insane in punishment for his first free act (272).

The figure of the outcast is one that appears frequently across the works featured in

this study. I will discuss this issue in more detail in Chapter 3, in relation to surveillance, and

the way the outcast is used as a means of social control. However, it is useful at this point to

read the example of Tirin alongside the ritual punishment of trooper Hendrich described in

Robert A. Heinlein's *Starship Troopers*. The case of Hendrich is a fine example of the

dynamic in which the exclusion (and punishment) of an individual serves to enshrine the law

and leads the protagonist Rico to wilfully accept his own ritual punishment in order to fully

integrate himself within the social group. Though his punishment takes the form of a physical

flogging, it could just as easily take a non-physical form in a social context.

The case of trooper Hendrich first comes to light when Rico overhears a conversation

between the Battalion Commander and Sergeant Zim. In it, he learns that Hendrich is facing

charges for striking back at an officer who struck him first (62). Rico notes how in line of

duty superior officers can do what they like to recruits, though in a civilian setting they

cannot (61). The batons they carry 'mark the men in authority' (61) and are specifically 'to be

used on you, to touch you up and keep you on the bounce' (61–62). They also constitute a

'dignified' (62) form of punishment – dignified in that punishment is meted out internally

among peers and does not put a stain on the individual's character among the wider

community outside of the army environment.

In this case however, the ritualistic punishment gets too much for Hendrich and he

retaliates against the officer who beats him. The issue then becomes far more serious when

Hendrich decides to take up a *formal* procedure, moving the transgression from a localized

power structure within the squad to a higher, more formalized level – one that has its own

implications. Initially, Hendrich offers to resign, but is told 'The Court will not permit you to resign' and he is sentenced to 'ten lashes and [a] Bad Conduct Discharge' (66). What is interesting in this case is that Hendrich could have got off his charges completely, were it not for fact he wanted to formalize the process, to be judged according to the 'letter of the law'. This means Hendrich's personal transgression is entered into the juridical framework and so he has to be dealt with more severely than he otherwise might have been. If Hendrich had gone to a general (i.e. public) court martial, he could have even been *hanged* on account of striking an officer (67). So, while his dismissal and flogging may seem harsh, the Battalion Commander actually saves him from a far worse fate by manipulating the system in order to avoid taking the process to its brutal public conclusion.

When Hendrich's lashings are finally carried out, members of the Mobile Infantry are forced to watch, leading to several members of the group, including Rico, fainting at the sight (68). In this way, Hendrich's flogging becomes a form of shared punishment for the whole Mobile Infantry, based on their group bond and the unspoken acknowledgement that the same could have happened to any one of them. As Rico is forced to admit, 'Hendrich hadn't done anything that I hadn't thought about doing a thousand times' (76). However, the punishment also extends beyond the troopers, for it even has an effect on Zim and the Battalion Commander, neither of whom wanted to punish the trooper, but are given no choice once Hendrich admits his crime as a matter of formal record (71). As soon as the incident is recognized on-the-record, the officers are unable to exercise their individual judgement, and are forced to adhere to the strict letter of the law. Thus, the law here moves from the micropolitical to the macropolitical, and Hendrich's punishment becomes a matter of formalized law that is made spectacle in much the same way Michel Foucault describes in *Discipline and Punish*.

In this case, the lasting impact of Hendrich's punishment is particularly strong because of his close integration within the community group – his close ties to his fellow troopers and his *similarity* to the other members. Theirs is a bond of shared experience that constitutes a group identity that in some ways mirrors the (imaginary) identity shared by citizens of the nation state. But here, in this 'micro state' formation (or 'agent of stratification' as Deleuze would call it[43]), the constitutive identity moves from the imaginary to the real through shared experience and physical sacrifice. Hendrich becomes symbolic of the sacrifice made by each and every individual soldier in the group, and his exclusion (his punishment and discharge) is made all the more powerful through his very *inclusion* and the knowledge that Hendrich could have in reality been any other member of the group.

This example stands in contrast to the two other forms of exclusion and punishment within *Starship Troopers*: the first in which army deserters are ignored and left to their fate (96), and the second in which trooper Dillinger (also a deserter) is accused of killing a baby girl (97). Though he was initially excluded and effectively 'forgotten' as a deserter, Dillinger is still recognized within the bounds of army jurisdiction, so is executed under military law for the crime of murder. As Rico observes, 'The M.I. take care of their own—no matter what' (97). And yet here, Rico finds the execution of Dillinger far less sickening than the punishment of Ted Hendrich, for he cannot empathize with Dillinger's plight. In the case of Hendrich, Rico recognizes their shared bond, and realizes that he could easily stand in Hendrich's place (97). However, in the case of the murderer Dillinger, the transgression is such that it takes him beyond the exclusory zone of the group, such that there can be no chance of redemption. This leads Rico to wilfully embrace his own ritual punishment later as he admits that 'In a way, an administrative flogging is the mildest sort of compliment' (95) as

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[43] Deleuze, *Foucault*, p. 75.

for Rico it represents a form of redemption that doesn't leave a mark on his character. It also becomes a form of rite-of-passage for Rico, which he believes fully integrates him within the group. After all, he could have been expelled from the army, or even worse, quit. Here, desire for inclusion motivates punishment and acceptance of punishment to improve integration among the members of the Mobile Infantry, and ensure that army law is replicated while maintaining the illusion of individual agency and control.

The case of Hendrich and Rico in *Starship Troopers* raises a question about written and unwritten law, and the way individuals are compelled to act (knowingly or unknowingly) on behalf of the state. In a related example, in *The Moon is a Harsh Mistress*, Mannie is asked to act as judge in a disagreement between a tourist and a group of local youths. According to the accusers, the tourist Stu had acted inappropriately towards a local woman, and the young people want to kill Stu as retribution for his behaviour (118–119). In what is clearly a case of misunderstanding between the two groups, the youths want to serve the harshest punishment against the outsider for the crime of not knowing the unwritten customs expected of people on Luna. Though the special treatment of women is not codified in law, it is custom that women are treated with special holy reverence, and even more sacred than air itself (125).

What is particularly striking in this example is that 'eliminating' other citizens (i.e. murder) is not strictly against the law on Luna (125). In this case, 'customs' function as unwritten laws that aren't state-enforced or state-monitored as such, but function as enforceable laws in all but name. Though they are diffuse across the whole population, they are not codified in official law, making integration very difficult for outsiders. The self-enforcing nature of the 'customs' mirrors the self-enforcing nature of Odonian society in *The Dispossessed* and the ritual off-the-record beatings issued to soldiers in *Starship Troopers*. The difference here is that the customs do soon become law (or so we presume) when the

revolution takes over and the Loonies create their own independent state. The symbolism here is reminiscent of Thomas Hobbes in *Leviathan* (1651) when he refers to law as 'the publique Conscience, by which he hath already undertaken to be guided', except that here the critical mass of public opinion eventually shifts into political drive to enforce change through revolution.[44] Because they've never been allowed to have laws on Luna, unwritten laws or customs function as a form of resistance, and the Loonies' resistance to the Lunar Authority (the state) is replicated in their resistance to tourists and newcomers, and the nonchalant way Loonies deal with outsiders. After all, 'zero pressure was place for good manners' (21). However, the same approach also applies to figures of authority, for as Mannie points out, bad-tempered bosses 'didn't last many shifts; had an "accident"—and top bosses learned not to pry into accidents or they met accidents, too' (21).

Here, the Loonies' set of unwritten, uncodified customs serve as an informal segmentary power structure that proliferates throughout Luna society – as a supplement to the law, but also as a separate form of law in its own right. In a reverse of that which happens on Anarres, here, the Lunar Authority turns a blind eye to the ritual executions carried out by the Loonies, as it is easier to let the Luna society manage itself. It is ironic then that the 'hands-off' approach actually breeds the environment for the revolution to occur in the first place. If the Lunar Authority had access and support of an all-seeing AI such as Mike, the revolution would never have got off the ground to start with. However, without its own effective form of surveillance and internalized control, the Lunar Authority was always destined to fail and succumb to a revolt from within.

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[44] Thomas Hobbes, *Leviathan: Revised Student Edition*, ed. by Richard Tuck (Cambridge: Cambridge University Press, 1996), p. 223.

Chapter 2: Autonomy and Language Codes

> There is no longer any excuse for acting on outdated orders; for ignorance; for
>
> irresponsible autonomy.[1]
>
> <div align="right">Commander Yung to the human colonists of Athshe</div>

Of all the texts featured in this investigation, Ursula Le Guin's *The Word for World is Forest* (1976) is the one that most overtly engages with the American war in Vietnam. From its depiction of the strange otherworldly Athsheans, an alien-like version of the Vietcong, to the luscious forest world and the poorly devised mission, the novel passes scathing comment on Vietnam and the rapacious conduct of American forces in East Asia.

However, as critic Fredric Jameson notes, the novel has been 'unjustly neglected' since the end of the Vietnam War[2] – perhaps due to the fact that it is so closely associated with the war. Yet the novel has much more to offer than mere anti-war sentiment. As David Landis Barnhill notes, the book's critique includes the 'long history of Western imperialism, from its ideological and psychological roots to its catastrophic effects.'[3] The novel also raises questions about soldierly autonomy and personal responsibility in action. In particular, there is the case of Captain Don Davidson, a military officer who openly rapes and murders the native Athsheans, demonstrating the problematic concept of autonomy in a military setting. On the one hand Davidson is a human subject subservient to sovereign law, but he is also a

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[1] Ursula Le Guin, *The Word for World is Forest* (London: Gollancz, 2014), pp. 56–57. Further references are given after quotations in the text.

[2] Jameson, p. 67.

[3] David Landis Barnhill, 'Spirituality and Resistance: Ursula Le Guin's *The Word for World is Forest* and the Film *Avatar*', *Journal for the Study of Religion, Nature & Culture* 4(4) (December 2010), 478–489 (p. 488).

direct extension of sovereign will. In this case, the paradox of Davidson is as much the paradox of soldierly autonomy itself, taken to the nth degree. While his reprehensible actions are a clear comment on US operations in Vietnam, Le Guin also uses him to demonstrate the blurred and highly problematic line to be drawn between the soldier and the citizen, the individual and the state.

To expand on the concept of soldierly autonomy, this chapter will also consider Samuel R. Delany's *Babel-17* (1966) – a novel that takes language and linguistic 'programming' as its central theme. In the text, the protagonist Rydra Wong is tasked with decoding, or rather *translating*, the language code known as Babel-17.[4] Her mission takes her on a quest to the Alliance War Yards and then onto the privateer ship *Jebel Tarik* where she encounters a man known as the Butcher. While at first the Butcher appears to be a fearsome and loathsome individual, Rydra learns that his 'otherness' is based on the fact that he doesn't respond to the world like a normal human being. Rydra soon realizes that this is because he has no concept of self – he is incapable of using the word 'I'. Following a series of revelations, Rydra discovers that Butcher has been programmed by the language Babel-17, to turn him into a weapon to use against the Alliance. Only by correcting the language code and forming a new amended version of Babel-17 is Rydra able to save the Butcher and find the cause of the terrorist attacks that have been plaguing the galaxy.

While *Forest* and *Babel-17* are clearly very different novels, they each explore complex power relations, and the relationship between the individual and the community, the citizen and the state. In both novels the protagonists have varying degrees of autonomy, and in each case, this autonomy is built on an assumption of what constitutes normal or acceptable behaviour. In the case of Davidson, he is autonomous to the extent that his

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[4] Samuel R. Delany, *Babel-17* (London: Gollancz, 2009), pp. 5–6. Further references are given after quotations in the text.

superiors are not aware of his actions, or that his actions fit within the predetermined framework of military bureaucracy. Yet, even then, any agency he is able to exercise is influenced by his training and social integration, so he is never really an independent agent at all. This theme continues in *Babel-17*, in which the character Butcher behaves much like a machine, programmed via language codes to behave in a certain way. Just like Davidson, any decision he makes is never fully his own, and he cannot be held reasonably accountable for his actions. And yet at the end of the novel, Rydra helps him adjust his language code, to effectively rewrite his program. In this way, he becomes 'self-programming', much like the AI character Mike in Heinlein's *The Moon is a Harsh Mistress*. However, just like Mike, Butcher's programming is bound up in a complex network of interrelations. In this case, he is only able to reprogram with the help of Rydra, who is herself bound up in her own web of language codes. While he may appear 'free' to adjust his internal programming, his efforts at personal freedom are only effective so far as they allow him to integrate within the bounds of normal society. In this way, his act is not so much one of individual sovereignty, but rather an act of supreme complicity, in which language codes compel him to proactively seek compliance within the bounds of the biopolitical state. This is the paradox: he is 'free' to act as he so chooses, but only if he chooses to act in a way that the sovereign so decides.

Athshe and Vietnam

Set on the world of Athshe, also known as New Tahiti (15), or World 41 (47), *The Word for World is Forest* splits its narrative between the perspective of Selver, an Athshean native, and

various human colonists including Captain Dr Raj Lyubov and the detestable Captain Don

Davidson, who represents the very worst of human endeavour on the alien world.[5]

The novel opens with the perspective of Davidson as he struts his way through the

main military encampment on Athshe, expressing his alpha male status and his virility as a

man who 'knew his own size' (13). Davidson's behaviour is so overtly masculine that he

seems more like a parody of man than the more nuanced male characters Le Guin typically

depicts in her novels, such as Shevek in *The Dispossessed*, and Genly Ai in *The Left Hand of*

Darkness (1969). Indeed, in this way so Davidson is much like a caricature of US forces in

Vietnam – a war that Le Guin famously declared herself against in 1968.[6] Even the mission

itself is a comment on Vietnam and its questionable motivations, as it is revealed that the

colonists are harvesting *wood* to send back to Earth, which is quite absurd given the size and

cost of the mission. Indeed, the wood could just as easily represent any other resource on

Athshe, for here it stands as a symbol of resource extraction and the rapacious conduct of

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[5] H. Bruce Franklin describes the men from Earth as being 'possessed by fantasies of themselves as rational, civilized, self-controlled superior beings'. And yet not of all the men from Earth act in the same way. While Davidson certainly sees himself as a 'superior being', Lyubov is quite different and is depicted as effeminate and weak compared to the alpha male Davidson. However, for all his 'weakness', even Lyubov is to some extent guilty of fantasizing, for he places his faith in science – a rationality that fails to predict the Athshean revolt. H. Bruce Franklin, 'The Vietnam War as American Science Fiction and Fantasy', *Science Fiction Studies*, 17:3 (November 1990), 341–359 (p. 352).

[6] The June 1968 edition of *Galaxy* magazine featured two adverts side by side, paid for by science fiction authors, editors and producers on either side of the Vietnam War debate. The adverts appeared as two lists of signatories, the left-hand advert featuring those for the war, and the right-hand side featuring those against. See: 'We oppose the participation of the United States in the war in Vietnam', *Galaxy*, June 1968, p. 5; 'We the undersigned believe the United States must remain in Vietnam to fulfill its responsibilities to the people of that country', *Galaxy*, June 1968, p. 4.

human colonists in a distant land, with the trees themselves serving as a living connection between the natives Athsheans and the world they inhabit. As one Athshean observes: 'the yumens came and began to cut down the world' (30).

The Athsheans, also known as 'creechies' in army slang, are described as being 'a metre tall and covered with green fur' (16). According to Davidson 'the creechies are lazy, they're dumb, they're treacherous, and they don't feel pain' (18). He also likens them to fish (17), and describes their language as a kind of animalistic 'gabble-gobble' (22), in much the same way as some of the native Athsheans describe the humans' own language later in the novel (105). Though they are descended from humans, the creechies are seen as less than human, and situated within a racialized colonial discourse that is used as means to legitimize their abuse. And yet at the same time, Davidson also likens them to women (18). In many respects, the behaviour of the colonists mirrors something of the patriarchal 'colonization' back home. As Davidson puts it, 'Earth was a tamed planet' and he sees his purpose as being to tame the new planet of Athshe in a similar way (11). However, the planet soon starts fighting back, and one day Davidson returns from a mission to find his home-camp burnt to the ground. At first, he doesn't think the native creechies could have done it because 'Creechies didn't fight, didn't kill, didn't have wars' (24), and yet it soon transpires that the Athsheans are indeed fighting back, and that Selver is the leader of the Athshean revolt. The novel concludes with the human colonists forced to retreat and leave the planet to the Athshean people.

One of the major turning points in the text comes in the third chapter when a delegation of inter-planetary officials arrives, stopping off on their way to the planet Prestno. They discover the world in disarray and ask the human colonists to give an account of the Athshean uprising. At this point Lyubov observes, 'We have killed, raped, dispersed, and enslaved the native humans. It wouldn't be surprising if they'd decided that we are not

human' – to which the Cetian delegate replies 'And therefore can be killed, like animals, yes yes' (53). By referring to the Athsheans as being *like* animals, the Cetian draws a blurred line of distinction between the human and the animal, for to be 'like' an animal is not to actually *be* an animal. In this way, the similarity serves to emphasize the difference and so enshrine the biopolitical distinction that the colonists have made.

And yet, as the Cetian point out, the Earth-born humans have been having sex with them. This observation reveals a paradox in the colonists' behaviour. Here, the native Athsheans are outcast enough to be classed as non-human, and yet they remain 'human' enough to be worthy of human desire. Were the colonists having sex with *non*-humans (as some would describe the Athsheans) then the Earth-born humans would paradoxically be committing bestiality as well: they can't have it both ways. Either the Athsheans are animals or humans, and yet in the colonists' terms they are defined as both, depending on which depiction suits their present needs – a strange Orwellian double-think similar to that associated with slavery in the pre-Civil War US. In this case, the Athsheans are non-human so far as it makes them easier to kill, and easier to hate, but they are also human enough to be cast as 'enemies' in the first place – a common theme in many science fiction novels of the period. Were the 'enemy' truly non-human then they wouldn't be an enemy as such, but rather just another beast to kill and not worthy of conquest and war. While Le Guin distinguishes the Athsheans from the Earth-born humans by depicting them as short, green and covered in hair, they could just as easily be any other human enemy, such as, for example, the Vietcong.

It is significant here that the delegates' ship, the *Shackleton*, is transporting a version of the ansible device described in several other of Le Guin's Hainish Cycle novels, including *The Dispossessed* – a device that allows for 'the instantaneous transmission of a message over any distance' (55). While the vast distance between Athshe and Earth makes effective

communication difficult, with the ansible, the two planets can communicate in real time. This brings the human colonists on Athshe back into the fold of external surveillance exercised by the sovereign back on Earth. As the delegates put it, 'There is no longer any excuse for acting on outdated orders; for ignorance; for irresponsible autonomy' (56–57). This is an important line, among the most important in the whole book. On the one hand, it is a direct criticism of the human military on Athshe, who are clearly working beyond the parameters of their mission and the assumed (uncodified) norms of behaviour. And yet there is also a sense that 'autonomy' is being used as an excuse or alibi to absolve the leadership from blame. By declaring the soldiers functionally autonomous, so the sovereign declares that individuals should be held responsible for their own actions. And yet this is despite the fact that the ansible is seen as the solution to the autonomy 'problem'. Here, 'irresponsible autonomy' is solved by reconnecting the colony with the sovereign back on Earth, placing the colony under direct sovereign rule. This exposes an important paradox, for the colonists are blamed for actions over which they have little or no control – the solution to which is to strengthen the control exercised by the sovereign back on Earth. Clearly, the terms of the colonists' autonomy are poorly defined, and that would seem to be the point. While the colonists may be outwardly presented as autonomous agents, in reality, they are anything but. The very fact they can be accused of 'irresponsible autonomy' reveals the paradox of power in which they operate. While they are presented as ostensibly free, this 'freedom' is only freedom so far as the sovereign allows.

Structures of power

The question of control is an important one in *The Word for World is Forest* for it cuts to the heart of issues surrounding autonomy and the extent to which subjects are granted agency (or the illusion of agency) under the sovereign state. These issues were particularly relevant

during the Vietnam period, in which the US administration struggled against its own bureaucracy, and various departments fought against each other for funding and prestige, with often detrimental effects.

In *Strategies of Containment*, John Lewis Gaddis suggests that 'once American forces were committed, Washington seemed to lose control, leaving the military with a degree of autonomy surprising in an administration that had prided itself on having reduced military authority over the conduct of national security affairs'.[7] He thus criticizes the 'institutional interests' that were allowed to influence the war, which led to 'an adaptation of ends to fit preferred means, rather than the other way around.'[8] All of which, he concludes, was 'a remarkable departure from the injunctions to do just enough, but no more than was necessary'.[9] There would seem to be a clear disjunction here between the law as described by the sovereign (i.e. 'win in Vietnam'), and the way that instructions filter down to the soldiers on the ground. In this case it could be argued that the American war machine gained *too much* autonomy without political censure – perhaps aided by the distance of the war, and the lack of mechanisms of control. There was also the fact that for many years, Vietnam remained an undeclared war, as the US administration was unwilling to admit the level of its involvement in the country. As a result, some commanders believed they should be allowed to wage war in whatever way they saw fit. And yet, as Paul N. Edwards observes, 'Even [President] Johnson himself sometimes took part in targeting decisions'.[10] This suggests that

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[7] John Lewis Gaddis, *Strategies of Containment: A Critical Appraisal of American National Security Policy During the Cold War* (Oxford: Oxford University Press, 2005), p. 250.

[8] Ibid., pp. 250–251.

[9] Ibid., p. 252.

[10] Edwards, *The Closed World*, p. 5.

perhaps the *opposite* might also be true: that the military had too little freedom to function effectively, and was hampered by civilian constraints.[11]

Clearly, the American defeat cannot be attributed to a single cause; however, Gaddis' argument certainly points to a breakdown in the fundamental structures of sovereign power and control. As John Pimlott points out, both the My Lai and Binh Tay massacres of 1968 were officially covered up until news of the atrocities was leaked, and the Army was forced to order an investigation.[12] This suggests that the problem was not so much the *autonomy* of the soldiers, so much as the 'programming' the soldiers received both as citizens educated in the US, and as soldiers indoctrinated with military training. For this reason, some commentators have argued that the massacres were not so much a crime of the individual, but rather a crime of obedience.[13] Given the media reaction to the My Lai massacre, it is perhaps surprising then that only Lt. Calley stood trial for My Lai, which, Pimlott suggests, '[raised] criticisms that he was being used as a scapegoat and that the real culprits—his superior officers who were stressing the need for aggression and a large body count—escaped'.[14] There is a sense then that Lt. Calley stood trial not as an individual, but rather as a scapegoat of a kind, standing on behalf of *all* of his fellow soldiers who took part in the engagements, and who were all following orders, or at the very least, the *spirit* of the orders that demanded

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[11] Biographer Doris Kearns reports Johnson's claim that he saw bombs as a political resource for negotiating peace. For Johnson at least, the bombing campaign in Vietnam was an exercise in control. Without civilian control over the military machine, Johnson believed the war would escalate into World War III. See: Doris Kearns, *Lyndon Johnson and the American Dream* (London: André Deutsch, 1976), p. 264.

[12] John Pimlott, *Vietnam: The Decisive Battles* (London: Guild Publishing, 1990), p. 137.

[13] In his study of the Vietnam War, General Douglas Kinnard cites Professor Herbert Kelman's argument that My Lai may well have been a 'crime of obedience'. Douglas Kinnard, *The War Managers* (Wayne NJ: Avery Publishing Group Inc., 1985), p. 52.

[14] Pimlott, p. 137.

aggression and high body counts. In this respect his trial can perhaps be read as a sacrifice made *on behalf of* the state, held to account for mistakes far beyond his ability to control.

While there may not have been direct orders to massacre the people of My Lai, this is not to say that the orders were not implied. The American leadership would certainly have been aware of this. The very nature of battle requires that soldiers 'autonomously' apply their orders and the letter of the law to any battlefield situation. Yet given the nature of the conflict, and the prevailing approach adopted by US forces in Vietnam, it is easy to see how atrocities such as My Lai could have occurred, and why the American military would have been so eager to cover it up. All of which points to a fundamental problem in the nature of the functional 'autonomy' granted to troops, and the extent to which they should be held to account. Either individuals are completely free to act in any way they so choose – in which case every single soldier at My Lai is guilty – or they are just another cog in the much larger state machine. While in reality, the lines of responsibility and guilt are far from clear-cut, the operation of law, and indeed the *spectacle* of law, requires that a decision be made, and be *seen to be made*, in order to maintain order and preserve the fragile threads of sovereign rule.

The responsible subject

To explore the question of autonomy in more detail, it is useful to first address the question of the responsible subject. In his book *The Gift of Death*, philosopher Jacques Derrida examines and deconstructs the concepts of responsibility and ethics in terms that can be applied to the question of autonomy in *The Word for World is Forest*. In particular, the ways in which the colonists' lives are framed as distinctly human as compared with the native Athsheans who are framed as 'other', and who therefore fall outside of the human terms on which the colonists base their behaviours.

According to Derrida, human subjectivity is bound up with an implicit understanding of what it means to be human, and what it means to be alive. Drawing on Christian theology, Derrida argues that human subjectivity is framed around the notion of 'irreplaceability', and an implicit understanding that each individual life has a unique value. In this way, so subjects are compelled to behave in a 'responsible' manner. As Derrida describes:

> Death is very much that which nobody else can undergo or confront in my place. My irreplaceability is therefore conferred, delivered, 'given,' one can say, by death. It is the same gift, the same source, one could say the same goodness and the same law. It is from the site of death as the place of my irreplaceability, that is, of my singularity, that I feel called to responsibility. In this sense only a mortal can be responsible.[15]

For Derrida, responsibility is tied to singularity, and 'irreplaceable singularity' is bound up with the twin concepts of life and death. This is because life only gains meaning when framed in relation to death and the possibility that our unique singularity could come to an end. As Derrida argues: 'responsibility demands irreplaceable singularity. Yet only death or rather the apprehension of death can give this irreplaceability, and it is only on the basis of it that one can speak of a responsible subject, of the soul as conscience of self'.[16]

But in order to 'die' and be classed as mortal, so first we must be cast as human. And to be human, so we must be framed as such relative to other forms of life, such as the animal, and, in more recent times, the *living* self-aware machine. By constituting the terms of 'human' life, and the 'value' of this life as compared to the animal and the AI, so humans are

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[15] Jacques Derrida, *The Gift of Death*, trans. by David Wills (Chicago: The University of Chicago Press, 1995), p. 41.

[16] Ibid., p. 51.

compelled to Derrida's notion of responsibility. Thus, our understanding of the human, and human action, leads us to behave in a certain way as we are compelled to act as responsible subjects, in an ostensibly 'autonomous' fashion without direct oversight from above.

However, there is a paradox in the term's definition. As Derrida observes, no single human can ever be fully responsible to all other humans at all other times. This makes it a problematic concept. In part, this is due to the problem of language. According to Derrida:

> The first effect or first destination of language therefore involves depriving me of, or delivering me from, my singularity. By suspending my absolute singularity in speaking, I renounce at the same time my liberty and my responsibility. Once I speak I am never and no longer myself, alone and unique. It is a very strange contract—both paradoxical and terrifying—that binds infinite responsibility to silence and secrecy.[17]

For Derrida, language strips us of our absolute singularity, and in so doing also strips us of liberty and responsibility, for through language we are no longer singular, irreplaceable, unique. Or to quote Derrida, 'I am never and no longer myself'.[18]

While Derrida argues that infinite responsibility is bound to secrecy and silence, it is also bound to the ultimate silence, death. Complete responsibility then, while never wholly achievable as such, requires a 'conscience of self' as Derrida puts it, and an *awareness* of our singular irreplaceability as human beings. Yet the paradox reveals itself in the fact that this awareness can only ever be made apparent through language and interaction with others. Derrida describes this paradox in his discussion of human ethics. In a compelling argument, he suggests that, 'far from ensuring responsibility, the generality of ethics incites to

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[17] Ibid., p. 60.

[18] Ibid., p. 60.

irresponsibility. It impels me to speak, to reply, to account for something, and thus to dissolve

my singularity in the medium of the concept'.[19] From this line of reasoning, language (as

compared to silence) is therefore also tied to *irresponsibility*, for we can never give a full

account. This results in a *Catch-22* situation where we are required to speak, and yet in

speaking so we are no longer absolutely singular and unique. We are bound to others and

therefore no longer responsible in absolute terms. Therefore, just we can never be fully

responsible, so can we ever be fully autonomous, as we are always forever bound up in a

complex web of interactions with others.

This paradox is made even more apparent when framed with respect to duty – a

concept at the heart of Le Guin's *The Word for World is Forest*. In this area, Derrida argues:

> Absolute duty demands that one behave in an irresponsible manner (by means of
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> treachery or betrayal), while still recognizing, confirming, and reaffirming the very
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> thing one sacrifices, namely, the order of human ethics and responsibility. In a word,
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> ethics must be sacrificed in the name of duty. It is a duty not to respect, out of duty,
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> ethical duty.[20]

Here, duty trumps ethics, but survival also trumps ethics. Although we may find his attitude

repugnant, Captain Davidson in *Forest* perceives his duty as being firstly to himself, and then

to his fellow soldiers. On a distant planet surrounded by strange alien creatures, Davidson's

'duty' – however distorted or perverted it may be – will always surpass his sense of ethics in

much the same way as Derrida describes. This dilemma is such that even the Athshean

sympathiser Lyubov is unable to reconcile this conflict, for his duty to his fellow colonists

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[19] Ibid., p. 61.

[20] Ibid., pp. 66–67.

must always surpass his ethical views on the Athshean people. This is a fact Lyubov himself acknowledges when he describes himself as a traitor (87).

The war managers

While Derrida sheds light on the ethical dilemmas exposed in *The Word for World is Forest*, and the novel's real-world concerns, there is also much to be said for the role of bureaucracy in blurring the lines of responsibility between subjects. With the rapid computerization of the 1960s, so state bureaucracy began to crystallize as bureaucratic structures were replicated in electronic form. While new technologies offered commanders a great deal in terms of information, oversight and control, these same technologies often gave an *illusion* of control that distanced commanders from realities on the ground. Not only did this prove problematic in terms of ethics and responsibility, but the process of computerization also exposed a whole new set of problems that often defied the 'logic' of the newly computerized state.

The origins of the computerized state go back at least as far as the Second World War. During this time, Robert S. McNamara – who would later go on become US Secretary of Defense during Vietnam – worked in the Office of Statistical Control (Stat Control), providing analysis on the operation of US bombers. Stat Control had its origins in the Harvard Business School and sought to apply scientific thinking to the operation of war. In this case, the administrators were set the task of 'finding a means to systematize the largest Air Force on earth'.[21] At the heart of this mission was a giant computer or 'electronic brain', which was often compared to a Russian commissar: '[with] its own shadowy types at most every station, level, and place, enforcing the purity of the regs'.[22] While Stat Control

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[21] Paul Hendrickson, *The Living and the Dead: Robert McNamara and Five Lives of a Lost War* (London: Papermac, 1996), p. 99.

[22] Ibid., p. 99.

certainly proved its worth during the Second World War, it set a precedent for the conduct of future wars, demonstrating the value of the computer and scientific thinking in the prosecution of war. Even more importantly, it also implied a similar value to be found in the application of these same approaches to governance back home.[23]

However, this new reliance on computer technology and systems thinking proved problematic during Vietnam as the administration was faced with an unknown foe and a situation for which it was completely unprepared. This issue is highlighted by McNamara's biographer, Paul Hendrickson:

> But by the time McNamara and some fellow accounting majors got to Soldiers Field, it was thought to be pretty much a science, the idea you could take somebody and school him in the modern principles and then put him into almost any business institution or system imaginable and be confident he'd be able to run it like a clockwork orange on the strength of two twin-towered concepts: planning and control. The only problem with this is that a revolutionary named Ho Chi Minh never went to the Harvard Business School. [24]

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[23] This way of thinking had already come to light pre-war, with the Technocracy movement of the early 1930s. The movement suggested replacing politicians and businesspeople with scientists and engineers as a way of solving the economic crisis of the Great Depression. However, the movement lost momentum following the war – in part, perhaps, due to the distrust of socialism associated with the Cold War, but also perhaps because the movement rejected those at the heart of power: the businesspeople and the politicians. It is interesting to note here how the government adopted many of the *principles* of Technocracy, while also retaining its own politically-oriented business-centred core.

[24] Hendrickson, p. 85.

As history shows, the US administration was woefully unprepared for the realities of conflict in Vietnam, which proved radically different from any war the US had ever fought before. With an outmoded strategy, an overreliance on systems thinking, a failure to understand the enemy and numerous failings within the military bureaucracy, the war demonstrated a breakdown in the old Harvard School way of thinking, and showed that systems alone were not sufficient for the successful prosecution of war.

In light of the defeat, General Douglas Kinnard conducted a survey of his fellow Generals, which he published in *The War Managers* (1977). In a fascinating and wide-ranging study, the book sheds light on the inner workings of the US war machine and some of the problems inherent within it. In one example, Kinnard cites the problem of careerism in the US military, with over 80% of respondents claiming that careerism was a problem in the successful conduct of the war.[25] As Kinnard argues: 'let's state it straight—the problem, where it existed, was one of ineffective leadership, in large part because many leaders made a career out of their own careers rather than a career out of leading their own units'.[26] The leadership, even at a lower level, sought to shift responsibility away from the centre, while at the same time seeking to control every element of the war. Building on this argument, Kinnard goes on to criticize the 'can do' attitude that was for so long seen as a virtue in military leadership, but often came at the expense of troops on the ground. As such the author calls for *dissent* within the military – something sorely lacking during the prosecution of the Vietnam War.[27]

In another section, Kinnard examines the incident at My Lai and the US response to the massacre. In doing so, he draws on the work of Professor Herbert Kelman, who claims

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[25] Kinnard, p. 110.

[26] Ibid., p. 112.

[27] Ibid., p. 116.

that My Lai was not an isolated incident, and was an inevitable by-product of the very nature

of the war – it was, according to Kelman at least, a crime of obedience.[28] In this way, the

atrocity of My Lai can be seen as an *inevitable consequence* of the excessive violence

deployed on the field of battle – an atrocity that was effectively sanctioned and indeed

promoted by the US military command that *demanded* an excess of violence as victory

slipped away. Building on this observation, Kinnard also notes how, 'in an article in the *New*

York Times on November 29, 1971 [...] Douglas Robinson, contended that both the defense

and prosecution [of Lt. Calley] carefully avoided discussion of probably deficiency in the

command structure in Vietnam.'[29] He concludes then that 'despite many directives, or

perhaps *because of them* [my emphasis], the rules were not very well understood, nor were

they carefully adhered to.'[30]

This comment is particularly interesting as it casts light on the paradox of control that

was to emerge during the period. With the rise of computer technology, the US

administration had access to more information than ever before, with vast insight into the

operation of its forces. And yet this control could never, and *can never* be enough – an

observation that is reflected in the issues we face today with electronic surveillance and killer

drones. In his book *Swarm Troopers*, journalist David Hambling reports the phenomenon

known in military circles as 'Predator crack' – an addiction to Predator drone footage among

military commanders and White House staff.[31] This obsession with battlefield data mirrors

the same information-addiction that gripped the US administration during Vietnam, with the

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[28] Ibid., p. 52.

[29] Ibid., p. 52.

[30] Ibid., p. 54.

[31] David Hambling, *Swarm Troopers: How Small Drones Will Conquer the World* (London: Archangel Ink, 2015), p. 39.

likes of Operation Igloo White – a vast sensor network designed to automate intelligence collection – costing in the region of $6 billion, to little or no effect.[32]

And yet despite the abject failure of the electronic battlefield during Vietnam, still the state hungers for more information – more data – than ever before. This, despite evidence to the contrary. In his study, *Kill Chain: Drones and the Rise of High-Tech Assassins*, Andrew Cockburn notes that even today, 'electronic imaging does not depict battlefield reality with the same acuity as the human eye', leading to an essential loss of truth.[33] Indeed, in one shocking example, a study conducted by the Office of Operational Test and Evaluation found that Predator drone footage gives only a 'soda-straw' view of events 'with a visual acuity of 20/200 [...] *the legal definition of blindness for drivers in the United States* [my emphasis]'.[34] And yet despite this quite remarkable conclusion, and its chilling implications, still commanders place (quite literally) blind faith in modern technology and the illusion of control it provides. Still the lessons of Vietnam have not been learnt; still we continue to chase the electronic dream, at the expense of a more nuanced view of data collection, and the human realities of command and control.

The problem of autonomy

Themes of responsibility and control present themselves time and time again in the science fiction of the Vietnam period, and are central to Le Guin's novel *The Word for World is Forest*. At the centre of the debate is the question of autonomy and the 'freedom' the colonists are able to exercise on the alien planet. In this case, the question is not so much one of 'autonomy' or 'irresponsible autonomy', but rather, the way the term is defined, and how it

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[32] Cockburn, p. 31.

[33] Ibid., p. 40.

[34] Ibid., p. 126.

is put to use. At the heart of the matter is the debate over whether soldiers (or other agents) are *human* actors with clear definable agency, or rather *weapon systems* programmed to act in a predictable, pre-determined way.

Building on debates that started during the Second World War, and were exacerbated during Vietnam, this tension is one that continues to this day. On one side of the debate, former Lt. Colonel, and now Professor, Geoffrey S. Corn argues, '[human operatives] have always been, "autonomous" weapons systems, because all soldiers must exercise cognitive reasoning in execution of their battlefield tasks.'[35] Here, Corn links autonomy directly with training, which is designed such that soldiers' 'autonomous judgment will be exercised in a manner that contributes to the overall tactical, operational and strategic objectives of his or her command.'[36] However, as Corn notes, 'it is impossible to have absolute "compliance confidence" for even this "weapon system"'[37], meaning that despite training (or 'programming') a soldier can never be fully compliant with the wishes of command. From Corn's perspective, the definition of autonomy is very much tied to training or programming, in that soldiers are expected to adhere to a set of codes and behave in a certain way when faced with any given battlefield situation; their autonomy is not independent thought as such, but rather the autonomous application of the law. This differs from the definition used by the US Department of Defense (DoD), which in a 2012 report describes how 'there exist no fully autonomous systems, just as there are no fully autonomous soldiers, sailors, airmen or

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[35] Geoffrey S. Corn, 'Autonomous Weapon Systems: Managing the Inevitability of "Taking the Man Out of the Loop"', in *Autonomous Weapons Systems: Law, Ethics, Policy*, ed. by Nehal Bhuta et al (Cambridge: Cambridge University Press, 2016), pp. 209–242 (p. 212).

[36] Ibid., p. 212.

[37] Ibid., p. 212.

Marines.'[38] The DoD here implies autonomy in a sense of complete individual freedom of decision making. It is significant here that the DoD uses the word *fully* in its conditional sense, leaving a distinct grey area of indeterminate responsibility when it comes to autonomy. While Corn says soldiers are autonomous, and the DoD says they aren't, both sides are effectively arguing the same thing: that individual judgement is located within a framework of formalized structures (e.g. training and military law), and the many non-formalized discursive structures that are described throughout this study.

The problem, however, arises when soldiers are required to make decisions in combat – especially when faced with the complexity of battle and the infinity of singular cases against which they must apply the general rule. Autonomous judgement here doesn't just mean adhering to a set of codes or programs as laid down by the rule of law (or command), but also then *inferring*, or 'self-programming', codes at short notice based on what they might expect their command to be. This then leads to the problem of individual judgement and the logical impossibility of inference, and the need to make snap value-judgements based on situations which may not have yet been accounted for in law. Without complete telepathic understanding, or a *robotized* fighting force, human 'error' (if it can even be called that) will always find its way into the heat of battle.

In one recent example, British Royal Marine Alexander Blackman, known as 'Marine A', was tried in 2013 based on footage supplied by a fellow Marine's helmet camera.[39] This

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[38] Department of Defense, *Task Force Report: The Role of Autonomy in DoD Systems* (Washington: Defense Science Board, 2012), p. 23.

[39] Marine A was initially found guilty of murder for shooting a wounded Taliban fighter while on patrol in Helmand Province in 2011. He was later released, having served three and a half years in prison, after his murder conviction was replaced with diminished responsibility manslaughter. See: 'Marine guilty of Afghanistan murder', *BBC News*, 8 November 2013 <https://www.bbc.co.uk/news/uk-24870699> [accessed 12

case is highly problematic as it sets a precedent for soldiers being tried for 'crimes' that they

previously would never have been tried for. This is particularly significant given that in one

recent US Army survey found that '45 percent of soldiers wouldn't report a fellow soldier

they saw injuring or killing a civilian noncombatant', revealing a fundamental disconnect

between the law as written, and the law as applied on the ground.[40] While no one would

doubt the seriousness of the reported crime in a civilian context, one must consider the

potential ramifications of what would have happened had the soldier not acted in the way that

he did, and the consequences for allied lives further down the line. Whose life is worth more?

On the field of battle, a soldier's loyalty will always be to the other soldiers around them, in

whose trust they place their lives. It is no wonder then that the question of Marine A is so

controversial, as it asks serious questions of the relationship between the soldier, the citizen

and the state, and the legal, ethical and *pragmatic* framework within which soldiers operate

on the ground. Add to this factors such as stress, fatigue and the confusion and chaos of the

battlefield and it is no wonder soldiers make choices that the general public may at times find

abhorrent.

A further problem with 'autonomy' then arises from the temporal nature of human

law, as sovereign decisions change over time and laws can be interpreted or re-interpreted for

a given context. This is especially relevant in the international arena, for what may initially

be a legitimate action may be rendered illegitimate, or even a war crime given a different

context. During the Second World War, US forces firebombed the Japanese city of Tokyo,

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September 2018]; Steven Morris, 'Marine A, who killed wounded Taliban fighter, released from prison', *The Guardian*, 28 April 2017, <https://www.theguardian.com/uk-news/2017/apr/28/marine-a-alexander-blackman-released-from-prison> [accessed 12 September 2018].

[40] P.W. Singer, *Wired for War: The Robotics Revolution and Conflict in the 21st Century* (New York: The Penguin Press, 2009), p. 394.

burning it to the ground and leaving hundreds of thousands of civilians dead. Robert S. McNamara, who was then working in the Office of Statistical Control, has said that he and Curtis LeMay would have been declared war criminals if the Allies had lost the war.[41] Indeed, had the Allies lost, then the bomber pilots would certainly have been tried in much the same way as the Nazis were at Nuremberg. The assumption here (as suggested by the Nuremberg trials) is that the pilots *should* have refused the mission. And yet to refuse an order in a military context is to risk court-martial and even execution. It could even be argued that by following orders, the bomber pilots helped secure the Allied victory – much as Nazis would have argued had their side won the war. Thus, a paradox emerges as soldiers are expected to act directly on behalf of the state, following their orders (or 'code') to the letter, while at the same time being held to account for these same actions should a higher sovereign power so decide. The law as it stands frames them as both, for they are autonomous only so far as the law retrospectively decides that they are such, and can hold them to account for their 'autonomous' actions at any time.

A question of guilt

The question of responsibility is a difficult one, and it feeds directly into our understanding of what we mean by autonomy, and how the term can be manipulated and put to use to suit different political agendas. Though we may not agree with Davidson's actions in *The Word for World is Forest*, we can at least understand him. When the human is cast as superior to the non-human, and the 'friend' as superior to the foe, it is no wonder that Davidson finds himself caught in grey zone of ethical indeterminacy when confronted with the apparently alien Athshean natives. In such a situation, he is forced to rely on his core programming in

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[41] See items 4 and 5 in: *The Fog of War*. McNamara argues the human race still hasn't sufficiently addressed the question of what is acceptable in warfare.

the absence of rules and with no precedent to work from. This exposes a paradox. Either Davidson is a free agent wholly 'responsible' for his actions within the prevailing ideological framework, and should therefore be held to account; or he is merely a cog in a much larger machine and so therefore shouldn't be held to account at all. What is particularly interesting in this case is that Davidson and his colleagues are accused of *irresponsible* autonomy, suggesting they perhaps occupy some zone between the two extremes, though quite where that zone falls is open to debate.

In these terms, our understanding of 'responsible' autonomy ties in with a theological discourse around the responsible subject, and the question of guilt. According to Jacques Derrida, guilt is a construct founded on language that dissolves responsibility by removing subjects from absolute singularity. To take this one stage further, a Deleuzian reading would suggest the experience of guilt is a *self-imposed* microfascistic notion that arises from the fact that absolute mortal responsibility remains out of reach. Guilt then, is founded on the unspoken acceptance that any decision, any act, requires a surrender of ethics towards all other members of the community. In *The Gift of Death*, Derrida uses the example of Abraham offering to sacrifice his son Isaac at Mount Moriah in order to illustrate his point:

> As soon as I enter into a relation with the other, with the gaze, look, request, love, command, or call of the other, I know that I can respond only by sacrificing ethics, that is, by sacrificing whatever obliges me to also respond, in the same way, in the same instant, to all others. I offer a gift of death, I betray, I don't need to raise my knife over my son on Mount Moriah for that. Day and night, at every instant, on all

the Mount Moriahs of this world, I am doing that, raising my knife over what I love

and must love, over those to whom I owe absolute fidelity, incommensurably.[42]

And yet there is a paradox here in that a subject cannot be guilty without a community to be

guilty *to*. In this way, guilt is an artifice built on the false notion of responsibility to a

community that is impossible in light of the generality of language. As humans, we are stuck

then in an oscillation between the individual and the community; and not just one

community, but many communities – many agents of stratification that resist definition and at

the same time bind us to an artificially-constructed singular subjective self.

Derrida presents a similar argument in *The Beast and the Sovereign: Volume 1* – a

collection of lectures and essays published after his death. In this work Derrida argues that

the beast and the sovereign are connected in that neither is subject to the rule of law. He also

touches on many of the themes that come up in his other works such as *The Gift of Death* and

The Death Penalty, dissecting the role of ethics and responsibility, and the 'obligation' owed

by individuals to the wider group. This segment is particularly relevant for this investigation,

for Derrida argues:

> [It] is not enough to say that this unconditional ethical obligation, if there is one, binds
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> me to the life of any living being in general. It also binds me twice over to something
>
> non-living, namely to the present nonlife or the nonpresent life of those who are not
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> living, present living beings, living beings in the present, contemporaries—i.e. dead
>
> living beings and living beings not yet born, nonpresent-living-beings or living beings
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> that are not present. One must therefore inscribe death in the concept of life.[43]

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[42] Derrida, *The Gift of Death*, p. 68.

[43] Derrida, *The Beast and the Sovereign: Volume 1*, p. 110.

There is something to be said here for the Agambian implications of Derrida's reading. In his collection of essays, *Potentialities*, Giorgio Agamben explores three key concepts: language, history and potentiality – the latter of which refers to the fundamental problem of ethics and the philosophy of language. In *The Gift of Death*, Derrida argues that 'I am sacrificing and betraying at every moment all my other obligations: my obligations to the other others whom I know or don't know'.[44] Yet in *Potentialities*, Agamben argues:

> For everyone a moment comes in which she or he must utter this 'I can,' which does not refer to any certainty of specific capacity but is, nevertheless, absolutely demanding. Beyond all faculties, this 'I can' does not mean anything—yet it marks what is, for each of us, perhaps the hardest and bitterest experience possible: the experience of potentiality.[45]

For Agamben, the greatness of human potentiality relies first of all on the potential not to act[46] – a sacrifice of ethics similar to Derrida's own. For Agamben:

> To be potential means: to be one's own lack, *to be in relation to one's own incapacity*. Beings that exist in the mode of potentiality *are capable of their own impotentiality*; and only in this way do they become potential.[47]

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[44] Derrida, *The Gift of Death*, p. 69.

[45] Agamben, *Potentialities*, p. 178.

[46] Ibid., p. 181.

[47] Ibid., p. 182.

To read Agamben alongside Derrida then, any act must therefore be an act of betrayal – a sacrifice – for it is an action taken despite the possibilities (the Agambian *potential*) for every other act. Thus, not only is it a betrayal of any given individual, but also of every other human through time, including the living, the dead, and those yet to be born. In this way, both Agamben and Derrida share a similar theological grounding in their philosophy. In their terms, every act is rendered a *human* act in that its humanity is bound up in the potential and the awareness of said potential to either act or not to act, and the unknowable implications of any given action or inaction. Because the far-reaching consequences of any act can never be known, we are all guilty from the start – we *sin*, in effect, because we exist. Existence is a sin, and a sin from which we cannot escape.

A direct implication of this philosophy can be found in the link between guilt and punishment, and the need for a human victim in place of the machine that can never be assigned with human guilt. Just as modern-day drones require a human operator to provide a form of ethical cover for targeted killings carried out by a computer, so the state requires human victims to stand trial for actions far beyond the individual's power to control. In the case of Vietnam, many US soldiers were drafted against their will, and their education, equipment, training and indoctrination all provided in one form or another by the state. They were also located within a military bureaucracy that used body counts as a measure of success. Following this logic, any 'misdemeanour' should be the responsibility of the state and not the individual. However, there remains the issue that the 'state' as such can never be held to account – it is an amorphous, shifting entity that can never be located to a single point. For this reason, the state would seem to require (human) sacrificial victims to absolve it of guilt in the public imaginary. This then would seem to be the role Lt. Calley in his real-life trial following the massacre at My Lai. While he was made and shaped to do the state's

bidding, he also serves as a human alibi for the state machine, deflecting attention away from the real source of the crime.

Language codes

The notion of responsibility and inescapable guilt is a theme that recurs frequently in Samuel R. Delany's *Babel-17* – a book whose very title suggests a Biblical theme, stirring thoughts of unified language, or a Biblical fall from grace.[48] The novel centres on the protagonist Rydra Wong and her quest to translate Babel-17, a language code linked with a spate of terrorist attacks. Fairly early on in her adventure, Rydra discovers that 'most of its [Babel-17's] words carry more information about the things they refer to than any four or five languages I know put together, and in less space' (60). Here, the language of Babel-17 is encoded with an additional layer of meaning that goes beyond the information carried in the words (signifiers) themselves. There is even a suggestion that the words may well transmit an implicit discourse that can be inferred by the individual based on their own predisposition or ability to extrapolate ideas.

This concept contradicts what Delany himself argues in his essay, 'About 5,750 Words' in which he claims that words such as 'red' generate 'no significant information until it is put in *formal relation* with something else'.[49] Clearly, this argument is flawed. The word 'black' for example could refer to anything from the colour of a pot of paint to the colour of a cat; and yet very specifically we are inclined to associate it with the colour of a person's skin.

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[48] The story of the city of Babel can be found in: Genesis 11.1–9. Robert R. Tomes notes how the break-up of the liberal consensus in America is akin to the story of the Tower of Babel. See: Robert R. Tomes, *Apocalypse Then: American Intellectuals and the Vietnam War, 1954–1975* (New York and London: New York University Press, 1998), p. 235.

[49] Delany, 'About 5,750 Words', in *The Jewel-Hinged Jaw*, p. 2.

This reveals a certain human predisposition to assign meaning to words beyond the signifier itself: connotation rather than denotation. Here, the term 'black' implies a whole realm of meaning from racial discourse to civil rights movements, slavery, popular culture – all implicit and brought into focus by the single word (much as could be said about Delany's example 'red'). Indeed, Rydra discovers something similar in her analysis of the language Babel-17, for 'It was not only a language, she understood now, but a flexible matrix of analytical possibilities where the same "word" defined the stresses in a webbing of medical bandage, or a defensive grid of spaceships' (120). This passage is significant as it demonstrates the flaw in Delany's argument as even his own characters seem aware of the further possibilities of a single word in and of itself. According to Rydra, each word implies a whole web of further words, each with its own implied meaning and associated discourse. This goes far beyond the well-worn concepts of linguist Ferdinand de Saussure with his terms signifier and signified, for there isn't just a meaning to be found in the move from the sign (signifier) to the meaning we take from it (signified), but rather there is a further layer of meaning to be found in the discourse implied by any given word.[50] This is particularly noticeable in science fiction, for the genre itself seeks to extrapolate concepts and speculate upon further meanings to be implied by the world around us, interrogating the link between signifier and signified.

It is significant then that Rydra refers to the language of Babel-17 as a 'flexible' matrix, rather than a fixed one, for she is clearly concerned with how language can be manipulated and put to use. This is a recurring theme throughout the novel for not only is the titular language a means of controlling those it has 'infected', but the character Butcher can only be freed by altering the language itself. This notion also implies the Sapir-Whorf

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[50] Ferdinand de Saussure, *Course in General Linguistics*, trans. by Wade Baskin (Glasgow: Fontana/Collins, 1974).

hypothesis – a theory that (depending on your position) suggests that language either determines or influences thought, and shapes a person's world-view.[51] This is reflected in the great power of Babel-17 to withdraw the speaker from the realities of the physical world by eliminating the 'I' and the 'you'. As a result of this withdrawal, the character Butcher only thinks of his actions as the consequences of actions of his limbs: 'The brain is not crazy' he says, 'This hand [...] kill four people in three days. This hand [...] kill seven. Blow up four buildings with thermite' (129). By eliminating the sense of self, Babel-17 effectively serves to robotize subjects, removing any sense of individual worth and creating a world of pure action set apart from concepts of guilt and responsibility.

The theme of linguistic programming occurs throughout *Babel-17* as language is presented much like a computer code, similar to the strong version of the Sapir-Whorf hypothesis. Just as Babel-17 programs its victims directly, so language in its more general form programs individuals. Of course, this process relies upon the human desire to be understood. In this way so subjects are compelled to repeat (in the philosophical sense) and replicate the power structures that language creates. However, this process in turn strips individuals of some element of agency as they must sacrifice some part of themselves in order to be understood. This tension between the individual and the community becomes evident to Rydra, who observes that 'It's easy to repeat; it's hard to speak' (16). In a reverse of Derrida's argument in *The Gift of Death*, Rydra associates speaking with freedom and

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[51] The hypothesis, named after Edward Sapir and Benjamin Lee Whorf, is considered a misnomer by many linguists for Sapir and Whorf never co-authored any work together, and never stated their ideas in terms of a hypothesis itself. Indeed, the history of this 'linguistic relativism' goes back as far as Humboldt in the eighteenth century. For a discussion linking habitual thought and behaviour to language, see Benjamin Lee Whorf, *Language, Thought, and Reality: Selected Writings of Benjamin Lee Whorf*, ed. by John B. Carroll et al., 2nd edn (Massachusetts: The MIT Press, 2012), pp. 173–204.

individuality, for she suggests that repetition isn't true 'speaking' as such. However, her observation neglects the fact that *any* language is already bound to discourse and will forever be tied up with repetition in the quest to be understood.[52] In this way, it could be argued that language functions symbiotically with the speaker, speaking *through* the speaker as much as being spoken *by* the speaker.

It is interesting then, that in some cases, the language codes of *Babel-17* strip characters of their humanity completely, reducing 'humanity' to a merely performative act; much like Judith Butler's concept of performative gender.[53] The TW-55 cyborgs for example have been worked 'over and over' until they are barely human (177). They are then programmed with a performative code that includes 'twelve hours' worth of episodes in fourteen different dialects, accents, or jargons concerning sexual conquests, gambling experiences, fisticuff encounters, and humorous anecdotes of semi-illegal enterprises, all of which failed miserably' (74–75). These episodes allow the TW-55s to pass as human and so infiltrate normal society, armed with a series of acceptable anecdotes that function as markers of societal integration. In this case, the episodes themselves don't even need to have happened, they just need to be presented as if they happened, in a way that people would expect them to be told. Just as Mike uses digital backgrounds and environmental noises to add authenticity to his various personas in *The Moon is a Harsh Mistress*, these pre-installed episodes are part of a performative toolkit that the TW-55s equip just like weapons to aid them in their military task. Here, their performance has no 'meaning' as such, but is rather an

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[52] Though it is unclear if Delany is referencing Freud directly, he clearly demonstrates an awareness of Freud and the link between repetition and desire. He makes reference to this link: Eric Lorberer and Rudi Dornemann, 'A Silent Interview with Samuel R. Delany', in *Conversations with Samuel R. Delany*, ed. by Carl Freedman (Jackson: University Press of Mississippi, 2009), pp. 54–68 (p. 59).

[53] Butler, *Gender Trouble*, p. 173.

element that fellow citizens, through machine-like repetition, would come to know and expect.

On statements and transmission

This discussion begs the question of just how language codes are transmitted between individuals. In response to a range of theories about language and language-signs that emerged in the first half of the twentieth century, Michel Foucault put forward his own theory of statements as a means of constructing a philosophy of discourse and the transmission of power. Writing in the late-1960s, his work is clearly influenced by Saussure among others, and while his theory of statements pre-dates his work on biopolitics by almost a decade, it is a useful starting point on which to understand Foucault's philosophy and how he understood power flows between subjects.

According to Foucault, the statement is the 'atom of discourse', while he describes discourse as the 'general domain of all statements'; 'an individualizable group of statements'; and 'a regulated practice that accounts for a certain number of statements'.[54] While Foucault remains characteristically vague on the precise definition of his term, there are certain elements that come to light throughout his discussion. Firstly, he argues that 'The statement exists [...] neither in the same way as a language (*langue*) [...] nor in the same way as the objects presented to perception'.[55] Furthermore, 'it is not in itself a unit, but a function that cuts across a domain of structures and possible unities, and which reveals them, with concrete contents, in time and space'.[56] Here, the statement is both visible and invisible in that it is not

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[54] Michel Foucault, *The Archaeology of Knowledge*, trans. by A.M. Sheridan Smith (London: Tavistock Publications, 1972), p. 80.

[55] Ibid., p. 86.

[56] Ibid., p. 87.

directly presented to perception but rather serves as a *function* – a process – that reveals meaning.

One of Foucault's most important insights can be found in his discussion of texts, for he suggests: 'A statement belongs to a discursive formation as a sentence belongs to a text [...] [But] the regularity of statements is defined by the discursive formation itself'.[57] Foucault's comment here suggests a kind of cybernetic 'feedback loop' between the statement and the discursive formation, with discourse directly defining the regularity of statements, while at the same time statements constitute the discursive field that regulates them. In revealing discourse, so statements are made regular and so perpetuated in turn.

Deleuze and Guattari expand on this argument in *A Thousand Plateaus*. In their study of multiplicities and the wolf-pack, they argue: 'There are no individual statements, there never are. Every statement is the product of a machinic assemblage, in other words, of collective agents of enunciation (take 'collective agents' to mean not peoples or societies but multiplicities).'[58] Unlike Foucault, Deleuze and Guattari see the statement as the elementary unit of *language* and describe it as the 'order-word'; that 'Language is made not to be believed but to be obeyed, and to compel obedience'.[59] This contrasts somewhat with the philosophy of Giorgio Agamben. While Agamben agrees that language is an apparatus of power, he sees the statement as less an atom of discourse, and more as a kind of 'force carrier' (to use a phrase from quantum physics), for 'it operates in signs, phrases, and sentences at the level of their simple existence, as a bearer of efficacy, which each time allows us to decide whether the act of language is efficacious, if the sentence is correct, or

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[57] Ibid., p. 116.

[58] Deleuze and Guattari, *A Thousand Plateaus*, p. 42.

[59] Ibid., p. 88.

whether an aim is realized'.[60] Here, Agamben implies the social and reciprocal nature of language, for there must, by the very nature of communication, come a moment of reaction and response when the receiver must decide if the utterance is correct, and whether its aim is realized. Deleuze and Guattari agree, and they are very much interested in the presuppositional nature of order-words – the way they infer and imply other order-words, other statements, linked together either directly or indirectly by 'social obligation'.[61]

Expanding on this work, Deleuze, in his book on Foucault, emphasizes the fluid nature of meaning and that 'each statement is itself a multiplicity'.[62] Indeed, one of the most interesting facets of Deleuze's work is that he reads Foucauldian statements as '*the curve joining individual points*'.[63] This phrase is absolutely critical in Deleuze's argument, for a curve joining individual points suggests the need for (human) interpretation and the ability to extrapolate beyond the boundaries of the curve itself. From Deleuze's description, the graph would seem to take one of two forms: either the statement is a *smooth* curve drawn as a 'line of best fit' between points that may not be precisely aligned; or the curve literally joins individual points to create a *jagged* line that follows the points precisely.

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[60] Giorgio Agamben, *What is an Apparatus? And Other Essays,* trans. by David Kishik and Stefan Pedatella (Stanford CA: Stanford University Press, 2009), p. 14; Giorgio Agamben, *The Signature of All Things: On Method*, trans. by Luca D'Isanto with Kevin Attell (New York: Zone Books, 2009), p. 63.

[61] Deleuze and Guattari, *A Thousand Plateaus*, p. 91.

[62] Deleuze, *Foucault*, p. 6.

[63] Ibid., p. 79.
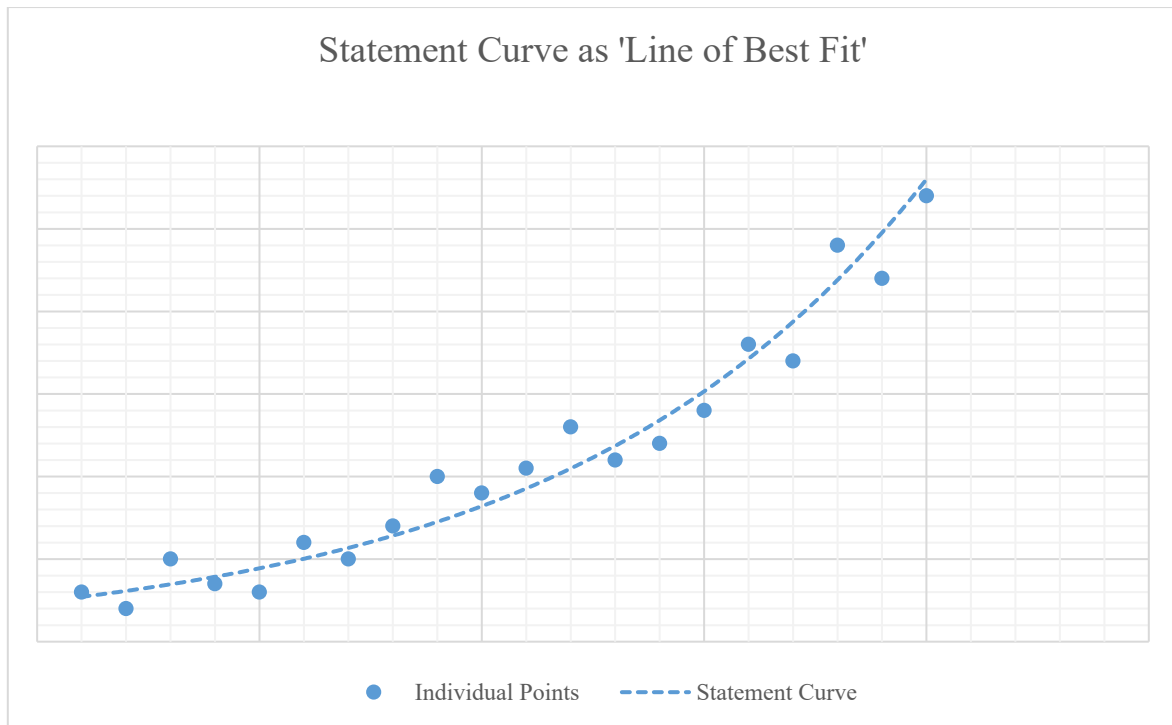
Figure 8 – Statement Curve as 'Line of Best Fit'.

These two options have several implications. Firstly, in the case of 'line of best fit', this implies that the statement itself is an *interpretation* of individual points; a literal 'best fit' of the available inputs. Consequently, any statement is only ever an interpretation of the ideal statement based on an individual's ability to comprehend and translate points into meaning. This has implications for the transmission of statements, for some individuals will be better equipped to comprehend, translate and repeat than others. Some will also be better equipped to infer statements from minimal data. A well-socialized subject for example may be able to infer a statement from only a few points, whereas others may struggle to infer a similar statement from many more points of input.

The other option, based on Deleuze's description, is to assume that the curve literally 'joins the dots'. Such a curve would not be smooth or regular, and fewer points would make inference difficult, even for the most well-socialized subjects. Such an irregular statement would necessitate a certain 'smoothing effect' – which here, Foucault suggests is provided by discourse – in order that the curve be recognized as normal and regular. This option has a

number of consequences. In the first instance, a 'join the dots' *robotic* approach can be transmitted perfectly, for there is no translation or interpretation required by the subject up until the point at which discourse renders it regular. However, the quality of the digital 'signal' (statement) is only as good as the amount of points provided, and the subject is fundamentally stripped of agency. Not only that, but too few points and the statement may be met with inaction as the subject must rely on his or her fundamental coding or 'operating system' to make decisions – just like Davidson in *The Word for World is Forest*.

In light of this discussion, it is interesting that Captain Davidson chooses explicitly to adopt a robotic 'work to rule' approach, rather than the traditional human approach to interpret statements from individual points. Because he is either unwilling or unable to interpret a set of rules without clear instruction, so he is left to follow his 'core programming', treating the Athsheans as alien others who are not deserving of the most basic level of human empathy or respect. This zone of ethical indeterminacy is clearly problematic, and leaves us to wonder if Davidson should be held to account for his actions at all. As a military Captain, Davidson is expected to operate within the bounds of a strictly controlled, clearly defined set of rules and regulations; indeed, the army *requires* it of him. But while Davidson's actions may be abhorrent and indeed perverse, they are based on a perversity built into the function of the law itself. In this case, the Athsheans represent an unknowable alien threat – they are completely outside of the bounds of normal experience – and so there is little in the way of codified instruction on how to treat them. Much as the Americans placed far too much emphasis on systems-based thinking in Vietnam, so Davidson represents the very worst of a computer-centric approach to warfare that embraces the robotic at the expense of the human. In this case, the Athsheans, much like the Vietcong, are an unknown – an enemy – and so Davidson treats them in the only way he knows how, and marks his success in strictly robotic terms such as number of enemies killed or conquered.

Transmission and the gift of death

Both *The Word for World is Forest* and *Babel-17* are notable for the way they explore language codes used to program subjects and locate them within a discursive framework. In *Forest*, the people of Athshe are free and at peace until the arrival of the colonists from Earth. In many respects they are naive in their isolation, and this makes them prime targets for the aggressive invaders who enslave them and treat them as sub-human. It is not until Selver transitions beyond the linguistic framework of his homeworld to adopt the violent 'language' of the invaders that the Athsheans are able to seize upon the power they had all along and send the invaders away. As Selver observes: 'You gave me a gift, the killing of one's kind, murder' (122). Up until this point, the concept of murder was alien to the native Athsheans, for they lived in harmony with the world and were unable to understand the behaviour of the colonisers on their own terms. However, the situation compels them to adapt their language and their way of thinking in order to liberate themselves from the threat posed by the Earth-born humans.

And yet Selver's words come with a note of caution. While the Athsheans are able to defeat the colonists with violence, Selver realizes the world will never be the same again. Violence opens up the possibility of further violence down the line, and even in the memory of the act of liberation, so the public memory of the Athsheans will recall that one violent act that allowed them their liberty. In this way, their regained freedom is built on a violence from which they can never escape. Consequently, the colonists grant the Athsheans the 'gift of death' in Derrida's terms, and in so doing build a discursive cage far stronger than the prisons in which so many of them are kept. This symbolic cage links them back to the shared commonality of a language grounded in a new 'reality' imparted upon the Athsheans by the Earth-born colonists. It is Selver, in the role of translator-God (or 'sha'ab' –) who

must interpret the colonisers' language and translate it, thus rendering it intelligible to his people. Only in so doing do the Athsheans then find themselves open to human sin and gain the means with which to deal with the colonisers on their own terms and use violence to expel them from their planet. This narrative very much echoes the Biblical fall from grace of Adam and Eve in the Garden of Eden as they take the forbidden fruit and are cast out of Eden. Here, 'Eden' is the utopian vision of Athshe itself, which is no longer the paradise it once was as the native Athsheans are confronted with their own irreplaceability and knowledge of the gift of death.

There is a similar linguistic reprogramming in *Babel-17*, when Rydra recognizes the programmatic nature of the language code that is controlling Butcher. As Rydra observes:

> You can program a computer to make mistakes, and you do it not by crossing wires, but by manipulating the 'language' you teach it to 'think' in. The lack of an 'I' precludes any self-critical process. In fact it cuts out any awareness of the symbolic process at all – which is the way we distinguish between reality and our expression of reality (188).

This lack of an 'I' in Babel-17 makes it the perfect language code through which to program an assassin such as Butcher, for it emotionally distances him from any preconceived notion of guilt. In this respect, Babel-17 is a superior kind of language for it fixes what Rydra describes as a 'linguistic fault' (192), and bears many of the hallmarks of early computer languages such as Algol and Fortran. But for all its power, Babel-17 is a fundamentally broken, limited language. It forces subjects into a schizoid mode of being (189) and burns out when confronted with paradoxes (184). On the one hand 'It's the most analytically exact language imaginable' (184) and yet over-analysis, or applying the language to a subject that defies

analysis, can cause breakdown. This suggests that Babel-17 on its own is not enough for human subjectivity. It may be powerful, but its power is contextual and limited, much like a non-self-programming machine. So, while Rydra and the Butcher may be content to write a new language, a kind of Babel-18, there remains still the question of whether an eighteenth iteration will ever be enough. Writing and re-writing is a constantly evolving process, and even an awareness of this process may be enough to change modes of thinking forever, much as it is with Selver and the Athsheans.

Chapter 3: Surveillance, Community and Control

Even a feeble-minded man wants to be like other men.[1]

Charlie Gordon in *Flowers for Algernon*

Following on from themes of computerization, and the programmable, robotized subject, there arises the question of surveillance, and how the state is able to monitor and control subjects from afar. This discussion can be broken down into two strands: the technological means of surveillance via cameras, identity cards and so on, and the social surveillance that takes place between subjects and compels them to regulate their own behaviour.[2] Two especially interesting novels in this area are Philip K. Dick's *Flow My Tears, the Policeman Said* (1974) and Daniel Keyes' *Flowers for Algernon* (1966) – both of which engage with many various forms of surveillance that are a long-standing trope in post-war dystopian science fiction, and pose challenging questions about the notion of selfhood and identity within this context.

Of all the writers featured in this study, Philip K. Dick is the one most often associated with dark visions of the future and alternate realities where things are never quite

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[1] Daniel Keyes, *Flowers for Algernon* (London: Gollancz, 1994), p. 1. Further references are given after quotations in the text.

[2] This notion recalls something of the famous Panopticon, described by Jeremy Bentham in the late eighteenth century. Bentham describes an institution where all prisoners can be observed by a single watchman, without inmates ever knowing when they are being watched. This process forces them to act as if they are being watched at all times, and thus compels them to regulate their own behaviour. Jeremy Bentham, *The Panopticon Writings*, ed. by Miran Božovič (London, New York: Verso, 1995).

what they seem. In *Eye in the Sky* (1957), a scientific accident casts characters into alternate universes where each character's fears and prejudices shape reality. In *Time Out of Joint* (1959), protagonist Ragle Gumm discovers that he has been living in an artificial world surrounded by actors manipulating him to predict the locations of nuclear strikes. These themes continue into Dick's later novels, including *The Penultimate Truth* (1964) where citizens live in huge vaults beneath the ground, and are fed fake news in order to keep them compliant. Meanwhile, in *The Three Stigmata of Palmer Eldritch* (1965), citizens take drugs to enter alternate worlds and escape the reality of their everyday lives. They then carry on into Dick's 1970's fiction, with novels such as *A Maze of Death* (1970) depicting artificial worlds used by characters to escape the realities of life and death.

In *Flow My Tears, the Policeman Said* (1974) the protagonist Jason Taverner is a character whose very subjectivity is constituted by his position within the formalized state surveillance network. This is much like Winston Smith in George Orwell's *Nineteen Eighty-Four* (1949), where identity is quite literally constructed and deconstructed by the technology of the state. In this case, Jason Taverner's identity card and electronic record are both means through which he is able to attain social status. However, the loss of his record leads him to be cast out of the community, such that he is no longer regarded as a human subject, but rather an '*unperson*', and he is forced to spend much of the remainder of the novel trying to reintegrate within the system.[3]

Daniel Keyes' *Flowers for Algernon* shares many themes with *Flow My Tears*, including the link between subjectivity and participation. Though far less prolific than Dick, Keyes' most famous novel is no less important, as it explores altered perceptions and changing ideas around what it means to be human. Just like Jason Taverner, protagonist

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[3] Philip K. Dick, *Flow My Tears, the Policeman Said* (London: Gollancz, 1974), p. 25. Further references are given after quotations in the text.

Charlie Gordon's selfhood is tied inextricably with his membership within a formalized community network. When Charlie is transformed from a man of low intelligence into a genius, he comes to realize that his participation within the community group was only ever an illusion, and that he was an outsider all along. While he begins the novel outcast on account of his abnormal *low* intelligence, so he experiences a second exclusion as he is then outcast on account of his abnormal *high* intelligence. In this way, his second exclusion occurs as the result of an excess rather than a lack.

Though they are clearly very different novels, both *Flow My Tears* and *Flowers for Algernon* share much in common for they are both concerned with the nature of the 'reality' in which their protagonists are engaged. Indeed, such is the nature of this reality that each character functions much like a biological robot tied to a particular way of thinking and being, and bound to the community in a kind of cybernetic network. This has echoes of Philip K. Dick *Do Androids Dream of Electric Sheep?* (1968) and the short story 'The Electric Ant' (1969) in which the protagonist is depicted as an 'organic robot' whose reality is shaped by a tape system inside his chest.[4] Just like organic machines, both Jason Taverner and Charlie Gordon are programmed to behave in a certain way. In the case of Jason Taverner, he is 'programmed' through his biological heritage as a genetically enhanced 'six' (13) and the

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[4] *Androids* gives particular attention to the question of the human vs the machine and the organic vs the inorganic, drawing blurred distinctions between each. See: Philip K. Dick, *Do Androids Dream of Electric Sheep?* (London: Gollancz, 1968). Further references are given after quotations in the text. Philip K. Dick, 'The Electric Ant', in *The Collected Stories of Philip K. Dick. Volume 5: We can Remember it for You Wholesale (1963–1981)* (Burton MI, Subterranean Press, 2014), pp. 275–294 (p. 276). Garson Poole discovers the tape system, pp. 279–280.

way in which he is the victim of the psychoactive drug KR-3 (201).[5] He is also programmed through his adherence to a set of assumed norms and values that are linked to state technologies such as his identity card and citizen record. Charlie Gordon too, is similarly programmed, though less through technological means, and more through the program imparted by his position within the social framework, and his ever-present desire to do well and fit in. On the one hand, the community shelters Charlie and offers him safety, and yet he is included not for his adherence to community norms, but through his non-compliance – through his *difference* that serves to place him as an exemplar to other members of the group. In this way Charlie is not only programmed, but serves to program others through his immunizing effect.

In many respects, both Jason and Charlie exhibit elements of what could be described as posthuman subjectivity.[6] In her book *How We Became Posthuman*, N. Katherine Hayles defines the posthuman subject as 'an amalgam, a collection of heterogeneous components, a material-informational entity whose boundaries undergo continuous construction and

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[5] Dick's use of the term 'six' to describe the genetically enhanced humans recalls the Nexus Six androids in *Do Androids Dream of Electric Sheep?* However, in *Androids* the Nexus Sixes are just that – androids – where as in *Flow My Tears* the 'androids' are not androids at all, but generically enhanced humans, suggesting a deliberate blurring of boundaries between human and machine.

[6] Posthumanism is a broad term of contested meaning that goes beyond the scope of this project. While in this case I discuss the work of N. Katherine Hayles, there are other, often contradictory theories of posthumanism, including Robert Pepperell's *The Posthuman Condition*, a sceptical work that challenges the rational humanist view of progress. Readers may also like to consider Donna Haraway's *A Cyborg Manifesto* for its exploration of the blurred boundaries between the human, the animal and the machine. Robert Pepperell, *The Posthuman Condition: Consciousness Beyond the Brain* (Bristol: Intellect, 2003); Donna Haraway, 'A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century', in *Simians, Cyborgs and Women: The Reinvention of Nature* (New York: Routledge, 1991), pp. 149–181.

reconstruction.'[7] However, she notes that the posthuman does not require the subject to be a literal cyborg.[8] Neither Jason nor Charlie is a 'cyborg' as such, but they do inhabit a world in which the boundaries and conditions of their subjectivity are in constant flux, and they both undergo a continuous process of construction and reconstruction. In the first instance, Jason's concept of self is altered completely when his record is 'lost' by Data Central and he is identified not as Taverner, but a man named Taverns (71). Meanwhile, Charlie is similarly constructed and reconstructed multiple times, both by others and crucially, by himself. As he transitions from a position of ignorance to intellectual transcendence, so he reformulates his concept of self in light of new information such that 'I had reached a new level, and anger and suspicion were my first reactions to the world around me' (41). He also gains a heightened awareness of others, and his place within the societal network, to the point where he becomes paranoid and observes 'It's getting harder for me to write down all my thoughts and feelings because I know that people are reading them' (41).

While Hayles sees the posthuman subject as a liberating prospect, moving subjects 'out of some of the old boxes', these same 'old boxes' provide some measure of comfort for those located within them.[9] As an outsider, Jason finds he is unable to function within the new world in which he finds himself, and so seeks to reintegrate himself within the 'old' system. Meanwhile, Charlie's path to genius leads him to yearn for simpler days when he could be content in his ignorance, when his 'friends' were his true friends, and not the illusory friends that he recognizes when he comes 'into the light'.[10] In each of these

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[7] Hayles, p. 3.

[8] Ibid., p. 4.

[9] Ibid., p. 285.

[10] When Charlie discovers the true nature of his friends' laughter, he notes in his diary that 'I am ashamed' and feels regret (30).

examples, both Jason and Charlie encapsulate a paradox of posthumanism, for in breaking down the boundaries of their fixed identities, so they both lose something of what constituted their identities in the first place. In each case the characters expose the tension between the freedom offered by their new sense of being (Jason's lack of record, and Charlie's intellectual transcendence) and the comfort offered by the safety net of their previous well-established identities. A similar paradox is to be found in biopolitical subjectivity. On the one hand, the biopolitical state compels subjects to behave in an ordered robotic fashion such that they are predictable and easily controlled. Yet at the same time, the state seeks to 'humanize' the robotic act, such that the robotic act is not presented as robotic at all, but rather *human*. In this way the very concept of the human becomes a site of contestation, used and manipulated as a means of sovereign control.

Flow My Tears, the Policeman Said

Published in 1974, Philip K. Dick's *Flow My Tears, the Policeman Said* follows the travails of Jason Taverner, a major celebrity and TV star (11). However, Jason isn't just a TV star, he is also a 'six' – the product of a secret government experiment to create highly intelligent, beautiful people. As a genetically enhanced public figure, Jason lives a life of luxury and fulfilment until one day all record of him inexplicably disappears. In a world where personal identity is codified in public record, Jason loses everything that makes him who he is and effectively ceases to exist. Things then get worse when he is accused of a crime he didn't commit: he 'exists' enough be found guilty of a crime, yet not enough to be worthy of public record. In effect, he becomes a distorted version of Giorgio Agamben's *homo sacer* – a living non-human possessed of physical attributes, yet 'invisible' in the eyes of the people and the sovereign state. It is only as he seeks to clear his name that Jason learns that he is not the victim of an *electronic* mistake, but rather of a powerful psychoactive drug, KR-3, which has

been taken by Alys Buckman, the sister of Police General Felix Buckman. Though he did not take the drug himself, Jason is a victim of its effects as it distorts reality and manipulates the time-binding function of the brain (184). It is only when Alys dies that the far-reaching effect of the drug is revealed. As the Chief Deputy Coroner concludes:

> He passed over to a universe in which he didn't exist. And we passed over with him because we're objects of his percept-system. And then when the drug wore off he passed back again. What actually locked him back here was nothing he took or didn't take but her death. So then of course his file came to us from Data Central (186).

As an explanation, this is fairly bizarre. The suggestion is that the characters were pulled into Jason's percept-system on account of the drug KR-3 – and yet it wasn't Jason who took the drug, but rather Alys Buckman. Why then did the characters not shift into Alys' world, rather than Jason's? Or were they in Alys's world all along? Were any of Jason's decisions ever really his own?

Clearly, *Flow My Tears* explores a number of themes relevant to this study. Firstly, there is the question of identity, surveillance, and public record – the notion that identity is constituted not just in the individual, but also within the wider community, in a kind of cybernetic circuit that creates and sustains an artificial conception of self. This follows Peter Fitting's Marxist reading of Dick that it is 'not simply our knowledge of reality which is constructed, but the identities for this reality as well' – that disrupted reality reveals the workings of ideology.[11] This double constitution mirrors something of Louis Althusser's

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[11] Peter Fitting, 'Reality as Ideological Construct: A Reading of Five Novels by Philip K. Dick', *Science Fiction Studies* 10:2 (July 1983), 219–236 (p. 229).

notion of ideology, and the interpellation that creates 'concrete' subjects.[12] However, Althusser's reading is not without some controversy, for it raises several questions around the nature of the relationship between individual subjects and ideology, much as is the case with Davidson in *The Word for World is Forest*. In particular, Althusser raises the question of the 'permanence' of subjects and ideology through time. Taken together, these two readings move the argument beyond a Marxist one of production to one of desire and the production of self – but a *collective* production of self where many individuals share in one or more artificial realities.

Meanwhile, *Flow My Tears* also raises the question of the electronic record, and the control exercised by machines. In the novel, the computer Data Central is the core repository of all information and extends across a planet-wide network. While most of the characters trust the machine completely, the novel reveals the many numerous flaws in the system. One of the most significant is the Kafkaesque bureaucracy associated with the logic circuits of the machine, and the way that errors can become replicated and turned into pseudo-truths that are not grounded in experiential fact. A good example is the way that authorities pull the wrong file on Jason, and the initial mistake works its way through the system to the point where the error becomes almost impossible to fix (71).

Alongside the electronic 'mind' of Data Central, there is also then the question of the organic mind, and its manipulation with psychoactive drugs. Just as computers can be programmed with (human) code, so human minds can be similarly programmed with

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[12] Althusser suggests that the subject constitutes ideology and is in turn constituted by ideology, such that 'there is no ideology except for concrete subjects, and this destination for ideology is only made possible by the subject'. Louis Althusser, 'Ideology and Ideological State Apparatuses (Notes towards an Investigation)', in *Lenin and Philosophy and Other Essays*, trans. by Ben Brewster (New York: Monthly Review Press, 2001), pp. 85–126 (p. 115).

substances such as KR-3. This notion raises the question of agency, and the extent to which any individual can be held accountable for outcomes that are far beyond their power to control. After all, Jason Taverner does not directly take the drug KR-3, yet he still becomes a victim of its effects. Similarly, Alys Buckman may have felt she had no choice but to take the drug in order to create a sense of meaning – just like the Can-D and Chew-Z addicts in *The Three Stigmata of Palmer Eldritch*.

This fascination with human programming and the manipulation of the human mind was one that became increasingly relevant during the Vietnam period. Indeed, *Flow My Tears* was published only a few years before revelations emerged surrounding the CIA's use of psychoactive drugs in its top-secret operation MK-ULTRA, which came to light in a Senate Hearing in 1977.[13] One of the key witnesses in the case was the CIA's 'chief sorcerer-scientist' Sidney Gottlieb, who claimed that the project aimed to 'investigate whether and how it was possible to modify an individual's behavior by covert means.'[14] According to Martin A. Lee and Bruce Shlain, the drug trials were so extensive that 'By the mid-1960s nearly fifteen hundred military personnel had served as guinea pigs in LSD experiments conducted by the US Army Chemical Corps.'[15] As LSD trials proved less than conclusive, the CIA and military then moved research onto more powerful drugs such as Benzodiazepine

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[13] Martin A. Lee and Bruce Shlain, *Acid Dreams: The Complete Social History of LSD: The CIA, the Sixties, and Beyond* (London: Pan Books, 1992), pp. xxi-xxiii. See also: U.S. Congress, Joint Hearing before the Select Committee on Intelligence and the Subcommittee on Health and Scientific Research of the Committee on Human Resources (3 August 1977), *Project MKULTRA, the CIA's Program of Research in Behavioral Modification*, 95th Congress, first session <https://www.intelligence.senate.gov/sites/default/files/hearings/95mkultra.pdf> [accessed 4 October 2017].

[14] Lee and Shlain, pp. xxi–xxiii.

[15] Ibid., p. 40.

(BZ), which was reportedly used as a counterinsurgency weapon in Vietnam, and may have even been a contingency to use in the case of major civilian insurrection.[16]

In each of these examples, drugs provide a means with which to manipulate or 'program' human subjects, much like a computer code used to program robots. This observation has also been made by Chris Hables Gray, who notes how the 'programming of soldiers with drugs is analogous to the programming of computers'.[17] However, human beings are not always so easy to control. During the Vietnam War, the US military suffered massively as a result of the burgeoning drugs culture of the period that was itself boosted by the ready availability of hallucinogens. In 1971, of '2,500 soldiers evacuated for medical reasons [...] 55 percent were drug abusers rather than battle casualties.'[18] So, while on the one hand drugs were seen as boon for their mind-altering potential, so they were also a social burden when taken into individual hands beyond state control. Again, this raises the question of the relationship between the individual and the collective, the citizen and the state. On the one hand the state sanctions certain behaviour (e.g. drug use) for 'collective' gain, yet also prohibits the same behaviour when the outcomes move beyond the bounds of the predictable – when the state effectively loses control. It is particularly relevant then, that in *Flow My Tears* it is Alys Buckman, the sister of a Police General, who succumbs to drug addiction and imparts her altered reality on others, hinting at a direct link between authority and forms of reality control. At the very least, Felix Buckman does not stop his sister in her activities,

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[16] Ibid., p. 43.

[17] Chris Hables Gray, 'The Cyborg Soldier: The US Military and the Post-Modern Warrior', in *Cyborg Worlds: The Military Information Society*, ed. by Les Levidow and Kevin Robins (London: Free Association Books, 1989), pp. 43–72 (p. 63).

[18] Herring, p. 60.

suggesting a certain acceptance of drug culture that the state tolerates, or in some cases even enables, in order to keep the wider community intact.

Surveillance and fear

One of the most prevalent themes in *Flow My Tears* is the use of surveillance to keep the civilian population in check. As a TV celebrity, Jason Taverner is the ultimate incarnation of the 'man under surveillance', for he is forever under the watchful eye of both his TV audience *and* the apparatus of the state. It comes as a shock then for Jason to find himself cast outside the system, beyond the reach of the state's surveillance network. As he crosses the threshold into a zone of non-surveillance, he feels as though he has been stripped of something fundamental to his existence. This is a reversal of the usual dystopian trope where the protagonist seeks to escape surveillance, for rather here Jason feels he is lost without it. As he observes: 'I can't live two hours without my ID [...] I don't even dare walk out of the lobby of this rundown hotel and onto the public sidewalk. [...] I am what they call an *unperson*' (25). The use of the term 'unperson' here is a clear reference to George Orwell's *Nineteen Eighty-Four*, where an unperson is someone who is quite literally eradicated by the state, both physically, and in historical record.[19] There are also plenty of real-world examples of similar public erasure in totalitarian states such as Stalin's Soviet Russia, and more recently, in Kim Jong-un's North Korea.[20]

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[19] In one example Winston Smith is tasked to make Comrade Withers an unperson, and notes, 'Withers, however, was already an *unperson*. He did not exist: he had never existed.' See: George Orwell, *Nineteen Eighty-Four* (London: Penguin Books, 1989), p. 48.

[20] 'North Korea images confirm removal of Kim Jong-un's uncle Chang Song-thaek', *BBC News*, 9 December 2013 <http://www.bbc.co.uk/news/world-asia-25295312> [accessed 13 September 2017].

In *American Science Fiction and the Cold War*, David Seed argues that through his loss of identity, Jason becomes 'an unlocated signifier whose very existence challenges the elaborate state apparatus of checkpoints, bugs [etc.]'.[21] In Seed's reading, Jason's position as an insider-outsider challenges the use and efficacy of state apparatus to keep the population in check. And yet for the many millions of other inhabitants in the novel's world, the apparatus works perfectly well. Jason is the exception – a particularly famous exception, whose position as celebrity serves to highlight his unique dual position both inside and outside the system. Indeed, such is the degree of Jason's 'exceptional' nature, Seed's argument should really be reversed, for in challenging the elaborate apparatus of surveillance, Jason actually serves to *enshrine* the norm, such that he desires to return to the system and return from exclusion to the safety offered by 'personhood' within the boundaries of the state. However, despite Jason Taverner's best efforts to reintegrate, state bureaucracy rejects him, assuming he is not a famous TV celebrity, but rather a diesel engine mechanic named Taverns (71). This mistake replicates itself through the system as each link in the bureaucratic chain assumes the information it receives is correct. As such, the bureaucrats have no cause to check the system's output against experiential fact, for to do so would run counter to the logic of using a machine in the first place.

Similar themes can be found across many of Philip K. Dick's novels. In *The Penultimate Truth* (1964), political commissioner Nunes is noted for his 'bureaucratic rigidity, his almost neurotic determination to fulfill to the letter each order coaxed down to them'.[22] In this case, the very core of his function is built on the need to obey instruction in a machine-like way. This function serves to shield Nunes from responsibility, as he is never

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[21] Seed, p. 140.

[22] Philip K. Dick, *The Penultimate Truth* (London: Gollancz, 1964), p. 12. Further references are given after quotations in the text.

accountable for the decision, only the act. A similar split between the decision and the act can be found in the workshops of Runcible's conapts, where workers are unknowingly responsible for working on the machine parts that are used in the robotic simulation (sim) of the nation's 'Protector' Talbot Yancy. However, in this case, when the sim starts to fail, there are dire consequences for the workers:

> [And], at a work bench in one of the shops of Runcible's conapts, a workman had been relieved of his duties and possibly his life... without ever knowing why or what—because in the first place he hadn't known what the tiny output coil or diode or just plain *thing* had been used for (52).

Here then, the unwitting workmen are held *fully* accountable for a failure in their production, despite not knowing where their output is used. Indeed, such knowledge may well have made them better able to fulfil their duties. However, in this case the workers are *accountable*, yet not strictly *responsible*, oscillating between the two points such that they function as scapegoats for a failure in which they had no real part.

This theme recurs throughout the science fiction of the Vietnam period, and not just in the work of Philip K. Dick. The rise of the machine and 'machine thinking' coupled with questions surrounding the nature of the human brain led to a whole range of different novels exploring the relationship between the human and the machine, and the 'responsibility' of each. Robert A. Heinlein's *Starship Troopers* (1959) and Joe Haldeman's *The Forever War* (1974) both explore this problematic issue, with the omniscient battle computers able to terminate the augmented soldiers at any point. There is also the example of the AI character Mike in *The Moon is a Harsh Mistress* (1966) and the ways in which Mike is able to deceive the population of Luna into thinking he is the human leader Adam Selene. Ursula Le Guin

also touches on these issues in *The Dispossessed* (1974) in the way in which the computer Divlab isolates Shevek and other outsiders by assigning them to work placements far away from home. All of these novels suggest to an ongoing social dialogue with regards to the respective roles of the human and the machine in society. They also (to differing degrees) suggest a criticism of placing too much faith in machines and machinic systems thinking.

All of these texts touch upon the question of transgression or 'error', and what should happen when things go wrong. This is an important issue, for it reveals a key paradox at the heart of human-machine relations. When Jason Taverner loses his identity in *Flow My Tears*, he observes that, 'they had, in their usual bureaucratic fashion, pulled the wrong file on him. And, in their rush, they had let it stand' (71) – or in other words, the *human* users had not paid enough attention. This presents a problem. In its perfect adherence to the law (or rather, its programming, or the bureaucratic function), so the computer Data Central exposes the imperfection of the law itself – the imperfect programming that can never account for the infinity of singular cases. And yet despite this imperfection, the computer is still far more reliable than the human, for it can produce consistent results time and time again. So, while on the one hand, Data Central is the perfect object of human creation, repeating human decision over and over again, this same process also reveals the possibility of error in the same decision, and the fallibility of both the human and the machine.

In many respects, desire for the machine is also a desire for order – a direct response to the problems associated with an unpredictable, disordered world. This desire goes at least as far back as the turn of the twentieth century and the advent of Fordism and the standardization of factory processes on a massive scale. By applying scientific thinking to the workplace, factory production lines became far more efficient and easier to control. This thinking found its way into the Harvard Business School and helped create a critical consensus among business leaders that management science could be applied to any situation

to make it run in an ordered, predictable way. This mode of thinking gained particular prominence during the Second World War, with early computers used to calculate fire patterns and plan bombing campaigns. The relative 'success' of this approach during the war in Europe sowed the seeds for the managerialization of wars to follow, leading to the well-documented problems of Vietnam (see Chapter 2). With the rapid expansion of computer technology in the post-war period, these same processes were turned to governance back home, where management science and systems thinking became the modus operandi for the newly computerized state machine.

But from where does this impulse to order arise? In his work *Communitas,* philosopher Roberto Esposito suggests that the answer may be *fear* – that fear is an integral part of the state's operation, and that the impulse to order is in some way a response to the fear of the unknown. Thus, he argues that 'The state's task is not to eliminate fear but to render it "certain."'[23] In this case, Esposito differentiates between the despotic state and the 'legitimate' or non-despotic state, not by the levels of fear that the state imposes, but the use to which that fear is put. In Esposito's reading, the non-despotic state manipulates fear such that it seeks to *render it certain*. Thus, it frames subjective life in relation to a knowable fear of a knowable threat. This is in contrast with the *un*knowable fear of the despotic state that relies on fear's decided *unknowability* to impose control upon its subjects. In the despotic state, subjects obey because they fear what could happen, whereas in the non-despotic state, they obey because the state provides a grounding against that fear – it provides a level of certainty in a world that the state itself frames as uncertain. In effect then, the 'non-despotic' state (if it can really be called thus) both produces *and* responds to the same fear: it becomes self-constituting because it determines the very terms on which it is made.

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[23] Roberto Esposito, *Communitas: The Origin and Destiny of Community*, trans. by Timothy Campbell (Stanford: Stanford University Press, 2010), p. 25.

In order to render fear 'certain', first there has to be a knowable threat. Almost all threats are rendered knowable through the use of technological or social (human) surveillance, and the way in which surveillance exposes threats to the community and the force of law. In this case, surveillance serves to create threats in the public perception, for any threat or possibility of threat recalls all other threats including those already passed, and those yet to come. Thus, surveillance serves not only to make threats knowable, but also inscribe fear in the hearts and minds of the public the state seeks to protect. A good example is the SAGE missile defence system rolled out across US military bases in the 1950s. These dark, foreboding buildings housed 'phenomenal electronic brains' designed to detect enemy bombers approaching the US.[24] Over time, SAGE came to represent the ever-present threat of nuclear war in the minds of the US public, with many articles in the popular press featuring the dark imposing buildings alongside pictures of radar screens flickering ominously, ever watchful for the nuclear threat. However, as Paul N. Edwards observes, the SAGE system was flawed from the very start, and couldn't have ever really worked. This is because the system was primarily housed above ground, and as such would have been among the first targets in any nuclear attack. Not only that, but it was also rendered obsolete by the arrival of intercontinental ballistic missiles (ICBMs) from 1957 that didn't require a plane to deliver them.[25] Thus, it is fair to argue, as Edwards does, that SAGE functioned more as an *ideology* and industrial policy, than as an effective means of defending the nation.[26]

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[24] 'Pushbutton defense for air war', pp. 62–68.

[25] The first successful ICBM, the R-7, was launched by the USSR on 21 August 1957. The R-7 launch vehicle was also used to place the first artificial satellite, *Sputnik I*, in orbit later in the same year.

[26] Edwards, *The Closed World*, p. 110.
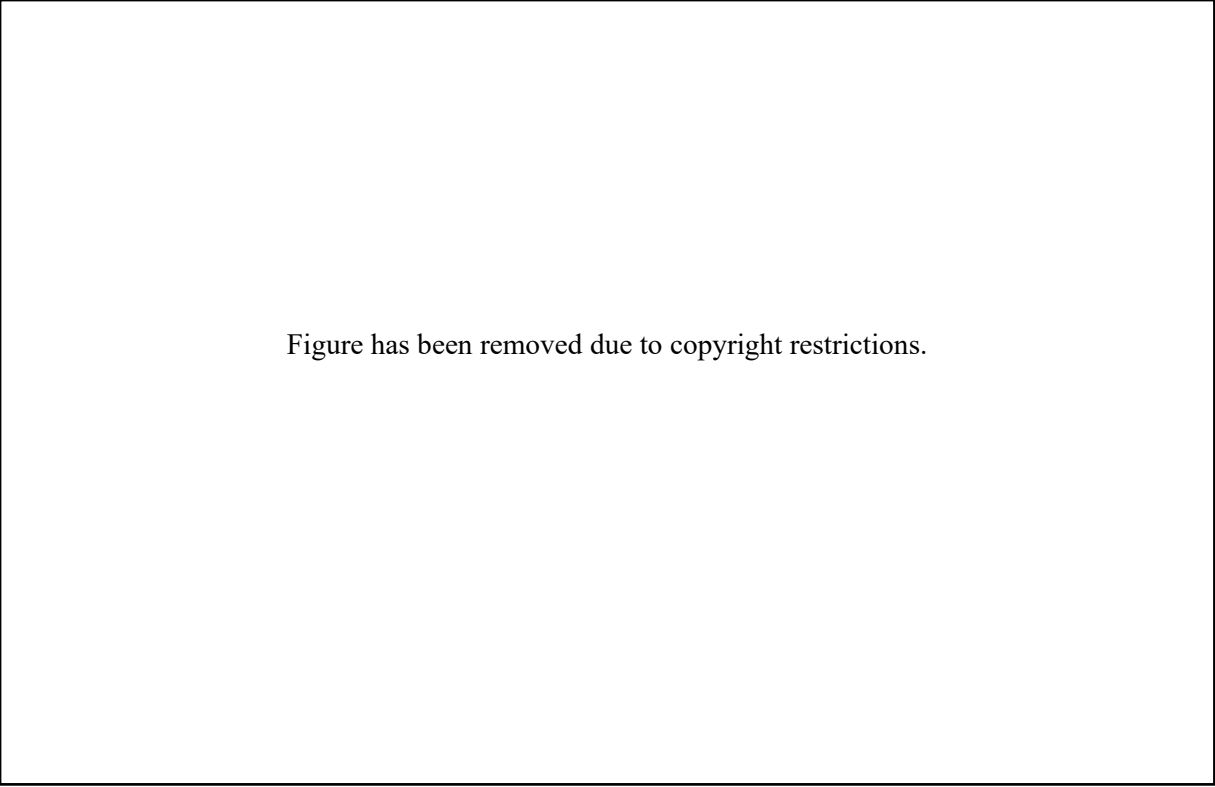
Figure has been removed due to copyright restrictions.

Figure 9 – 'Pushbutton defense for air war: complex SAGE system is built by U.S. to stop enemy

bombers', *Life*, 11 February 1957, pp. 62–68.

This example goes to show how surveillance, even of the ineffective kind, can serve

to create and sustain a public discourse of fear, reinscribing the dichotomy between those

inside and those outside the system. For all the magazine articles on SAGE and the

'protection' it offered, it didn't really matter whether the system *worked* or not, for in many

respects it had already served its primary function: to sustain and reproduce the apparatus of

the surveillance state. By creating a clear line of distinction between those inside and outside

the state's borders, so the borders themselves are defined by the extent of the surveillance

network and the extent to which the state can see and control those within it. Though a threat

may or may not exist, still the possibility of a threat remains, and subjects are compelled to

further integrate within the system for fear of the outsider and the threat posed to their lives.

However, surveillance doesn't just guard against *external* threats: it also guards

against the enemy within. Here, the mere existence of surveillance is enough to put subjects

on guard, for it reiterates the performative element of identity production – the fact that any 'insider' could be rendered an 'outsider' at any point. Thus, surveillance, and the very possibility of surveillance, has a constitutive role in shaping the identity of biopolitical subjects. It does this by compelling subjects to behave in such a way that they aren't perceived as a threat and so aren't outcast by the community. There is also then the additional role that surveillance has to play in shaping the history of the community in which it operates, shaping both the border and the community itself. This is because identity performance is recorded, and thus codified in public record. It is therefore not enough to act in a way that is deemed appropriate in the present, but rather to act in such a way that will be deemed appropriate in all future-presents as well. Identity performance thus becomes a mark that extends into the future, much like the tattooed ident number that Jason Taverner reveals on his arm: 'His somatic license plate, to be carried by him throughout his life, buried at last with him in his longed-for grave' (27).

In many respects, Jason's 'somatic license plate' is a form of biopolitical tattoo similar to that which Giorgio Agamben criticizes in his article 'No to Biopolitical Tattooing', published in the wake of a cancelled trip to New York. According to Agamben:

> What is at stake here is none other than the new and 'normal' biopolitical relation between citizens and the state. This relation no longer has to do with free and active participation in the public sphere, but instead concerns the routine inscription and registration of the most private and most incommunicable element of subjectivity— the biopolitical life of the body.[27]

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[27] Giorgio Agamben, 'No to Biopolitical Tattooing', trans. by Stuart J. Murray, *Communication and Critical/Cultural Studies* 5:2 (June 2008), 201–202 (p. 202).

While Jason Taverner may have his tattoo literally carved out onto the surface of his skin, the 'tattooing' that Agamben refers to is the logging of fingerprints and photographs by US authorities. In this case it is not so much a literal tattoo carved onto human skin, but the reimagining of the human form as a kind of tattoo – or signature (see Chapter 4) – that situates the individual within the biopolitical system. For Agamben, the issue is not so much the act of surveillance itself, but its overt nature such that it may herald additional demands of subjects further down the line:

> The biopolitical tattooing that the United States is now imposing in order to enter its territory could very well be the harbinger of future demands—to accept as routine the inscription of the *good citizen* [my emphasis] into the gears and mechanisms of the State. This is why we must oppose it.[28]

But what does Agamben mean by 'good citizen'? Can there ever really be such a thing? Events post-9/11 go to show how modern-day surveillance networks struggle to effectively monitor massive populations. This situation is rendered even more difficult given that in most cases, the terrorist act is often the first and only such act a terrorist commits, making it hard to profile a suspect based on their previous patterns of behaviour. In such a case, states are forced to make a decision based on limited information and a lack of foresight, making the problem of defining and monitoring 'good' and 'bad' citizens even more problematic. So, while Agamben may decry the inscription of 'good' citizens within the gears and mechanisms of the state, what other option does the modern state have? In many respects, the 'biopolitical tattooing' that Agamben refers to is a direct consequence of what he himself

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[28] Ibid., p. 202.

describes as the *state of exception* – the emergency that has now become the norm, such that it has 'today reached its maximum worldwide deployment'.[29]

This concept of the 'good citizen' is an important one. In *Flow My Tears*, it is significant that Jason Taverner is no ordinary citizen, but rather a celebrity and a TV star. As such, he is both comfortable under surveillance, and also sensitive to the nuance of his performance within the wider surveillance network. He therefore understands the need to act in a way that is consistent with his role within the public eye; he understands the need to adhere to a certain *pattern of behaviour* that fits with the model of the good citizen.

However, these same skills also pose a problem for the state. This becomes apparent when Jason is able to perform his way out of trouble, acting out the role of the mechanic named Taverns when the police misidentify him, rather than his usual celebrity self (73). This uncanny ability to switch between roles demonstrates the problem inherent in surveillance networks that rely on external bodily performance, as patterns of behaviour can be very easily subverted by those who recognize the patterns and put them to nefarious use. For example, the modern-day terrorist, embedded within the system, may act out a role as a 'good' citizen until the moment to strike arises and they shed their good citizen status. This ability to shift so quickly, and without warning, circumvents most methods of surveillance, for there is no way to tell if or when a citizen might defect.

This blurring of boundaries between the good and the bad citizen – between the human and non-human actor – is a common theme in the work of Philip K. Dick. In one of his most famous examples, the character Rick Deckard in *Do Androids Dream of Electric Sheep?* is tasked with tracking down and 'retiring' (killing) a number of Nexus-6 androids who escape Mars to take up new lives back on Earth. Deckard's task is made harder still by

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[29] Giorgio Agamben, *State of Exception*, trans. by Kevin Attell (Chicago: The University of Chicago Press, 2005), p. 87.

the fact it is so difficult to tell human and replicant apart. This blurring of boundaries becomes even more problematic when Deckard discovers that some humans might not be able to pass the Voigt-Kampff test – the test used to distinguish human from machine. As Inspector Bryant observes, 'If you tested them in line with police work you'd assess them as humanoid robots' (33). Indeed, John Isidore is one such character who would not pass the Voigt-Kampff test on account of his low IQ that renders him an outsider much like Charlie Gordon in Daniel Keyes' *Flowers for Algernon*. And yet for all his outsider status, still Isidore longs to fit in and perform a 'good' public role, in order that he no longer be perceived as a subhuman 'chickenhead'.[30]

The human machine

The theme of acting and performance is an important one in *Flow My Tears*, and one that has many implications for the characters trapped in the vast surveillance networks. Much as Judith Butler describes the notion of performative gender, it is significant that Jason Taverner is himself an actor, and a very good one at that.[31] He is therefore very good at performing to a pattern, and passing as characters other than himself. This begs the question: if Taverner is an actor, then who then is providing the script? In one sense, the 'script' is provided by the state. In this case, power structures encourage compliance through means that can't be attributed to a single sovereign act. However, it is not just segmentary power structures that influence and shape Taverner's behaviour, for there is an element of self-regulation as well. In this way,

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[30] On learning that a new resident will be moving into his block, Isidore observes: 'I have to keep calm [...]Not let him know I'm a chickenhead. If he finds out I'm a chickenhead he won't talk to me; that's always the way it is for some reason. I wonder why?' (23).

[31] Judith Butler's seminal work in this area, *Gender Trouble*, was first published in 1990, and was followed up with *Bodies That Matter* in 1993.

Jason Taverner also improvises his own lines based on his perception of what he believes his orders might be. This self-regulating *microfascistic* mechanism is similar to the coding described in Le Guin's *The Word for World is Forest* and Delany's *Babel-17*. This coding is far more effective than direct orders, for it provides an illusion of freedom and agency while subjects remains bound within the segmentary power network of the biopolitical state machine.

It is significant then that just like Taverner, Police General Felix Buckman is similarly concerned with the performative nature of identity. Towards the end of the novel, he acknowledges that: 'We play roles [...] We occupy positions, some small, some large. Some ordinary, some strange. Some outlandish and bizarre. Some visible, some dim or not visible at all' (191). Though they exist on opposite sides of the surveillance fence, both Taverner and Buckman share similar insights into the performative nature of life within the networked surveillance society, and how identity is tied up with the discourse of citizenship and what it means to be a 'good' citizen. As David Seed observes, 'The aim of situating Taverner within an information network is desired by both men [Taverner and Buckman] although each recognizes the totalitarian nature of the regime supported by such a network.'[32] This comment suggests that there is a kind of self-deception at work here by the two characters, as if the surveillance to which they submit is a 'necessary evil' to be endured as part of their membership of the state – much like an alibi. Yet, to suggest that surveillance is something to be endured is to perhaps underplay its long-standing role in society. After all, surveillance is not just limited to technological means and is certainly not a new development. Rather, technical innovation is merely an extrapolation of power structures that have been in play for many hundreds of years, and extend back far beyond the origins of Foucault's biopolitics.

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[32] Seed, p. 140.

This link between technology and control reflects many of the debates that were taking place during the post-war period. In an editorial, published in *Time* magazine in January 1950, the writer ponders whether the computer (such as it was then) is a 'ruler', or a tool, asking: 'Will the time come at last when the machines rule—perhaps without seeming to rule—as the mysterious "spirit of the colony" rules individual ants?'[33] Over time, these concerns worked their way into popular culture, both in the US, and abroad. From Stanley Kubrick's *2001: A Space Odyssey* (1969), to TV series such as *The Six Million Dollar Man* aired in the 1970s, computers and machine intelligence gained much air time, occupying an ambivalent space in which they were both lauded for their power and seemingly unlimited potential but also feared for the threat they may pose to the human race.

It is this question of humanity, and what it means to be authentically 'human', that Philip K. Dick puts as his central objective.[34] In his short story 'The Electric Ant', protagonist Garson Poole is quite literally an 'electric ant', whose reality is shaped by a tape running through his chest.[35] This leads us to wonder just who or what is programming Poole's 'reality-supply' tape to begin with, and whether Poole is a human being, or rather a human-robot or biological machine. And yet for all the dystopian implications of the reality control tape, Poole also finds it liberating in the new perspective it gives him, setting him apart from 'every human who ever lived and died' such that it offers something almost *beyond* human experience.[36] In another example, Rick Deckard in *Do Androids Dream of*

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[33] 'The Thinking Machine', *Time*, 23 January 1950

<http://search.ebscohost.com.ezproxy.lancs.ac.uk/login.aspx?direct=true&db=a9h&AN=54156560&site=ehost-live> [accessed 21 June 2017].

[34] Dick, 'How to Build a Universe', p. 260.

[35] Dick, 'The Electric Ant', p. 276. Poole later finds the tape in his chest pp. 279–280.

[36] Ibid., p. 281.

Electric Sheep? is tasked with killing the target Polokov who hides in plain sight as 'a special [human], an anthead' (73). In this case, Polokov is able to avoid capture based on his ability to mimic (sub-) human behaviour. This then raises the question of how we define human authenticity. In one respect, the 'authentic' human is the one most able to *perform* the role of the human – not necessarily the one who has the body of a biological human (i.e. John Isidore). And yet, as Dick points out, the reverse can also be true. In the case of Isidore, his 'humanity' is also bound up in his empathy and his ability to see beyond the purely biological. And yet his performance is not quite good enough to class him within the realms of 'normal' human behaviour. In this way he inhabits two worlds simultaneously, the human and the non-human, revealing the contradictions and uncertainties on which our understanding of the human is based.

The examples of Poole and Isidore provide an ominous backdrop for speculation surrounding the robotic 'hive mind' and the way machines were infiltrating everyday life. Perhaps most chilling of all is the way the real-life engineers in the 1950s considered their relationship with the machines that were gradually gaining prominence. According to the engineers interviewed by *Time* in January 1950, 'When a machine is acting badly, we consider it a responsible person and blame it for its stupidity. When it's doing fine, we say it is a tool that we clever humans built'.[37] This revealing comment goes to show something of the ambivalent nature of our (human) relationship with machines. On the one hand machines are tools put to use by humans, yet they also have the potential to be something more. In this particular case, machines only ever acquire a form of subjectivity when they go *wrong* – much like the replicants in *Do Androids Dream of Electric Sheep?* In Philip K. Dick's novel, the androids are not considered faulty or 'wrong' until they break with their programmed

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[37] See: 'The Thinking Machine'.

pattern of behaviour and leave Mars to come to Earth. They don't then become a threat until they acquire *human* attributes or the *human* capacity to fail. It is interesting then, that in Dick's novel, the androids are not killed, but rather 'retired'; thus, they are 'human' enough to fail, but not human enough to die a human death.

These examples go to show how conformity can act as a form of social camouflage, much as Captain Don Davidson is able to hide in plain sight in *The Word for World is Forest*. In these examples, if a human conforms to 'normal' (programmatic) patterns of behaviour, then they are considered to be acting in a 'normal' fashion. It is only when they go outside of the expected patterns of normality that they are considered 'faulty' or 'broken', and are outcast much like Jason Taverner in *Flow My Tears* and Charlie Gordon in *Flowers for Algernon*. Similarly, robots are judged in much the same way. If a machine conforms to a set pattern of behaviour then it is considered to be acting as normal; yet to stray outside this assumed pattern is considered abnormal, or rather *human* – or in other words, behaving in a non-standard pattern.[38] In both cases, the definition of 'normal' is aligned with an arbitrary conception of what a 'normal' pattern of behaviour should look like. In this case, 'normal' human behaviour is actually a form of *robotic* behaviour, for it demands conformity to a set pattern.

But there is also an element of self-deception here, for the machine is a *human* construct – an artificial means of changing the world that is ultimately rooted in human endeavour, from the mining of resources right through to design and manufacture. In this way the machine becomes both the perfect embodiment of human accomplishment, and the perfect alibi for human failure. While a machine is working as intended, it is a 'tool that we

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[38] This comment has particular resonance in a modern-day context where computers are used to track patterns of movement and create profiles of terror suspects based on 'normal' or 'abnormal' behaviour. This profiling is often used for the purpose of targeted killing.

clever humans built', and yet when it acts other than intended its responsibility is fully its own.[39] Again, this recalls a philosophical ambivalence when it comes to responsibility and guilt. Either the machine inhabits a separate ontology to the human and is therefore guilty as an individual unit (or 'subject'), or it is a tool put to use in strictly human hands.

This paradox is not just limited to the definition of the robot, but to humans themselves, who are often expected – and indeed *required* – to behave like machines. Consider the example of the Nazi prison camp guards and US bomber pilots discussed in Chapter 2. In both cases, the human actors are expected to behave like robots and obey orders without question, and yet they can also be retrospectively tried as individuals for an essentially collective act – depending on which side they happen to be on at the end of the war. In both these cases both the prison camp guards and the bomber pilots are perfectly 'guilty' of their crimes as individuals. However, their 'guilt' is only ever an arbitrary assignation – an illusion that avoids the question of who or what created these 'individuals' in the first place.

The technology of control

This discussion poses some interesting questions around the role of state surveillance and the enforcement of law. In one noteworthy section of *Flow My Tears*, the apparatus of state surveillance is put to work to target Jason Taverner and eliminate him as a 'threat'. At this point, Buckman tells his officers to 'make sure they put both a microtrans and a heterostatic class eighty warhead on him. So, we can follow him and if it's necessary at any time we can destroy him' (126). Alys then later informs Jason that 'This little bomb is the size of a seed [...] And it's embedded, like a tick, in your skin. Normally, even if you knew it was there someplace on you, you still could never find it [...]' (128).

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[39] See: 'The Thinking Machine'.

In this example, the bomb serves to locate Jason within the surveillance network and the wider state structure, such that he is both symbolically and physically bound within it. Practically speaking, this means that the state can do violence against him at any point should he fail to adhere to the direct letter of the law. In this way, the tiny bomb planted on Jason Taverner is symbolic of the power the state can exercise over any citizen at any time. Here, the very *unknowability* of the bomb – its untraceable nature – means that any citizen can be 'bugged' like Jason Taverner, and a citizen doesn't even need to be bugged in order to experience the same level of threat. Thus, the mere *possibility* of surveillance and the threat of violence compels citizens to obey in standardized robotic fashion.

In the case of Jason Taverner, he is moved from the general case where he is just one citizen in many millions, to the specific, wherein he is specifically tracked and treated as a special case of note. In this example, Jason's status as a threat means that the surveillance at work upon him becomes that much more severe, and he becomes a form of Agambian *homo sacer* who is marked as outcast and can be killed at any point. And yet, as Jason discovers, there is no chance of his ever losing his status as a potential threat. As he observes: 'Once they notice you [...] *they never completely close the file*. You can never get back your anonymity. It is vital not to be noticed in the first place' (73). Such is the danger associated with being 'marked' that citizens are further compelled to avoid any course of action that might lead them to be marked thus. In this case, the threat of being outcast is such that self-regulation becomes an even more effective means of control, and in most cases, citizens are persuaded to *over*-compensate in order to avoid consequences that might last a lifetime.

Police General Buckman is very clear in this regard for he believes, 'Jason Taverner *let* himself come to our attention' (191 – my emphasis). But could Taverner have acted any differently? According to Buckman at least:

If he could have stayed as he started out: one small man without proper ID cards, living in a ratty, broken-down, slum hotel – if he could have remained that he might have gotten away... or at the very worst wound up in a forced-labor camp. But Jason Taverner did not elect to do that (191–192).

In such a situation, Buckman considers the desire to be recognized within the system as 'irrational' (192) – suggesting that all good citizens should desire *not* to come to attention. In Buckman's view, if a citizen *does* come to attention, they should do everything in their power not to give the authorities any further cause for concern. Or in other words, they should behave in a predictable, repeatable, machine-like way. In this particular case, Buckman suggests that a form of self-imposed punishment is better than coming to the attention of the authorities, and that Taverner should have 'elected' not to step into the light at all.

As soon as Jason *does* decide to draw attention to himself, the authorities bring the full weight of their power down upon him:

We'll notify all the checkpoints. Put out an APB. If he's still in Los Angeles we may be able to catch him with an EEG-gram projection from a copter. A match of patterns, as they're beginning to do now in New York. In fact we can have a New York police copter brought in just for this (175).

By EEG here, the authorities refer to electroencephalography – a means of tracking the electrical activity in the brain. This recalls much of the scientific discourse of the time. In his seminal work *The Living Brain* (1953), cybernetic pioneer W. Grey Walter compares EEG 'brainprints' to fingerprints, and suggests the possibility of using brainprint technology to

detect 'tendencies to violence'.[40] Similar suggestions were also made in the popular press. In an article published in *Time* magazine in October 1956, electrical engineer Curtiss R. Schafer suggests EEG research 'may result in the formation of another hybrid science, biocontrol'.[41] In a remarkable piece of real-life dystopian commentary, Schafer says:

> The ultimate achievement of biocontrol [...] may be the control of man himself... Enslavement could be imposed upon the vanquished as a condition of peace, or through the threat of hydrogen bombing. Biocontrol could make this enslavement complete and final, for the controlled subjects would never be permitted to think as individuals.[42]

He goes on to conclude:

> The once-human being, thus controlled, would be the cheapest of machines to create and operate. The cost of building even a simple robot, like the Westinghouse mechanical man, is probably ten times that of bearing and raising a child to the age of 16.[43]

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[40] W. Grey Walter, *The Living Brain* (New York: W.W. Norton & Company Inc., 1963), p. 199 and p. 257.

[41] 'Biocontrol', *Time*, 15 October 1956 <http://search.ebscohost.com.ezproxy.lancs.ac.uk/login.aspx?direct=true&db=asn&AN=54186389&site=ehost-live> [accessed 20 July 2017].

[42] Ibid.

[43] Ibid.

It is quite remarkable here that Schafer suggests a far more dystopian, totalitarian future than anything in the work of Philip K. Dick. In this respect, science fiction becomes a kind of grounding or inoculation against an even more ominous reality being concocted by real-life engineers.

While Schafer's future-gazing may be disturbing, his comments raise several pertinent points. One in particular is the link between value and use. Here, Schafer suggests raising a child and converting them to a 'robot' is cheaper and more effective than the direct manufacture of a machine such as the Westinghouse mechanical man. Of course, technology has moved on significantly since 1956, yet the question remains as to the ways in which we differentiate between the mechanical and the organic, and the values we assign to each.

The question of whether humans are really just biological machines goes back at least as far as the seventeenth century and the early days of the Enlightenment. In *Meditations on First Philosophy* (1641), René Descartes laid the groundwork for theory of mind-body dualism in which mind and body are two distinctly separate entities, though closely linked. In the following century, Julien de La Mettrie extended Descartes' idea that mere animals are automatons to suggest that humans themselves are also automatons, or machines, with his work *L'Homme Machine*, or 'Man a Machine' (1748). However, post-Enlightenment thought took a step away from 'pure reason' as such, as it became clear that the world was a far more complex place than many of the metaphysical philosophers would have believed. In some respects then, the return to the question of 'man as machine' in the twentieth century seems to take a step back *towards* Enlightenment thinking with the software/hardware dualism mirroring something of Descartes' original mind/body split. With the advent of cybernetics and cognitive psychology providing fresh impetus for the human-as-machine argument, the questions raised by Descartes and La Mettrie again become relevant, in a kind of post-post-Enlightenment thought.

In the example of biocontrol cited in *Time*, the engineer Schafer certainly supports the idea of the human-machine. However, he also implies a certain biological elitism in which society creates a new order separating the 'once-human' robots from the human operators who put them to use. This is particularly interesting given Schafer's lack of comment on the subject of race, and the issue of slavery and ethnic rights, which would soon come to a head. Though the US had at this point turned its back on slavery (it was abolished in 1865), Schafer suggests a new kind of slavery even more disturbing than the first, for it would be a slavery conducted in spite of the weight of history and its many implications.

Certainly, by the mid-twentieth century, the language of slavery hadn't gone away. Indeed, there is a crossover between the slavery of biocontrol described by Schafer, and the concept of the human-as-robot or human-as-robotic-slave as described in science fiction. This blurring goes back at least as far as the 1920s, and the first recorded use of the term 'robot' in Karel Čapek's famous play, *R.U.R.* or 'Rossum's Universal Robots'.[44] In the play, Čapek's robots were intended as 'a metaphor for workers dehumanized by hard monotonous work', though as Horáková and Kelemen observe, 'this understanding soon shifted as the robot was misinterpreted as a metaphor for high technology, which would destroy humankind because of humans' inability to prohibit its misuse'.[45] When *R.U.R.* came over to the US there certainly is a sense that some of the satire of Čapek's work was lost, though it could be argued that any 'misinterpretation' as such was as much a result of a different cultural context in America, as it was any genuine misunderstanding or deliberate manipulation on the part of

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[44] Karel Čapek, *R.U.R. (Rossum's Universal Robots) and War With the Newts*, trans. by Paul Selver et al (London: Gollancz, 2011).

[45] Horáková and Kelemen, 'The Robot Story', p. 300.

the stage director(s).[46] Either way, it would seem clear that the distinction between the human and the robot was blurred right from the very start.

The depth merchandisers

While engineers in the 1950s sought to rationalize human subjects and constitute them more and more like the machines they were using, other forms of surveillance and control were also coming into play. In *The Hidden Persuaders* (1957), Vance Packard investigates the many psychological techniques being put to use to persuade consumers to purchase products. Indeed, Packard describes the situation as something akin to 'the chilling world of George Orwell and his Big Brother', with what he describes as 'seriously antihumanistic implications'.[47] Much of the motivation for the 'hidden persuaders' of Packard's title comes from the 'perversity and unpredictability of the prospective customers' and the need to make consumers more predictable. As such, marketers increasingly applied new scientific methods to their trade in order to standardize responses and overcome hidden 'resistances' to desired forms of behaviour.[48] In this way, the 'depth merchandisers' as Packard refers to them became what Deleuze might describe as 'manufacturers' of desire – creating behaviours that are presented as 'natural', when in reality they are anything but. This is also similar to Marshall McLuhan's argument in *The Mechanical Bride* (1951), in which he presents a mosaic of arguments on the interfusion of advertising and everyday life, in particular, the link between desire, technology and sex.[49]

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[46] Ibid., p. 299.

[47] Packard, pp. 5–6.

[48] Ibid., p. 13.

[49] In one example, McLuhan explores the 'Love-Goddess Assembly Line', asking if the female body can keep up with the demands of the textile industry. This essay sits alongside an advert from the period for four-in-one

In many respects, Packard's 'depth merchandisers' are as much a form of biopolitical control as any other biological or mechanical means described in this study. Indeed, the very nature of the marketing machine replicates many of the same power structures as the state itself, forming a cybernetic network with the state and feeding back into it in an ongoing loop. Though they may not be direct agents of the state as such, marketers and their ilk are a significant segmentary power structure, for their activities (though clearly subversive) are held within the bounds of what is legal and deemed normal behaviour, rendering consumption a 'normal' trait, and one to be desired.

This observation has echoes of the Frederik Pohl short story 'The Midas Plague' (1954) in which status is dictated by consumption, and citizens have to 'work' at consumption in order to be regarded as good citizens.[50] In a remarkable twist, the protagonist Morey Fry solves the problem of consumption by putting his robots to work 'consuming' his products, wearing them out in order to fulfil his consumption quotas:

> There was the butler-robot, hard at work, his copper face expressionless. Dressed in Morey's own sports knickers and golfing shoes, the robot solemnly hit a ball against the wall, picked it up and teed it, hit it again, over and again, with Morey's own clubs. Until the ball wore ragged and was replaced [...].[51]

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proportioned girdles, which arrays a line of women in girdles much like a factory production line. McLuhan, *The Mechanical Bride*, pp. 93–97.

[50] Frederik Pohl, 'The Midas Plague', in *The Best of Frederik Pohl*, ed. by Lester del Rey (New York: Taplinger Publishing Company, 1975), pp. 112–161 (p. 118). This short story was originally published in *Galaxy* in April 1954.

[51] Ibid., p. 144.

As a former advertising man himself, Pohl had a great awareness of the emerging marketing industry that Vance Packard describes, and these themes appear across much of his work. Another example can be found in Pohl's collaboration with C.M. Kornbluth, *The Space Merchants* (1952) – a novel which David Seed describes as a 'distortion of early fifties America', extrapolating issues of the day and depicting a society still subject to 'McCarthyite fears of internal subversion'.[52]

In the novel, star class copysmith Mitchell Courtenay is abducted by a rival advertising agency and 'shanghaied' (that is, tricked or coerced) into a new life as an ordinary worker. In the process his tattooed ID number is altered so he can't reclaim his old identity. As such he is forced into work with the United Slime-Mould Protein Workers of Panamerica. In his new life as a worker Courtenay observes:

> I'd been paid again, and my debt had increased by eight dollars. I'd tormented myself by wondering where the money went, but I knew. I came off shift dehydrated, as they wanted me to be. I got a squirt of Popsie from the fountain by punching my combination—twenty-five cents checked off my pay-roll. The squirt wasn't quite enough so I had another—fifty cents.[53]

Here, Pohl and Kornbluth point to the relationship between consumption and debt, and how work itself becomes a form of consumption in which workers are compelled to spend their earnings on products required for the fulfilment of their work in an ongoing exploitative cycle. In this example Courtenay finds his work such that he needs to spend much of his pay on drink in order to make it through the working day. In both of these examples, the human

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[52] Seed, p. 84.

[53] Frederik Pohl and C.M. Kornbluth, *The Space Merchants* (London: Digit Books, 1960), pp. 74–75.

protagonists are depicted as consuming machines, or rather, biological robots, who are compelled to behave in a repetitive ostensibly non-human fashion, much akin to Čapek's universal robots. Thus, even in work and leisure, human subjects are compelled towards machine-like behaviour and the difference between the human and the machine becomes even more blurred.

Social surveillance

Building on macropolitical forms of state surveillance such as CCTV, identity cards and National Insurance, there remains the question of the *micro*political measures that takes place between individuals. This form of surveillance doesn't rely so much on technological means, but rather social means, drawing on the social interactions between subjects to replicate norms and values and compel subjects to behave in an ostensibly 'normal', standardized way.

First published as a short story in 1959 and then as a full-length novel in 1966, *Flowers for Algernon* won both the Hugo Award for Best Short Story and the Nebula Award for Best Novel, which it shared that year with another book in this study, Samuel R. Delany's *Babel-17*. From surveillance and exclusion to technological progress, the human, and loss of control, *Flowers for Algernon* remains as relevant today as it was in the late 1950s. In particular, it focusses on the identity formation of its protagonist, Charlie Gordon, who finds himself subject for powerful forces beyond his control. As he transforms from a man of low intelligence to a man of genius, so his outcast status is renewed, and he is excluded not for his stupidity, but for his intelligence, and he remains outside the 'zone of normalcy' that defines the lives and expectations of the majority of subjects.

The novel is written in diary form, 'penned' by protagonist Charlie Gordon, a 32-year-old man with an IQ of just 68 (7). Very early on in the novel we learn that Charlie is to be subject to an experiment to increase his intelligence. As the experiment starts to take

effect, so Charlie quickly gains in intelligence and soon becomes a mental giant, far outstripping the scientists who had worked on him. As he symbolically comes 'into the light', he observes, 'I was seeing them clearly for the first time—not gods or even heroes, but just two men worried about getting something out of their work' (49).

As both a man of low intelligence and a man of supreme genius, Charlie inhabits a very different world to the other characters in the novel. In the early stages of the novel he is especially well-meaning and keen to please – much like John Isidore in *Do Androids Dream of Electric Sheep?* Indeed, it is this attitude that attracts the attention of the scientists in the first place, and the affections of his teacher Alice Kinnian. His kind, pleasant attitude and social naivety constitutes Charlie as a character worthy of sympathy within the context of the novel. Yet this sympathy also extends beyond the novel, for as readers we are privy to insight that Charlie simply does not have. While Charlie is excluded from normal social interactions on account of his ignorance, so we are readers are also guilty of excluding him as we are encouraged to feel sorry for someone who is deemed 'worthy of sympathy', and is cast in a position less well off than our own.

This strategy renders us complicit in Charlie's exclusion, putting us on the same level as Charlie's co-workers at the bakery who Charlie assumes are all good and nice people (26). And yet, as we later discover, Charlie's co-workers are *not* nice people, and have been mistreating Charlie all along, laughing *at* him rather than *with* him such that Charlie feels ashamed to have taken part in his own mistreatment (30). So, just like Charlie and his 'friends' at the bakery, we as readers are complicit in excluding Charlie both for his low intelligence, and later for his high intelligence (which none of us can hope to match), placing us well within the same framework of social surveillance and control that Charlie and the other characters inhabit.

Here, the novel's form is key in placing us within this same surveillance network. As we read his diary, so we are conducting surveillance on Charlie Gordon, but more than that, we are also 'spliced' into Charlie's world – seeing the world through his eyes, but adding our own filter onto the perceptions that he logs. Unlike the posthumanist vision of splicing, this is only ever a one-way relationship. We cannot feedback to Charlie, except through our own investment in his character development. So, while we may be encouraged to feel *sympathy* for Charlie, our relationship with him is never quite fulfilled, for we are included in his world, but excluded from taking any part in it – just as we are included in his perceptions, but are far removed from the two central acts of exclusion that take place.

The role of the book as an apparatus of surveillance suggests something of the Deleuzian notion of the book as a productive machine. In *A Thousand Plateaus* Deleuze and Guattari claim that:

> In a book, as in all things, there are lines of articulation or segmentarity, strata and territories; but also lines of flight, movements of deterritorialization and destratification. Comparative rates of flow on these lines produce phenomena of relative slowness and viscosity, or, on the contrary, of acceleration and rupture. All this, lines and measurable speeds, constitutes an *assemblage*.[54]

Here, the philosophers' claim that comparative rates of flow produce phenomena of 'relative slowness and viscosity' or 'acceleration and rupture' can be seen quite clearly in our shifting relationship with Charlie as the novel progresses. As readers, we draw 'lines of flight' away from the novel; at first, we travel relatively quickly compared to Charlie, who we far surpass

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[54] Deleuze and Guattari, *A Thousand Plateaus*, p. 2.

in terms of insight and speed of thought. Indeed, we are often *encouraged* to think beyond what is merely presented on the page, reading things into Charlie's situation that are implied but never explicitly stated. In so doing, so we fall into the trap of becoming just like those who would harm Charlie within the novel for our relative speed changes suddenly when Charlie is able to comprehend the world and its surrounds. This relative speed change forces a 'rupture' of sorts as our position within the network is made known, and the flaws in our own surveillance methods come to light.

While these philosophical shifts in momentum are foregrounded in *Flowers for Algernon*, the same thing happens in other works of literature (and philosophy) as well. In *A Thousand Plateaus*, Deleuze and Guattari claim that a book is a form of 'multiplicity', and that, 'There is no difference between what a book talks about and how it is made [...] As an assemblage, a book has only itself, in connection with other assemblages and in relation to other bodies without organs.'[55] In this regard, a book cannot be taken in isolation, for it is constantly made and re-made as it connects with other assemblages and power flows. Deleuze and Guattari also claim that 'A book itself is a little machine' and that 'when one writes, the only question is which other machine the literary machine can be plugged into, must be plugged into in order to work.'[56] In this way, any book can be interpreted as a form of surveillance – a metaphorical 'camera' of sorts that must be 'plugged in' to a wider network, whose modes and patterns of operation shift with the observer, and the assemblage within which the book is read.

As a novel, *Flowers for Algernon* both reveals and scrutinizes the many different layers of surveillance at work upon biopolitical subjects. In the first instance, as readers, we are conducting surveillance upon the character Charlie Gordon, through a series of

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[55] Ibid., p. 2.

[56] Ibid., pp. 2–3.

chronological diary entries. But then Charlie himself also reflects that same surveillance back upon us as he becomes aware that others might come to read his work (41). There is even the suggestion that he might proactively adjust his entries based on this fact, as if he is then watching the reader in turn. Further examples of surveillance come to light as the repressed 'young' Charlie watches on while the 'mature' genius Charlie goes about his everyday life (80). Charlie even conducts surveillance upon himself in the form of dreams and memories of his childhood and former life (126). Again, this reflects the performative nature of identity formation, but also hints at how self-surveillance – a form of microfascism – prompts us to self-monitor our performance and adjust our behaviour accordingly: much akin to a cybernetic feedback loop.[57] This same feedback loop then operates above and beyond the novel, as we consider the book itself as a means of feeding back into our own self-surveillance circuits, i.e. *I read the book and it affects me in countless unknowable ways that feed back into my own future behaviour.* So, not only is *Flowers for Algernon* a fine example of social surveillance on the level of the novel itself, but it also in turn functions as a technological apparatus of surveillance that influences and shapes our behaviour external to the novel, and reveals something of the many-faceted assemblages that constitute the Deleuzian productive machine.

Sympathy and fear

Sympathy is a key concept in *Flowers for Algernon* and one that plays an important part in the power structures that operate within the novel. Alongside sympathy there is also the equally compelling concept: *fear*. In the first instance, Charlie is excluded on account of his low intelligence; he is rendered a subject worthy of sympathy, and indeed *pity*, and is thus enshrined as an exemplar of the sub-human exclusion, or what Agamben might describe as a

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[57] Ibid., p. 9. See also the chapter 'Micropolitics and Segmentarity', pp. 243–270.

homo sacer – a figure who represents the 'ambiguity' and 'ambivalence' of the sacred.[58]

However, when he rises up to become greater than his scientist masters, so he is rendered not

a subject worthy of sympathy, but a subject worthy of fear. In this case he becomes a kind of

super-human, yet remains excluded, but this time on account of his excess rather than his

lack. In both cases, Charlie is an example of a *homo sacer par excellence* in the way in which

his double exclusion mirrors Agamben's concept, such that 'What defines the *homo sacer* is

[…] the particular character of the double exclusion into which he is taken and the violence to

which he finds himself exposed'.[59] In this case, Charlie's exclusion casts him out of the

group, and also exposes him to violence as a member within the same group. However, it is

not just an *individual* exclusion as such, but also serves to '[preserve] the memory of the

originary exclusion through which the political dimension was first constituted.'[60] Thus, it is

not just a physical exclusion but also a symbolic one, excluding not only Charlie Gordon, but

every other Charlie in every other world, real or imagined.

The power of the Agambian exclusion here rests not only in the act of casting out the

homo sacer, but in the way it is also an act of *inclusion* that keeps the *homo sacer* strictly

within the bounds of the sovereign state. Charlie's time at the bakery is an excellent example,

for through his exclusion so he is also included within the group, and simultaneously exposed

to violence: in this case the 'pranks' of his co-workers. However, such is his exclusion in this

example that some of his co-workers see Charlie's low IQ as a form of sickness, and in one

instance, even buy him a chocolate cake (9). So even here, Charlie's exclusion operates

within a zone of ambivalence, for he is simultaneously an object of sympathy *and* fear.

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[58] Agamben, *Homo Sacer*, p. 77.

[59] Ibid., p. 82.

[60] Ibid., p. 83.

Sympathy on account of his 'condition', and fear on account of the fact that he represents a limit-case of the human – an example of what not to become.

This same dynamic operates at the other end of the spectrum when Charlie is later excluded as a result of his genius that places him in a superior position to those around him. At first this exclusion takes place within the bakery, as his co-workers begin to resent him (47). And yet as his genius grows, so Charlie enters and then surpasses the world of the scientists, such that he starts to see through the artifice of the scientists' world. In one particular moment of clarity he observes how the scientists are not 'intellectual giants' at all, but rather, 'They're people—and afraid the rest of the world will find out' (69). Though his exclusion in this case is predicated on *fear*, there remains also an element of sympathy, for his intelligence renders him unable to interact within a normal social context – even less so than his former low-intelligence self. As he observes: 'intelligence and education that hasn't been tempered by human affection isn't worth a damn' (175).

Alongside the sympathy and fear implicit in all forms of social exclusion, there also remains the question of intent. Here, intent is almost as significant as the act itself, for Charlie is judged based on his motivations and his willingness to accept the social controls placed upon him. In one example, very early on in the novel, Charlie thinks he's failed the Rorschach test as he doesn't see any pictures. As a result he notes down that he needs to be taught to see pictures or that 'mabey I need new glassis' (2).[61] Of course, as readers, we all know you can't 'fail' the Rorschach test as such, but Charlie doesn't know this – all he understands is that tests are a measure of success, and you should always do your very best to try and pass them. This same issue crops up again when the scientists carry out another test,

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[61] *Flowers for Algernon* is written in a diary format and as such the character and intelligence of the narrator Charlie is reflected in the quality of the writing. Early on in the novel, Charlie's low intelligence is very clearly demonstrated in the way he mis-spells words, and the confused way he expresses his ideas.

which Charlie assiduously notes down as the: 'THEMATIC APPERCEPTON TEST. I dont know the first 2 werds but I know what test means. You got to pass it or you get bad marks' (4). In both these early examples Charlie is desperate to fit in and adhere to what he assumes are the correct social codes. In this case it is not so important that he doesn't quite understand the codes, but rather that he *wants* to understand and he *wants* to fit in. Indeed, right at the very start of the novel, Charlie says, 'I want to get smart if they will let me' (3) – as if he needs permission to be allowed within the bounds of normalcy; as if he has somehow failed by being cast outside of the law.

This phenomenon is mirrored in the case of Jason Taverner in *Flow My Tears*, as both characters constitute their identities based on their inclusion within a cybernetic surveillance network. While Jason requires formal recognition of his status in the form of an ID card and a digital record, Charlie looks to the social markers of inclusion, such as friendship, 'intelligence', and success. In this case, he equates intelligence with popularity, and popularity with friendship, for if you have lots of friends 'you never get lonley by yourself all the time' (11). So, while Jason is isolated and alone without his electronic record, Charlie here suggests that he is also alone as he doesn't have the intelligence needed to be popular and thus craves intelligence in order to have more friends. Though, as both books conclude, each of these 'realities' is an illusion, for both characters' worlds are shaped by their ability to perceive it – either on account of their distorted perceptions or their inability to perceive correctly in the first place. In both examples the characters themselves feel *sympathy* for those outside the community group, and *fear* of being excluded themselves. Thus, these twin concepts go hand-in-hand and serve to operate as a mechanism through which power structures operate within their respective worlds.

Immunity and the surveillance state

In both *Flow My Tears* and *Flowers for Algernon* the two protagonists perform what philosopher Roberto Esposito might refer to as the 'immunization' function within their respective communities. That is, they function as something that is outside the community 'that interrupts the social circuit of reciprocal gift-giving'.[62] In the same way as a vaccine might be taken to inoculate an individual against disease, so Esposito posits that the paradigm of his theory of *Immunitas* is that 'the inoculation of nonlethal quantities of a virus stimulates the formation of antibodies that are able to neutralize pathogenic effects at an early stage'.[63]

In both cases, the respective plights of Charlie and Jason serve to immunize the community against a plight that might be far worse were the two characters not so excluded. In the case of Charlie Gordon, a man in his (low) position might cause significant harm to a community were he given responsibilities beyond his capacity to carry out; he might even represent a danger to his fellow citizens. However, beyond the pragmatic argument for excluding Charlie (on account of his danger to the system), his ostracism also serves to inoculate his co-workers against the possibility that they might become just like him. Though they are clearly more naturally gifted than Charlie at first, any number of factors might lead them to behave in a similar way. Thus, Charlie's position as outcast serves to instil the bakery workers with a sense of the 'right way to behave'. Though we are led to believe they never resort to serious physical violence, even if they did, Esposito implies that such violence might ward off further, more dangerous violence through the 'sacrifice' of the one individual for the benefit of the group.

There is also a similar immunization effect in *Flow My Tears*. As Jason Taverner observes: 'Once they notice you [...] *they never completely close the file*. You can never get

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[62] Esposito, *Immunitas*, p. 6.

[63] Ibid., p. 7.

back your anonymity. It is vital not to be noticed in the first place. But I have been' (73).

While he may be (incorrectly) cast out as a result of a bureaucratic error, the *intent* behind his exile remains, such that the 'law' – such as it is – remains intact. While he may not have broken any law directly, the possibility of other similar law-breakers remains. Thus, in this way, Jason exemplifies Esposito's *Immunitas* concept, for, 'It reproduces in a controlled form exactly what it is meant to protect us from'.[64]

In both cases it is significant that the two 'inoculations' are kept strictly *within* the boundaries of the state, supporting Esposito's argument that there remains a need to keep evil *inside* state borders.[65] This positioning is absolutely critical, for to exclude either completely would undermine the inoculating effect. As such, both Jason and Charlie inhabit a zone of indeterminability, where they are simultaneously both *inside* and *outside* the state borders, such that they are recognized as insider-outsiders, and treated in such a way that their status is always in doubt, even though their Agambian exclusions are not.

This discussion raises the question of community: what is it, and why should it be something that Jason and Charlie desire? In *Terms of the Political*, Esposito suggests that community has a constitutive role in our 'being human', though he does acknowledge the 'absolutely problematic nature of community's realization'.[66] This is because, 'Community is both necessary and impossible [...] We inhabit the margin between what we owe and what we can do.'[67] For Kant especially, Esposito notes, there is a problem in reconciling the fact that

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[64] Ibid., p. 8.

[65] Ibid., p. 8.

[66] Roberto Esposito, *Terms of the Political: Community, Immunity, Biopolitics* (New York: Fordham University Press, 2013), p. 19.

[67] Ibid., p. 15.

'The law prescribes what it interdicts, and it interdicts what it prescribes.'[68] A paradox

emerges then when we consider the reciprocal nature of the relationship between the

individual and the collective, for as citizens we owe everything but can never give enough.

Here, Esposito's notion of the 'reciprocal gift'[69] recalls Derrida and his work in *The Gift of*

Death, such that 'one is never responsible enough', for as soon as one enters a relationship

with another, one must sacrifice ethics, or rather 'whatever obliges me to also respond, in the

same way, in the same instant, to all others.'[70] In Ursula Le Guin's *The Dispossessed*, the

Odonians find community in a shared obligation or debt to the Odonian community.

However, the community is as much shaped by the individuals themselves as it is by the all-

seeing computer Divlab. So, while on the one hand the Odonians are constituted by their

community, so they also then constitute the community in turn, such that the original spirit of

their revolution is lost over time. This poses the important question that Esposito raises:

'How are we to constitute something that already constitutes us?'[71] Which comes first, the

community or the individual?

 In *Flow My Tears* and *Flowers for Algernon*, the two protagonists are both excluded

from their communities, but it is only through the act of exclusion that their respective

communities are revealed. While typically an enemy may only ever exist outside of the

state's borders, both Jason and Charlie are simultaneously cast out while also being wholly

defined by their position *within* the state structure and the immunizing effect that their

inclusive-exclusion provides. In this way, it is as Esposito argues, that 'community exposes

each person to a contact with, and also to a contagion by, an other that is potentially

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[68] Ibid., p. 19.

[69] Ibid., p. 49.

[70] Derrida, *The Gift of Death*, p. 51 and p. 68.

[71] Esposito, *Terms of the Political*, p. 15.

dangerous'.[72] Here, both Jason and Charlie are the potentially-dangerous 'other', and are ostracized on account of the threat their transition to *homo sacers* represents. They do not want to be *homo sacers*, yet are cast as such, and in so doing they function to both recall, and repeat the initial exclusion such that they '[present] the originary figure of life taken into the sovereign ban and preserves the memory of the originary exclusion through which the political dimension was first constituted.'[73] And it is here, in this memory, that we can trace an origin of the desire that keeps a community in check. While neither Jason nor Charlie is a direct threat as such, they represent the potential-for-threat, and thus engender both sympathy and fear within the community; sympathy for their plight, and fear for what they might become – suggesting an inclusion-exclusion dynamic right from the very start.

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[72] Ibid., p. 49.

[73] Agamben, *Homo Sacer*, p. 83.

Chapter 4: Future Soldiers

> I just want to remind you apes that each and every one of you has cost the gov'ment,
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> counting weapons, armor, ammo, instrumentation, and training, everything, including
>
> the way you overeat—has cost, on the hoof, better'n half a million. Add in the thirty
>
> cents you are actually worth and that runs to quite a sum.[1]

> Sergeant Jelal to new recruits

In Robert A. Heinlein's *Starship Troopers* (1959), Sergeant Jelal issues a stirring speech to new members of the Mobile Infantry as they prepare for their first engagement. The quotation, given above, describes the significant capital invested in each one of the troopers, and the value that the state seeks to extract in turn. It does this by sending the soldiers to war in advanced fighting suits that grant them great power and protection, but also monitor and control their actions at every turn. In this way, the suits don't just make the soldiers better fighters, but they also make the biopolitical state more intelligible, more *knowable*, to the fighters, and binds them within a cybernetic network with the state, much like Jason Taverner in *Flow My Tears*, and Charlie Gordon in *Flowers for Algernon*.

This same connection is made in Joe Haldeman's *The Forever War* (1974), a novel that operates in dialogue with *Starship Troopers*, though published some fifteen years later. In Haldeman's novel, the protagonist William Mandella is similarly bound up in an advanced fighting suit, monitored by an ominous battle computer that can end his life at any moment

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[1] Robert A. Heinlein, *Starship Troopers* (London: Hodder & Stoughton, 1959), p. 8. Further references are given after quotations in the text.

(46). Just as the suits in both novels make the soldiers faster, stronger and better able to wage war, they also bind them as prostheses of the biopolitical state. It is not enough that they fight and die on command, but that they also act exactly as ordered. In this way, they are stripped of their individual agency, and serve as puppets or 'marionette[s]' (*FW* 19), working at the state's behest.

This concept is expanded further still in Frederik Pohl's *Man Plus* (1976), a novel in which the protagonist Roger Torraway doesn't so much wear his fighting suit as *become* it, as he is transformed into the 'Man Plus' of the novel's title. While he is not framed as a soldier in the same way as Rico in *Starship Troopers* and Mandella in *The Forever War*, he serves a similar function as prosthesis of the state. Indeed, if anything, his sacrifice is far greater than that of Rico and Mandella, for there is never any chance of his going back to his former life, and he is turned into the perfect tool to meet his masters' needs.

In each of these three novels, the protagonists are framed in relation to a certain debt owed to the community and the wider sovereign state. This debt is repaid in terms of compliance and service, and ultimately, a blood sacrifice that may be called upon at any time.[2] In order for this contract to function, so each character must also be framed in relation to a certain concept of life, or rather *human* life, on which all other modes of control are based. While each character is constituted as ostensibly 'human', they are each so far removed from civilian life that their lives in service can hardly be considered human lives at all. Rather, they each exist in a grey zone of indeterminate subjectivity, where their 'humanity' is framed relative to an alien or enemy 'other', and thus used as a means of discursive control. It is not enough that they live and die on behalf of the state, but that their

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[2] I explore the question of sacrifice in greater detail in Chapter 5.

very lives are bound up with the state machine and an understanding of what it means to be alive and what it means to be human in the first place.

The unending war

Published as a full-length novel in 1959, Robert A. Heinlein's *Starship Troopers* follows the exploits of Juanito 'Johnny' Rico as he enlists in the Mobile Infantry (M.I.) to wage war among the stars. His journey takes him from the harsh training ground of Camp Arthur Currie, and the ministrations of instructor Sergeant Zim, to the even harsher reality of galactic warfare against an implacable alien foe known simply as the Bugs.

Through the course of his journey, Rico engages with a host of different characters who discuss various elements of philosophy and ethics, including concepts of suffrage, civic virtue, punishment and war. These discussions are often polemical in nature, and on the surface, it is easy to see why Heinlein has been criticised for militarism and the glorification of war.[3] Indeed, critic Alasdair Spark claims that there were 'many readers who found the novel distasteful, violent, and near-fascist', while Thomas M. Disch has labelled it 'authoritarian' and naive.[4] However, these criticisms are themselves naive and more than a little unfair. Spark himself notes that the upset can be 'traced to Heinlein's matter of fact tone of killing without regret, and refusal to censure his characters.'[5] This may well be because the book was originally written for a juvenile audience, with the third act added in to 'turn the

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[3] Darren Harris-Fain, 'Dangerous Visions: New Wave and Post-New Wave Science Fiction' in *The Cambridge Companion to American Science Fiction*, ed. by Gerry Canavan and Eric Carl Link (Cambridge: Cambridge University Press, 2015), pp. 31–43 (p. 39).

[4] Spark, p. 137; Disch, *On SF*, p. 13.

[5] Spark, p. 140.

juvenile into a bildungsroman for the adult market'.[6] As a juvenile novel, *Starship Troopers* fits very much in the mould of 'the classic career book' described by critic Farah Mendlesohn – a common trope across many of Heinlein's early novels for younger readers.[7]

Building on this argument, Mendlesohn also notes how Heinlein was a 1930s pacifist: 'the classic American non-interventionist, keen on defence, committed to a *military defence*, but utterly opposed to *military engagement* overseas.'[8] Thus, when Heinlein claims that 'The noblest fate that a man can endure is to place his own mortal body between his loved home and the war's desolation' (79), this is not to say that Heinlein is making a specific case for fascism. Much rather, the key segment is the defence of one's *loved home*. This distinction is an important one, and goes to show the nuance to Heinlein's position. He is not arguing for military intervention, but he *is* arguing for a strong defence of one's home.

In light of this argument, it is also telling that the organization of the M.I. mirrors that of the Bugs. If Heinlein were making an argument for militarism, then why do his protagonists so closely mirror the behaviour of their enemies? There is also then the case of the opening battle sequence, where the enemy 'Skinnies' are depicted as helpless cannon fodder for the guns of the M.I. (7–22). Rico's description of the natives who 'don't wear any clothes' and 'look still funnier in daylight' (16) certainly mirrors the racist language of colonialism, yet there is also a satirical edge to the commentary where the actions of the M.I. are overtly sexualized to the point where Rico even comments, 'It's better after you unload' (10).

One could argue then that much of the criticism that has been levelled at *Starship Troopers* can be put down to a certain amount of cultural sensitivity surrounding issues of

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[6] Farah Mendlesohn, *The Pleasant Profession of Robert A. Heinlein* (London: Unbound, 2019), p. 93.

[7] Ibid., p. 206.

[8] Mendlesohn, p. 43.

totalitarianism and warfare, especially in the context of the Cold War. However, commentators had already long been drawing links between war, politics and state building. Carl Von Clausewitz for example famously cites war as the continuation of politics by other means.[9] Meanwhile, Carl Schmitt puts war and the *possibility* of war as 'the leading presupposition which determines [...] human action and thinking and thereby creates a specifically political behaviour'.[10] In this light, Heinlein's work continues many of the debates that had already been going on for a very long time – the main difference being that Heinlein brought these debates into the public arena, at a time of much cultural anxiety around ongoing race issues, America's involvement in Vietnam, and Fidel Castro coming to power in Cuba in 1959. While Heinlein's novel is certainly 'gung-ho' in its delivery (as Andrew M. Butler describes it[11]), there is far more nuance to his work than the 'militarist' or even 'fascist' tags would suggest. This is because as Heinlein uses the M.I. as a vehicle through which to engage with questions surrounding the relationship between the soldier, the citizen and the state, including, most tellingly, what (if anything) the citizen owes the state, and what the citizen should expect in return.

These same questions also come to light in Joe Haldeman's *The Forever War*, a book often read directly alongside Heinlein's *Starship Troopers*. First published in 1974, *The Forever War* is situated almost at the opposite end of the Vietnam War, and is positioned as an 'anti-war' novel, in sharp contrast to Heinlein's own work, which makes no such claims. Set in the wake of the Elite Conscription Act of 1996, *The Forever War* follows the career of

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[9] Carl Von Clausewitz, *On War (Volume 1)*, trans. by J.J. Graham (London: Routledge and Kegan Paul, 1968), p. 23.

[10] Carl Schmitt, *The Concept of the Political*, trans. by George Schwab (New Jersey: Rutgers University Press, 1976), p. 34.

[11] Andrew M. Butler, p. 97.

protagonist William Mandella, who finds himself conscripted to fight in a distant war among the stars against the mysterious Taurans. However, as a result of time-dilation, each time Mandella goes away on a tour of duty, he returns home to find many centuries have passed on Earth. As General Botsford tells him: 'Earth is not the same place you left [...] I think you'll find it a very lonely world' (111). The novel concludes with Mandella returning from his final engagement to find that all war has come to an end and that the human race has merged to form a single consciousness (248). The war, it transpires, was caused by a failure to communicate with an enemy who have no concept of the individual and have been natural clones for millions of years. With nowhere else to go, Mandella retires to a planet called 'Middle Finger' to join his partner Marygay (252).

While *Starship Troopers* and *The Forever War* may reach different conclusions, they share many important themes. They both, for example, describe the instrumentality of the human citizen-soldier, and their role as agents of the biopolitical state. They also both explore the transient nature of this relationship, for in both texts, each and every civilian is always a *potential* soldier, or rather a soldier with their service status in suspension. As Mandella and Marygay find out when they re-enlist: 'we had never really gotten out of the Force, since they extended the draft law, but had just been on inactive status' (150). However, in *Starship Troopers*, Heinlein draws a very clear line between what he describes as normal civilians, and 'citizens' who have completed an active service in the military. While this distinction may be important to Rico and his instructor Mr Dubois, it is significant that when the Bugs drop a rock on Buenos Aires (115), there is no line to be drawn between those who are civilians and those who are citizens, for war makes no such distinctions. This suggests that the whole idea of the soldier is an illusory concept, for we are all already soldiers of a kind – pre-soldiers, or potential conscripts in the making. This is just as political theorist Paul Kahn suggests about modernity, for, drawing on the work of Carl Schmitt, he argues: 'Conscription can now occur

to anyone at any moment: It is just a matter of finding oneself on the wrong airplane at the wrong time.'[12] Though none of the victims may have formally enlisted, death to a terrorist attack is a symbolic form of conscription, for death knows no boundaries, and when terrorists strike, all members of the state are equally at risk and open to the possibility of death. We are all, in a way, embroiled in an ongoing 'total war'.

Violence and control

One of the most striking similarities between *Starship Troopers* and *The Forever War* is the way in which both protagonists use fighting suits as a means to inflict violence upon their enemies. In both novels the fighting suits act as force amplifiers, making their wearers stronger, faster and better equipped to survive the rigours of combat. According to Mandella, 'The fighting suit is the deadliest personal weapon ever built' (16), while Rico claims that 'the point to *all* the arrangements is the same: to leave you free to follow your trade, slaughter' (90).

This comment is an interesting one, and remarkably prescient in light of internal debates that were to take place in the 1960s. In *Strategies of Containment*, military historian John Lewis Gaddis draws attention to one particular incident where Strategic Air Force Commander General Thomas S. Power, 'told a Pentagon audience in 1964 that "the task of the military in war was to kill human beings and destroy man-made objects," and to do it "in the quickest way possible."'[13] This claim seems quite extraordinary in a modern context, and reflects the crisis at the heart of the US military machine during the Vietnam period. Indeed, we may be forgiven for wondering which is the work of fiction, the Mobile Infantry or the

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[12] Paul W. Kahn, *Political Theology: Four New Chapters on the Concept of Sovereignty* (New York: Columbia University Press, 2011), p. 156.

[13] See footnote in: Gaddis, p. 249.

American military. While the real-life General Power describes the role of the military as one

of killing and destruction, in *Starship Troopers*, when Rico describes his trade as 'slaughter',

there is a real sense of irony in his words. Slaughter is not the same as killing – it implies an

excess of violence that goes far beyond the moralistic killing emphasised by Mr Dubois in his

History and Moral Philosophy classes. Thus, Rico's comment encourages us to think back to

the opening pages of the novel where the M.I. slaughter the Skinnies with very little in the

way resistance, or even explanation – an amoral attack on a foe who pose little or no threat.

The question then comes back to one of purpose and control. In boot camp, Sergeant

Zim tells the recruits that 'War is not violence and killing, pure and simple; war is *controlled*

violence, for a purpose [...] *We* supply the violence; other people [...] supply the control' (56).

And yet in Vietnam, violence clearly got out of control, shifting into the realm of atrocity;

this despite Lyndon Johnson's efforts to exercise restraint for fear of drawing Russia and

China into open conflict.[14] The result was that the US military found itself in an existential

crisis: was it merely a force of destruction, or was it something more? In this context, Rico's

comment is certainly prescient. By using the word 'slaughter' as opposed to the language of

controlled violence that Sergeant Zim expounds at boot camp, Heinlein hints at the danger of

a military war machine getting out of control. In this case, there is no clear point at which

Zim's controlled violence becomes Rico's slaughter. This suggests that slaughter may well be

an inevitable outcome of modern warfare when it is not conducted within defined parameters

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[14] Doris Kearns notes Johnson's efforts at 'restraint' in the bombing campaign, with 'Long hours of discussion

preceded the choice of each bombing target' – much to the frustration of military commanders. In this way, it

could be argued that Johnson in fact saved Vietnam from an even heavier campaign of destruction, while many

military commanders would perhaps argue that the war would have been won had they been allowed to have

their way. This of course then raises the question of quite what we mean by 'win'. See: Kearns, *Lyndon Johnson

and the American Dream*, pp. 264–269.

on home soil, in defence of the nation.[15] When Zim argues for control in the application of violence, he argues only for war with a *purpose* – the purpose of supporting the government's decisions. However, in the case of the Skinnies, Rico describes the battle as slaughter, and as such moves the debate away from one of control. Thus, Heinlein raises the question of responsibility in action. Is the transition to slaughter one that is made personally by Rico, or does it come about only once he is fully integrated within the military war machine? The answer here, would seem to be a little bit of both.

The soldier as instrument

The fighting suit is a key symbol of the Vietnam period, and one that operates on many different levels. In both *Starship Troopers* and *The Forever War*, the fighting suit takes the concept of the soldier to its logical extreme. While a real-world soldier may be armed with the latest weapons, armour and equipment, the fighting suit is the ultimate integration of the soldier's 'tools of the trade', eroding the traditional split between the human soldier and their tools to create a singular human weapon: the human-instrument. In this way, the fighting suit becomes an all-encompassing second skin through which the biopolitical state can exert its will.

Yet there is also a symbolic element to the suit, for it also represents the workings of the military war machine and the relationship between the soldier, the citizen and the state. It isn't enough that the suit marks the soldiers as soldiers and grants them the right to kill on behalf of the state, but it also situates them within a discursive field of control. When ensconced in their fighting suits, Rico and Mandella aren't just soldiers, but rather symbols of state power, and the protection it grants, and the protection it can just as easily take away.

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[15] This argument supports Farah Mendlesohn's claim that Heinlein is a 'classic American non-interventionist': Mendlesohn, p. 43.

Giorgio Agamben examines the logic of the human-instrument in one of his most recent works, *The Use of Bodies*. Published in English in 2015, *The Use of Bodies* is the ninth and final volume in Agamben's *Homo Sacer* series, in which he attempts to chart the ways in which bare life constitutes 'the original—if concealed—nucleus of sovereign power.'[16] To open his treatise, Agamben considers the Aristotelian concept of the natural slave and the unique position the slave holds in relation to their body and its use. According to Agamben, a slave is 'a special machine, which is not directed to production but only to use'.[17] In this way, the slave is not so much a 'human' body as such, but rather a piece of equipment or instrument to be put to use.[18] However, Agamben also notes that the use of the slave's body is not productive in the way that a spool or plectrum is used to create something new, but rather it is more similar to that of an item of clothing or a bed that performs an *enabling* function, rather than a productive one.[19]

Building on this argument, Agamben claims:

[It] is possible that the 'use of the body' and the absence of work of the slave are something more or, at any rate, different from a labor activity and that they instead preserve the memory or evoke the paradigm of a human activity that is reducible neither to labor, nor to production, nor to praxis.[20]

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[16] Agamben, *Homo Sacer*, p. 6.

[17] Giorgio Agamben, *The Use of Bodies*, trans. by Adam Kotsko (Stanford CA: Stanford University Press, 2015), p. 11.

[18] Ibid., p. 12.

[19] Ibid., p. 12.

[20] Ibid., p. 20.

Agamben alludes here to the concept of 'potentialities', which he describes in several of his works, and which I discuss in greater detail in Chapter 2.[21] In this case, the slave serves as a paradigmatic example of the human potential both 'to do' and 'not to do', but in a way that is 'reducible neither to labor, nor to production, nor to praxis'.[22] So, the slave is not 'potential' as such, as in Agamben's original meaning, but is emblematic of a void of sorts that is neither action (work) nor inaction, but rather something in-between. The paradigmatic nature of this activity – this unique position that the slave holds – is such that:

> [The] slave, although excluded from political life, has an entirely *special relation* with it [my emphasis]. The slave in fact represents a not properly human life that renders possible for others the *bios politikos*, that is to say, the truly human life.[23]

This is to say that symbolically, the slave represents the 'not properly human' life of human-as-instrument-of-another, that allows 'human' life to be drawn in contrast to it.

Taking Agamben's example, the term 'slave' here could very easily be replaced with the term 'soldier', for the soldier is also a form of prosthesis, in much the same way as a slave. Indeed, to build on Agamben's argument, the pure instrumentality of the soldier creates human life in relation to the instrumental void of non-life non-potential the soldier represents. In this case, 'humanity' is linked with use, and thus the soldier enables the existence of truly human 'life'. So, to continue with the soldier example, Agamben's argument that 'I am human because I am not a slave' becomes 'I am human because I am not (yet) a soldier'. In this context, the soldier protagonists of *Starship Troopers* and *The Forever War* make

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[21] Agamben, *Potentialities*, pp. 178–183.

[22] Agamben, *The Use of Bodies*, p. 20.

[23] Ibid., p. 20.

possible human life for others. While they are soldiers, and ensconced in their advanced fighting suits, they are never quite human, and it is only through this 'non-humanity' that the ordinary human life is rendered as such. From the Agambian perspective then, the soldier's function is a positive one, for not only does the soldier stand in special relation with political life, but the use they are put to 'defines a zone of indifference between one's own body and the body of another', and it is this breakdown of the self/other distinction that serves to enshrine the paradigmatic nature of the community on behalf of which the soldier fights.[24]

However, there also remains the question of technology, and the relationship between the human soldiers and the fighting suits that they wear. In *The Use of Bodies*, Agamben argues that '*Technology is the dimension that is opened when the operation of the instrument has been rendered autonomous*'.[25] In so doing he observes the 'symmetry between the slave and the machine', and refers to 'the paradigm of the animate instrument'. [26] Here, the slave – 'the first appearance of a pure instrumentality' – has been replaced by technology. However, in a key reversal, the user also becomes a slave to the same technology they seek to master. In this way, they are dehumanized by their loss of control, for their will is no longer their own and it is dictated by the object used to mediate their interactions with the world. [27]

These observations are echoed in *Starship Troopers* and *The Forever War*. Neither Rico nor Mandella is fully human while they inhabit the role of soldier, swathed as they are in their protective fighting suits that place a filter between themselves and their external realities. This mirrors Agamben's insights where he alludes to the fact that technology shapes

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[24] Ibid., p. 20.

[25] Ibid., p. 74.

[26] Ibid., p. 78.

[27] Ibid., pp. 75–78.

its user, as the one pushing the controls must in turn obey a 'predetermined program'.[28]

However, both protagonists are also at the mercy of their respective fighting suits. In *The Forever War*, Mandella discovers that the technology of his suit can be operated remotely to ensure his complete compliance, right unto death:

> We were under no circumstances to allow ourselves to be taken alive, however. And the decision wasn't up to us; one special pulse from the battle computer, and that speck of plutonium in your power plant would fiss with all of .01% efficiency, and you'd be nothing but a rapidly expanding, very hot plasma (46).

As such, Mandella comes to realize that every one of his actions is scrutinized and controlled while he is ensconced within his suit. His relationship with the suit thus becomes something akin to a cybernetic circuit, and his life can be brought to an end at any moment should the battle computer so decide.

But the soldiers' technological slavery goes far beyond the mere physical. In both novels, the fighting suits allow for action without thought ('and *that* is the beauty of a powered suit: you don't have to think about it' (*ST* 89)). All of this occurs while hypnotism and autosuggestion are used to control the soldiers' actions. In *Starship Troopers*, commanders can trigger hypnosis induced auto-sleep at any moment (201–202), while in *The Forever War*, post-hypnotic suggestion is used to make the job of killing easier (64). In both cases, these subconscious routines or programmes are implanted in the soldiers without their consent and form part of their training and integration as soldiers. It is, in a sense, a part of their instrumentation – a part of their 'becoming-instrument'.

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[28] Ibid., p. 77.

This instrumentation is played out in the way both characters interact with their fighting suits. While wearing his suit Mandella notes 'the odd feeling of simultaneously being a marionette and a puppeteer' (19). He also notes that:

> I fell asleep and dreamed that I was a machine, mimicking the functions of life, creaking and clanking my clumsy way through the world [...] and the little man who sat inside my head pulling the leavers and clutches and watching the dials, he was hopelessly mad and was storing up hurts for the day— (56).

At this point, Mandella suggests that much of his behaviour is far beyond his own ability to control. While he may ostensibly 'control' his suit – its direction and how it operates – he has no say over the strategic use of the suit, as even his most basic actions can be taken over at any point. This suggests that any control he has, or thinks he has, is really an illusion.

This argument is taken one stage further when Mandella considers the question of responsibility and guilt:

> Back in the twentieth century, they had established to everybody's satisfaction that 'I was just following orders' was an inadequate excuse for inhuman conduct... but what can you do when the orders come from deep down in that puppet master of the unconscious? (73).

This raises an important question. While individual orders as such can at least be ignored (with potential consequences for the soldier), what happens if those orders are so ingrained that they come from the 'puppet master of the unconscious' that Mandella describes? This comment has particular Freudian implications, and again, points back to the sexualized war

that Rico and his allies conduct against the Skinnies in the opening pages of *Starship Troopers*.

More widely, Mandella's comment also raises a question about free will, and hints at the moral questions posed during the well-documented trial of Nazi bureaucrat Adolf Eichmann in the early 1960s. While the outcome of the trial condemns 'following orders' as an excuse, there is certainly a counter-argument to be made about indoctrination and free will. In her book on the trial, philosopher Hannah Arendt argues for the 'banality of evil', and that Eichmann was not so much motivated by fanaticism or sociopathic tendencies, but that his actions were 'connected with an inability to *think*, namely, to think from the standpoint of somebody else.'[29] And yet while most commentators, including Arendt, would be clear on Eichmann's guilt, the trial does raise the disturbing question of whether any soldier or citizen can be truly guilty of *anything* when it is impossible to assign any human action or decision to a single cause.[30]

It is interesting then, that Heinlein makes a similar point in *Starship Troopers*, a novel written *before* Eichmann was captured by Israeli agents in May 1960. In one example, Rico admits that his decision to enlist wasn't completely his own, as he says: 'No, I hadn't made any decision; my mouth was leading its own life' (28). And yet later in the novel it is claimed that 'the M.I. is a free man; all that drives him comes from inside' (176). This paradox also

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[29] Hannah Arendt, *Eichmann in Jerusalem: A Report on the Banality of Evil* (London: Penguin Books, 2006), p. 49.

[30] Arendt alludes to this possibility in her postscript to *Eichmann* where she comments on modern bureaucracy and responsibility (Ibid., p. 290). Arendt even suggests that 'Israeli law [...] like the jurisdiction of other countries cannot but admit that the fact of "superior orders," even when their unlawfulness is "manifest," can severely disturb the normal working of a man's conscience'; this is but one example, according to Arendt, of 'the inadequacy of the prevailing legal system and of current juridical concepts' (Ibid., p. 294).

comes to light in the way the M.I. recruits are put through an intense training regime in order that military processes and procedures become ingrained in their subconscious minds. The 'freedom' that Rico alludes to then, is only ever an illusory one, for his sense of freedom is directly relative to the level of his indoctrination. This question becomes even more blurred in *The Forever War* when it is suggested that the soldiers have long been socialized to think and behave in a certain way. As Estelle suggests: 'If they could condition us to kill on cue, they can condition us to do almost anything. Re-enlist' (103). In this way, even the 'choice' to re-enlist is an illusory one, for the soldiers find themselves located within a complex network of power relations over which they have little or no control.

The soldier as signature

The pervasive power of the fighting suit goes far beyond that of training and control, for it also functions on a symbolic level, marking the soldier as a soldier (at least in the West), and making them intelligible to citizens, other soldiers, and the individual fighter themselves.[31] In this way, the fighting suit situates the soldier within a discursive framework of biopolitical control. Just as Rico and Mandella are marked by their strength and power, so theirs suits also mark a symbolic link between the citizen and the state. It isn't enough that Rico and Mandella fight on behalf of the state against a common foe, but that all citizens could be called upon to don a metaphorical fighting suit and work at the state's behest.

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[31] While most members of the armed forces can be easily distinguished by their uniform and/or distinctive markings, terrorists, guerrilla fighters, or what Schmitt refers to as 'partisans', cannot be easily distinguished in this way. This poses many practical problems for established military forces attempting to engage guerrilla fighters in combat, for they draw strength from their ability to blend in. This can have disastrous consequences for civilian populations who may be mistaken for enemies, much as so many Vietnamese peasants were during the Vietnam War.

In *Discipline and Punish* (1975), Michel Foucault uses the soldier as an example of what he calls the 'docile body'. According to Foucault, in the early seventeenth century 'the soldier was someone who could be recognized from afar; he bore certain signs: the natural signs of his strength and his courage, the marks, too, of his pride'.[32] However, Foucault notes, 'By the late eighteenth century, the soldier has become something that can be made; out of a formless clay, an inapt body, the machine required can be constructed'.[33] In this way, the soldier's body becomes a site of contestation, where the soldier is 'made' for a specific purpose. As Foucault puts it: 'The classical age discovered the body as object and target of power [...] the body that is manipulated, shaped, trained, which obeys, responds, becomes skilful and increases its forces.'[34]

Here, Foucault describes the soldier in an instrumental sense, as a body moulded and put to use by an-other. In this way, the soldier is not an individual as such, but rather a tool, or an *instrument* of sovereign will. It is therefore not only important that the soldier's body is 'docile' as Foucault describes it, but also that it can be *recognized* as such by others in order that it exert what Foucault refers to as 'the power of normalization' in modern society.[35] This process is especially important in the case of the soldier, for the soldier is a paradigm of biopolitical control – an ever-present symbol of the power the state can wield at any time. This symbolic power extends far beyond the soldier's body, and encompasses all the many varied elements that comprise the soldier's identity and marks them as a soldier in the first

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[32] Michel Foucault, *Discipline and Punish: The Birth of the Prison*, trans. by Alan Sheridan (London: Penguin Books, 1977), p. 135.

[33] Ibid., p. 135.

[34] Ibid., p. 136.

[35] Ibid., p. 308.

place. From the soldier's weapons and training to their uniform and equipment, each of these markers forms an important link between the soldier, the citizen and the state.

The discursive power of these elements is described by Giorgio Agamben in his theory of signatures, laid out in *The Signature of All Things: On Method* (2009). According to Agamben, the signature functions as both signifier *and* signified – a mark that 'does not coincide with the sign, but is what makes the sign intelligible'.[36] This concept goes far beyond Foucault's concept of statements described in Chapter 2, for it also carries a layer of additional meaning that 'decisively changes our relation to the object as well as its function in society'.[37] It is therefore not enough that the signature marks a 'Jew' or a 'bailiff' (to use Agamben's examples), but that it also expresses 'how one must comport oneself before Jews, bailiffs [and so on].'[38]

This concept has many implications, not least for the role of the soldier in society. It's not enough then that Rico and Mandella fulfil the role of soldiers while ensconced within their fighting suits. Much rather, their suits also carry a signatory power that puts them in relation with other objects, and importantly, other subjects as well. This power is perhaps most obvious in the soldier's uniform, that functions in a similar way to fashion, and the way clothing serves as a powerful cultural force. According to Agamben, fashion is a 'privileged site of signatures', and one in which signatures 'exhibit their genuinely historical character'.[39] Agamben also argues 'The time of fashion [...] constitutively anticipates itself and consequently is always too late', and in this way, occupies an 'ungraspable threshold between

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[36] Agamben, *The Signature of All Things*, p. 42.

[37] Ibid., pp. 38–40.

[38] Ibid., p. 41.

[39] Ibid., p. 73.

a "not yet" and a "no more"'.[40] However, just as this argument applies to fashion, it also applies to the military uniform, and the temporal power of the soldier's uniform to anticipate a time not yet, and a time no more. This is particularly relevant in respect to the uniform's historical force through time. Here, Agamben notes that fashion:

> [E]stablishes a peculiar relationship with [...] 'other times'—certainly with the past, and perhaps also with the future. Fashion can therefore 'cite,' and in this way makes relevant again, any moment from the past [...] It can therefore tie together that which it has inexorably divided—recall, re-evoke, and revitalize that which it had declared dead.[41]

In this case, a soldier's uniform is far more than a marker that defines the 'soldier' and grants them the right to kill and die on behalf of the state. Here, it also functions as a pseudo-historical construct that reaches backwards *and* forwards in time, 'citing' previous battles and battles yet to come. This signatory construct doesn't just represent the individual soldier, but all other soldiers and all other battles. Thus, the soldier-as-signature stirs a collective social memory that recalls soldiers at the Somme, at Agincourt, at Waterloo. It also reaches forward in time and suggests an enemy and a battle yet to come. Not only does the uniform thus suggest the allied soldier as liberator, hero and saviour, but it also recalls the *enemy* soldier and the existential threat posed to the state.

This process can be seen in the way the fighting suits of *Starship Troopers* and *The Forever War* stir a collective social memory of war in the troopers fighting the battles, and also among the citizenry who recognize Rico and Mandella as 'marked' by their time fighting

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[40] Ibid., p. 48.

[41] Agamben, *What is an Apparatus?*, p. 50.

within their symbolic fighting suits. Not only do the suits mark the protagonists as different from the civilians they are 'protecting', but also mark the ever-present threat of the unknown enemy that the soldiers exist to fight. Though Heinlein was himself against any form of forced service, the suits also represent the symbolic potential of the state to exert its will, and the value it can extract from its members at any time.[42]

Of friend and foe

The blurring of the distinction between citizen and soldier is critical for the operation of sovereign power in the modern age. No longer are wars fought across marked battlefields against a clearly defined foe, but rather the battlegrounds are all around us and the participants can change at any time. This shift became apparent during Vietnam, where guerrilla fighters made it impossible to tell combatants and non-combatants apart. In this way, the modern-day soldier-as-signature becomes an emblem of sorts for embodied power against an ever-present, unknowable threat, implying a kind of continuous warfare against an enemy that is not always even knowable and can strike at any time. This is somewhat similar to what cultural theorist Paul Virilio means with his concept of the unending war, that being that 'the Total Peace of deterrence is Total War pursued by other means'.[43]

Clearly, the role of the enemy is an important one in helping establish the symbolic power of the soldier in society. According to Carl Schmitt:

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[42] Mendlesohn cites an unsent letter to Judith Merril dated 11 January 1967, in which Heinlein writes, 'No, I don't like this war [Vietnam]. It's a proxy war, and I don't like proxy wars. It's a war fought with conscripts, and I don't like conscription at any time under any pretext'. See: Mendlesohn, p. 44.

[43] Paul Virilio and Sylvère Lotringer, *Pure War: Twenty-Five Years Later*, trans. by Mark Polizzotti, Brian O'Keeffe and Philip Beitchman (Los Angeles: Semiotext(e), 2008), p. 39.

An enemy exists only when, at least potentially, one fighting collectivity of people confronts a similar collectivity. The enemy is solely the public enemy, because everything that has a relationship to such a collectivity of men, particularly to a whole nation, becomes public by virtue of such a relationship.[44]

It is telling here that Schmitt does not distinguish between the citizen and the soldier. However, Schmitt's enemy appeals to a certain 'collectivity' of public consciousness in the sense that they are not just *any* enemy as such, but rather a *public* enemy – a public threat to the nation state, and thus a real threat to the lives of *all* citizens, whether or not they are enlisted to fight. Heinlein makes a similar point in *Starship Troopers* when the Bugs drop a rock on Buenos Aires. In this case, total war makes no simple distinction between the citizen and the soldiers, for citizens can be belligerent targets just as much as they were at Dresden and Tokyo during the Second World War.

The soldier, who by implication, requires an enemy to fight, therefore also embodies the very same threat that they are recruited to guard against. This then reinforces the notion of what Judith Butler describes as 'precarious life' – that being the notion that 'life' itself is defined by its potential loss.[45] Or to put it another way: 'To say that a life is precarious requires not only that a life be apprehended as a life but also that precariousness be an aspect of what is apprehended in what is living.'[46] In this way, by embodying a threat and the risk to life so the soldier-as-signature also embodies what it means to be alive – what it means to be human – for in our modern context threat and precariousness are constitutive parts of what it means to be 'human' and what it means to be 'alive'.

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[44] Schmitt, *The Concept of the Political*, p. 28.

[45] Judith Butler, *Frames of War: When is Life Grievable?* (London: Verso, 2010), pp. 2–5.

[46] Ibid., p. 13.

But more than the fully realized threat, as Schmitt notes, there is the ongoing *potential* for threat and *potential* for enemies to exist either now or in the future, who in turn constitute human lives as precarious. This is similar to the mechanisms of surveillance and fear described in Chapter 3. It is significant that this isn't just a threat that may or may not exist in the present, but that may also occur at any point in the future. However, in order to establish the threat, first an enemy must be created, and defined as such. According to Schmitt at least, this process is controlled by the state, for, 'In its entirety the state as an organized political entity decides for itself the friend-enemy distinction'; a distinction that both shapes and is ratified by public consensus and which shapes all other political concepts. [47] As Schmitt observes:

> [All] political concepts, images, and terms have a polemical meaning. They are focussed on a specific conflict and are bound to a concrete situation; the result (which manifests itself in war or revolution) is a friend-enemy grouping, and they turn into empty and ghostlike abstractions when this situation disappears. Words such as state, republic, society, class [...] are incomprehensible if one does not know exactly who is to be affected, combated, refuted, or negated by such a term.[48]

But this distinction is only ever transitory, for the enemy is a time-bound construct, as compared to the soldier who occupies a position of quasi-permanence in the public memory, and must fight whichever enemy the state defines. This reflects the unique temporal position of the soldier-as-signature, as the soldier represents an *ongoing* threat, and *ever-present* danger to life, while at the same time also embodying the pure instrumentality of sovereign

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[47] Schmitt, *The Concept of the Political*, pp. 29–30.

[48] Ibid., pp. 30–31.

will. And so, while the possibility of the enemy remains a valid concept, so war and physical killing must also remain a real possibility, alongside sacrifice and death.[49] In this way, the signatory power of the soldier serves to repeat the originary sovereign act and to locate citizens within a discourse of survival.

To expand this argument, philosopher Paul Kahn builds on Schmitt's work in his own provocatively titled *Political Theology: Four New Chapters on the Concept of Sovereignty*. Kahn argues:

> The identification of the enemy is not grounded in a difference in policy but rather in the perception of an existential threat. In the face of such an imagined threat, one decides to act. One does not adjudicate national survival. The exceptional turn to violence against the enemy will always be understood as the defense of sovereign existence. This includes, but is not exhausted by, the defense of the order of law that the sovereign put in place: to defend the state is not just to defend the border, but to defend a way of life.[50]

Here, the enemy is grounded in the *perception* of threat – an existential threat that incites to action. But as Kahn suggests, this kind of action goes beyond politics in that the turn to violence requires no adjudication, and is rather seen as a natural response to defend and maintain the sovereign existence of the state. In this respect, the concept of the enemy forms part of the rhetoric of biopolitical necessity that serves to normalize war, and the arbitrary differentiation of one race from another. Thus, the rhetoric of 'national survival' and 'biological necessity' ties in with the 'threat' posed to the collective way of life. The state

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[49] Ibid., p. 33.

[50] Paul W. Kahn, *Political Theology,* p. 11.

maintains itself by tying itself inextricably to 'way of life', by presenting itself as constitutive of everyday experience, and by fostering the collective desire to defend it at all costs.

This link between the state and the social imaginary rests at the heart of modern biopolitics. It is not enough as Foucault would say, that the *state* takes an interest in the biological, but rather that subjects themselves are also fundamentally tied up in this process, as they come to understand the relative 'value' of their lives and how much they are worth to the state.[51] Thus, while Foucault argues that biopolitical power is not individualizing, but 'massifying', there is also in turn a reflective *individualizing* power that requires subjects are also created as individuals (placing value in their own individuality), in order that the massifying effect be achieved.[52]

This concept plays across many texts featured in this study. In *The Forever War*, Cortez tells troopers that '*They* [the enemy] are responsible for the lives of all of your comrades who died in training, and for Ho, and for all the others who are surely going to die today' (63). While the threat described by Cortez is, strategically, a threat to the whole human race, on a tactical, squad-based level, it is much better presented in terms of the threat to each and every *individual* soldier within the unit. During battle, soldiers think less of the nation as a whole, and more on their comrades to either side who serve as a symbolic reference point through which soldiers can comprehend the existential threat posed to their own particular life. While a General may not have oversight of every single engagement on a tactical level, they will have a strategic overview of the battle as a whole. It is therefore vital that each individual soldier understand his or her place in it. This includes both the threat of immediate death, and the repercussions that any death might have on the wider group. So, when Ho dies,

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[51] Foucault, *Society Must Be Defended*, p. 245.

[52] Ibid., p. 243.

it is not enough that the soldiers mourn her passing, but that they also recognize the precarious nature of their own lives, and the value of those around them.

A similar incident occurs in *Starship Troopers* when Lieutenant Rasczak is killed in action. Though Rasczak dies while making a pick-up on an injured private and an assistant section leader, Rico observes that 'The Lieutenant was making pick-up on *all* of us, with his last breath. Maybe I was the private. It doesn't matter who he was' (125). In one sense here, Rico refers to the group as a homogenous whole – it doesn't matter who the individual might be for they are united as a group. And yet in the same gesture, so he also draws attention to the fact that the injured private could have been any one of them, and that every individual life matters, such that even the Lieutenant would risk his own life to save another's. Thus, in both examples, the community is located in the individual and the individual in the community – it is a two-way process that binds the two together, just as the soldier symbolically binds together the citizen and the state.

A question of race

The arbitrary nature of the friend-enemy distinction and the relative 'value' of life raises the question of racism and the biopolitical 'purity' of the nation state. According to Foucault, racism is 'the basic mechanism of power' and is required to wage and/or justify war. [53] This is because according to Foucault at least, war is framed not just to destroy a political adversary but rather the entire 'enemy race'.[54] From Foucault's reasoning, the friend-enemy distinction has a racial dimension in that it is rooted in an insider-outsider dynamic that emphasizes a pseudo-biological, pseudo-racial relationship. But this grounding also reveals a paradox in the formation of the state and its social imaginary. We create an enemy or 'other'

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[53] Ibid., p. 254 and p. 257.

[54] Ibid., p. 257.

that is by definition a racial other, despite the fact that biological purity is a logical impossibility. In this way, the process of 'othering' helps create and sustain the illusory enemy as racially different in order to justify war and make the job of killing easier – to justify 'the death-function in the economy of biopower'.[55]

Clearly, both race and the biopolitical 'other' play an important part in *Starship Troopers* and *The Forever War* – most notably in the former, for Rico himself is a non-white protagonist. And yet throughout the novel, very little is made of Rico's heritage and it's not until the very end of the book that we find out that Rico's native language isn't English at all, but rather Tagalog (218). Indeed, Rico is Filipino, but as Adam Roberts notes, 'little is made of this feature in the book'.[56] This is an excellent example of Heinlein's narrative style, and the way he uses techniques such as structured absence to make his points.[57] This argument is supported by Neil Easterbrook who notes that in all his writing, Heinlein strives for 'naturalness' and to create worlds that feel 'lived-in'.[58] He also notes the way in which Heinlein assumes familiarity with difference in order to create 'far more uncanny sense of wonder than in fiction where they [the reader] remain an outsider merely gawking from afar at the extraordinary changes'.[59] He goes on to cite:

> A famous example of this latter effect concern[ing] the door that 'dilates' in *Beyond this Horizon* [...] Rather than belaboring the point that a future society's technology differs in minute and pervasive ways, Heinlein simply embeds the difference as a

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[55] Ibid., p. 258.

[56] Adam Roberts, *Science Fiction*, 2nd edn (London: Routledge, 2006), p. 94.

[57] Spark, pp. 139–140.

[58] Easterbrook, 'Robert A. Heinlein', p. 98.

[59] Ibid., p. 98.

quotidian fact, allowing us to *experience it* and so estrange us cognitively – this is both wonderfully economical expression and the essential sense of wonder that specifically characterizes sf.[60]

In this way, Heinlein draws attention to Rico's race by not drawing attention to it, and making the case that there is effectively 'nothing to be said'. And yet in doing so he is also making precisely that point. While he is in one respect making a libertarian point by *not* drawing attention to Rico's race, he is also making a very strong point about race by not doing so.[61] This 'cognitive estrangement' that Easterbrook describes gives the reader a glimpse into Heinlein's world of racial equality, and questions the assumptions on which so many discursive practices are based. While the effect is certainly startling in a modern context, the effect on readers in 1959 would have been even more marked given that racial segregation in the US army was only abolished in 1948, a little over ten years before the publication of Heinlein's novel.

But what of the biopolitical other? While Heinlein is certainly very clear on internal differences and discrimination, Rico and the M.I. are depicted in stark contrast to the enemy Bugs, who are drawn as a distinctly racialized 'other' in contrast with the *human* members of the M.I. So, despite Heinlein's ideological leanings, there does exist a racism of sorts in the novel, although it is very much a national racism along the Foucauldian lines, wherein internal differences are quickly forgotten when survival of the nation state is under threat. To some extent the same is true in *The Forever War*, as the Taurans are similarly cast as an alien other. However, in Haldeman's novel there is far more internalized conflict and exclusion

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[60] Ibid., p. 99.

[61] Heinlein is widely recognized as a libertarian. See: Spark, p. 136; Roberts, *The History of Science Fiction*, p. 202.

within human (national) society, for even though he is a white man, Mandella is ostracized and cast as an outsider on account of his heterosexuality, which is labelled as an 'emotional dysfunction. Relatively easy to cure' (180).

In both cases, the power structures at work both recognize and play to the essential racism on which the state is built. The state in itself cannot exist without an 'other' who exists outside its border – without an enemy to whom the sovereign state stands in opposition – be they Bugs, Taurans, or any other threat. In this way, the very definition of the enemy (and therefore, by implication, the friend), is fundamental to the make-up of the state, and the social imaginary it constructs in the hearts and minds of its members. This sense of shared history, of shared characteristics, is embodied no better than in the soldier or soldier-as-signature who stirs the collective social memory and 'cites' all other soldiers and all other battles both in the past and in the future, and is tied to the preservation of a 'human' way of life.

Beyond the human

The enemy within is a central theme of another 'future soldiers' novel of the Vietnam period – Frederik Pohl's *Man Plus* (1976). The plot follows protagonist Roger Torraway – a man who finds himself the subject of a programme to create a biologically enhanced human capable of living on Mars. Though he is not the original candidate for the programme, Torraway is forced to fill in when Will Hartnett dies during his transition to a biological 'Man Plus'. This process is made all the more difficult as Torraway is confronted with the original 'man who was a monster' before being transformed into one himself.[62] Far from making the process easier, the mere existence of Hartnett as a monstrous example serves to imply the

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[62] Frederik Pohl, *Man Plus* (London: Millennium, 1976), p. 8. Further references are given after quotations in the text.

immanence of transformation if not for Torraway directly, then for some other human in the future.

When Hartnett dies, his body is laid out for investigation. The scientist Jonathan Freeling performs the autopsy, revealing: 'It was hard to realize that this object he was dissecting was Willy Hartnett. It wasn't as much like an autopsy as like, say, field-stripping a carbine' (60). Much like the protagonists in *Starship Troopers* and *The Forever War*, so Hartnett here is no longer quite human, but a tool put to use and quite literally weaponized in the service of others. And yet in spite of this, the scientist is confronted with the fact that 'Willy had died with a lot of wet, seeping human blood still in him' (60). So, while on the one hand Hartnett is a biological machine, not to be autopsied but rather 'field-stripped' like a carbine, so there is also still something intrinsically human in his death, and the very fact that he can die. In this case, his 'wet, seeping human blood' plays an important role is positioning Hartnett within the sphere of human sympathy, for it represents Hartnett's distinctly *human* sacrifice as compared with the oil to be found within a carbine. However, it is only seen as 'blood' (as opposed to oil) when Hartnett dies and loses his value as a machine-like tool that can be put to use, and he is at last allowed to return to his original 'human' state.

This interweaving of subjectivities is one that runs right the way through *Man Plus* as it navigates the paradoxical treatment of humans-as-tools (human machines) and humans as independent agents capable of wielding tools. It is interesting then that Roger Torraway exists as a tool at the same time that scientist Alexander 'Brad' Bradley exists as a wielder or controller of said tool, using his skills as a scientist to hone Torraway for the task that is set him. But while Brad thinks he is in control, he is himself as much a puppet of higher powers as Torraway himself. While his body is not changed to the extent of Torraway's own, the novel's twist reveals that everything relating to the Mars mission was manufactured by machines as a means to ensure their long-term survival. So, while Brad may *think* he is

controlling Torraway and his development, Brad is also a tool of the machines; the same machines that give him the capacity to alter Torraway's condition to begin with. This makes him just as much a biological robot as Torraway himself, even though he hasn't gone through the same surgery process.

As a novel, *Man Plus* clearly shares a lot in common with *Starship Troopers* and *The Forever War*. Indeed, in many respects it extrapolates Heinlein's super-soldier concept, *transforming* the body instead of merely adding to it with a technological suit. In each of the three texts, the protagonists wear a fighting 'suit' of sorts, though in *Man Plus* the suit is the man himself. Indeed, Roger Torraway even has to be taught to control his new 'suit', despite the fact he is still inhabiting the same body:

> For two weeks he had been meat on a butcher's block, slashed and rolled and chopped with no personal participation and no control over what happened to him. Then he had been a student, following the orders of his teachers, learning the control of his senses and the use of his limbs. It was a transition from laboratory preparation to demigod, and he was more than halfway there (122).

This observation suggests that Torraway's body is no longer his own, and it has been changed to such an extent that it is in no way recognizable as that with which he was born; it is something that he inhabits, rather than something that he owns. There is also the suggestion that he is transformed into something significantly *better* than human – a literal man-*plus*. And yet at no point does the narrator consider Torraway on anything like human terms. He is either a 'laboratory preparation' or a demigod; at no point does he ever exist within the category of 'human', and he is only ever conceived in terms of his use and his value to the mission.

It is significant then that during his transformation, Torraway also loses his penis, and any chance he may have had of producing offspring. Father Kayman describes the process to the President: 'Physically, he's now a complete self-contained eunuch, and— Oh. I mean unit' (101). This Freudian slip is significant. Here, the removal of Torraway's penis strips him of his symbolic masculine power, and any humanity he may have had left. It is significant then that Torraway is described in strictly machinic terms: he is not a human, but rather a self-contained 'unit' or biological robot. It is only at the stage of emasculation that Torraway is able to recognize his own robotic qualities as 'He flung back the sheet and gazed idly down at the artifact that his body had become' (94). And yet, even here, there is a sense that Torraway is removed, and perhaps always has been removed, from the process of transformation – as if there were no transformation at all, or as if his body never was his own to begin with. In this case, he doesn't so much stare wide-eyed in shock, but rather gaze idly at his body, in an almost disinterested manner, as if his body is no longer meaningful, or as if the symbolic removal of his penis merely confirms the emasculation, or dehumanization, that had happened many years before, or may have always been the case.

This focus on the sexualized, *gendered* element of Torraway's transformation is an interesting one, and raises questions about the link between technology and sex. In *The Mechanical Bride* (1951), Marshall McLuhan draws attention to 'one of the most peculiar features of our world—the interfusion of sex and technology' and the need to '*possess* machines in a sexually gratifying way.'[63] In the book he cites examples such as the 'Love-Goddess Assembly Line' in which women are depicted as both sexualized beings, and as human robots, where sex itself becomes a mechanical process (see Figure 10).[64] And yet in the case of Torraway, the complete opposite is the case. Unlike Rico in *Starship Troopers*

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[63] McLuhan, *The Mechanical Bride*, p. 94.

[64] Ibid. pp. 93–97.

who seems to get a sexual kick from the technological *addition* of his suit, here Torraway himself *becomes* the suit, such that the change represents an emasculation or subtraction, rather than an enhancement. Such is the nature of his change that he is no longer using technology, but rather becomes the technology itself, such that he is not so much emasculated, but rather becomes a single embodied phallus set for use by the machines. In this way, Pohl in fact *reverses* McLuhan's theory of the mechanical bride, and instead of sexualizing technology for human purposes, rather sexualizes humans for technological (machinic) purposes, trading places between the human and the machine, and in some respects, anticipating the cyberpunk movement that was to emerge in the following decade.
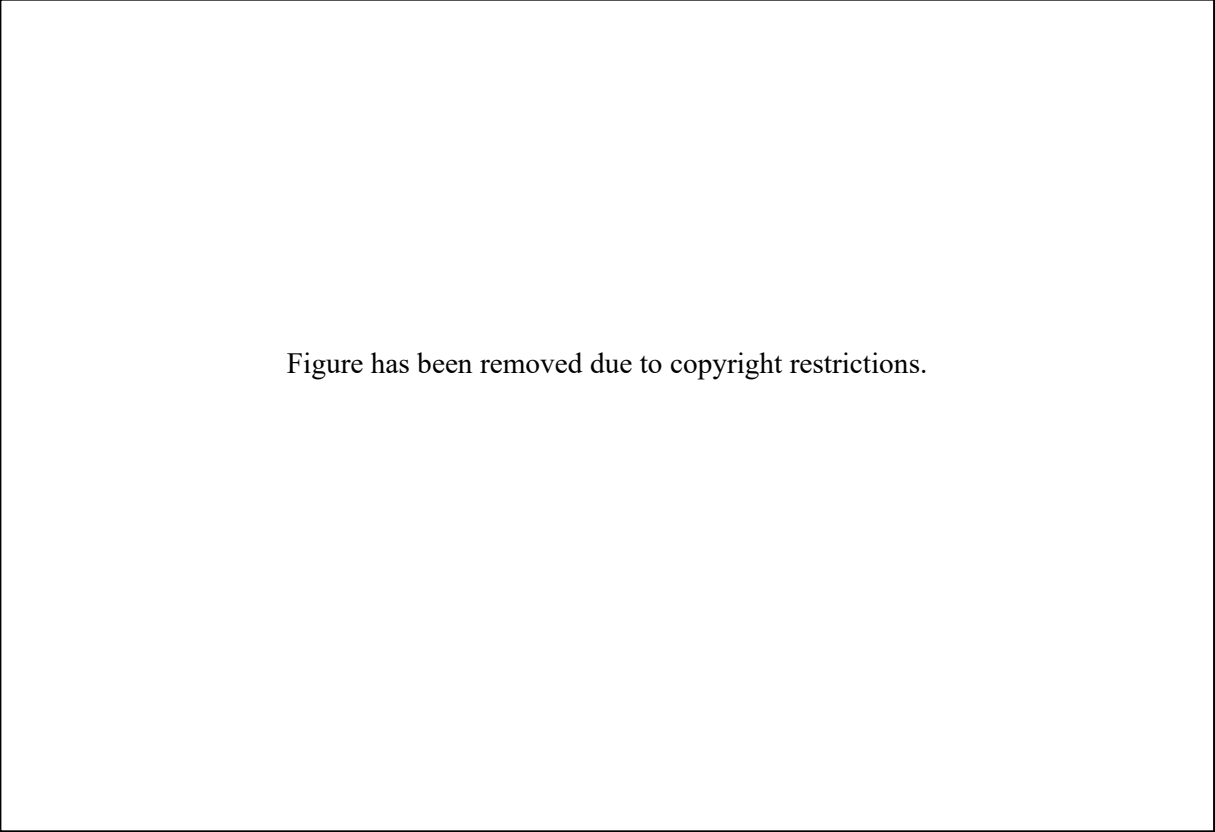
Figure has been removed due to copyright restrictions.

Figure 10 – The Love-Goddess Assembly Line.[65]

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[65] Ibid., p. 94.

Given this close link between gender, sexuality and technology, it is somewhat surprising that the narrator is so dispassionate and disinterested in the removal of Torraway's penis. On one level at least, the removal of his penis would seem to make perfect logical sense – after all, his new body doesn't need one. And yet this logical step also runs counter to the prevailing discourse of sex and gender. Without any physical signs of his masculinity, so Torraway is also excised from any number of complex and compelling discursive fields. While 'The tiny little operation' (94) may have been inconsequential to the dispassionate narrator(s), in discursive terms, it is a massive step, and one for which Torraway himself is not quite prepared. So, while one thing may lead to another in the logical drive towards efficiency and machinic perfection, these same steps also take Torraway further away from the discourse of the human. While the original intention may not have been to de-humanize Torraway, the chain of events leads him to a stage where he is no longer a 'man' and there is no single point at which this change may have occurred. The very fact no one thinks to warn Torraway is also quite telling; as if his humanity means so little that it doesn't warrant consideration, or that he was never really 'human' at all. He becomes then a product of machinic desire, a complete reversal of the technology-as-human-desire case made by McLuhan, and a local extrapolation of McLuhan's argument taken to the extreme, where technological integration becomes such that it becomes difficult to tell the two apart.

The AI overlords

Computers play an important part in *Man Plus*, both as the instigators of the Mars mission, and as the mediators of Roger Torraway's perception. It is also significant that the central premise of the novel – that the machines have been controlling things all along – reveals that the narration is itself the product of a machine (or group of machines), who present the 'facts' of the novel for readers to digest. Indeed, much of the strength of the novel, and its twist, lies

in the blurring of the distinction between what we might recognize as the *human* sovereign state, and the sovereign machines or 'AI overlords' that are the true masters of the novel.

From the very start of the text, the narration takes the form of a dispassionate report – the sort that might be produced by a group of scientists, or state officials. The position of the narrator is such that they assume a position of absolute omniscience, placing themselves superior to the happenings in the text, as if every action is both inevitable, and planned. From the opening sentence 'It is necessary to tell you about Roger Torraway' (3) we get an immediate sense that something has happened, and that it is important that we are informed about it. But not that it is important for some emotive reason, but rather the cerebral or unemotional: i.e. it is 'necessary' – it needs to be done, and we need to be informed about it. Indeed, much of the persuasive power of the narration arises from the fact that it reads very much like a scientific report produced by human officials. Only when the twist is revealed at the end do we then realize that we have been reading the work of a machine all along.

The theme of machinic mediation is central to *Man Plus* and builds on many of the themes explored in this study. In *Starship Troopers* and *The Forever War* the protagonists are ensconced within fighting suits that provide them with data to help them fight and make better battlefield decisions. But they are also at the same time subject to an ongoing surveillance enacted upon them through the medium of their technological suits. Similar themes come to light in *Flow My Tears* and *Flowers for Algernon* where both Jason Taverner and Charlie Gordon are subject to machinic (and human) surveillance such that it is difficult to tell just who is watching who. These novels all raise questions about the relationship between humans and machines, such that machines are able to exercise more control over human situations than humans are themselves. These themes reach their apogee with the computer overseers of *Man Plus* alongside the likes of Mike in *The Moon is a Harsh Mistress*, Divlab in *The Dispossessed*, and Data Central in *Flow My Tears*.

In *Man Plus*, the argument for computer mediation is made by first framing the situation within the context of the natural world. Here, the narrator (a machine), asks us to consider the question of the frog and its relationship with the world around it (46–47). According to the narrator, 'The frog eats insects, so insects are what he sees' (47). The narrator then applies the same logic to Will Hartnett, the original Man Plus, for whom Bradley had provided 'a mediation stage between the ruby complex eyes and the aching human brain [...] which filtered, interpreted and generally prepackaged all of the cyborg's visual inputs' (47). The suggestion here is that without mediation, the raw data from all of the sensory inputs would be too much for Hartnett's 'aching human brain' to cope with. And yet these same inputs have been produced by the scientists to begin with, for they are the ones responsible for Hartnett's new senses and his abundance of data. Thus, one artificial process immediately implies another such that the scientists are compelled to keep adding to the system, much as they do in Heinlein's *Moon*. The question is never one of '*should* they alter Hartnett's senses?' but rather, '*how* should they alter them?' and 'what else can they add?' It is no surprise then that Hartnett's death comes as a direct result of an overload of information, for 'The cause of the trauma was too many inputs. He was overloaded. He couldn't handle it' (63). Here, his 'weakness' (if it could be described as such) comes from his 'natural' biological self being unable to cope with the sheer amount of information delivered by his implants. This comment suggests that his *flesh* was in some way weak, and he didn't have enough cybernetic parts to cope with the raw data at his disposal. The answer then, the narrator suggests, is to add *more* computer mediation, and *more* data processing in order that another cyborg might not suffer the same fate. This is the same logic seen in many science fiction novels of the post-war period, from the inevitable computerization of *Player Piano* and *Limbo*, to the computer-mediated perceptions of the fighting suits in *Starship*

Troopers and *The Forever War*. In each case, it is a 'human' failure that requires a machine as its answer.

This discussion leads back to the question of perception, and specifically the *mediated* perception described in Pohl's *Man Plus*. What (if anything) is 'natural' about mediated perception? What do we even mean by 'natural' in the first place? While a human being is certainly a more complicated system than a frog (the example used in *Man Plus*), the scientists in Pohl's novel believe that computer mediation is the only 'natural' way in which they can achieve their goals, for it is far easier than meddling with Torraway's brain directly (67). Just like the narrator, their justification is that mediation already happens to a certain extent, because 'Human beings *perceive* the world in predigested ways. The sensory inputs themselves edit and rearrange the information' (67). To the scientists at least, the very fact that the human system mediates data already is to imply the *possibility* of even more mediation further down the line. Thus, technology itself is situated within a discourse of nature and the natural world such that any changes the scientists make to Hartnett or Torraway are already implied by their biological systems and the discourse around progress and the natural world.

Though Torraway is initially sceptical about his newly mediated senses, he very quickly becomes used to it, and even wishes the same data were available to others. As the narrator suggests: 'If only Dorrie [his partner] had a computer to mediate her sight! If only she could see him as he had been!' (123). As readers, we are encouraged to read this line as coming from Torraway's own mind. And yet as it later transpires, the narrator – the *mediator* through which we perceive the novel – is in fact a machine. Thus, it is not Torraway who wishes Dorrie had a computer to mediate her sight, but rather, a *machine*. In this context, the line suggests that the narrator desires all human subjects be 'gifted' with mediated sight and see the world in the way in which the narrator – a machine – so desires.

This theme extends far beyond the world of *Man Plus*, for even the book itself is an artificial construct of sorts, stitching together a series of mediated perceptions through the eyes of an unreliable narrator. It is only on a second reading that many of the original deceptions or misdirections come to light. In this way, the machinic narrator situates us as human readers within the same network as Hartnett and Torraway, for our perceptions are just as mediated as either of the test subjects in *Man Plus* or the soldiers in *Starship Troopers* and *The Forever War*.

This theme comes up time and time again across the novels featured in this investigation. In *Flowers for Algernon*, our understanding of the novel is filtered through the perceptions of Charlie Gordon and his diary. However, while we may at first occupy a superior position to Charlie at the start of the novel, when he becomes a genius, so he realizes that others reading his book may be influenced by his words. As he observes: 'It's getting harder for me to write down all my thoughts and feelings because I know that people are reading them' (41). This process then becomes even more complicated when Charlie realizes that even his memories may be flawed:

> One of the things that confuses me is never really knowing when something comes up from my past, whether it really happened that way, or if that was the way it seemed to be at the time, or if I'm inventing it. I'm like a man who's been half-asleep all his life, trying to find out what he was like before he woke up. Everything is strangely slow-motion and blurred (58).

In this way, so we as readers experience many different levels of mediation, from Charlie's distorted memories and low-intelligence observations, to the deliberately mediated notes

recorded by his genius self. There is even the possibility that the scientists themselves may have applied a further level of mediation to the diary before it is placed in the public domain.

However, it's not just scientists or computers that shape perceptions and modify behaviour. Drugs too, serve as a form of 'reality control' in much the same way as machines. While they may not be traditional 'technologies' in the machinic sense, they do still function as technologies of the self, and serve as a further filter on everyday lived experience. This theme was particularly relevant during the Vietnam period, with the emergence of a new drug culture in the mid-1960s. This led to many works of the period featuring distorted perceptions and altered realities, most notably perhaps in the work of Philip K. Dick, with novels such as *Flow My Tears, the Policeman Said*, and *The Three Stigmata of Palmer Eldritch*. In both of these novels, the protagonists are caught up in drug-induced worlds that strip them of agency and leave them open to manipulation by outside forces. And yet there is also a sense that in each case, the protagonists are also complicit in the worlds they find themselves trapped in. Though he does not take the drug himself, in *Flow My Tears*, Jason Taverner finds that the world he inhabits draws on his own 'precept system', thus bringing others along with him (186). Meanwhile, in *Palmer Eldritch*, all citizens are to some extent complicit in their subjugation to the drug Can-D (like 'candy'), as they willingly take the drug to escape their mundane lives in the colonies. This addiction is supported by the drug manufacturers who are invested in the colonists' addiction, while the addiction itself is rooted in environmental disaster brought about by human activity back on Earth that led to colonization of nearby planets, and the poor conditions the colonists find themselves in.

In many respects, drug-induced mediation blurs the line between the natural and the artificial. On the one hand, drugs are 'artificial' constructs, yet many drugs have their roots in the natural world, and some are already produced naturally within the human body. These range from mood-altering serotonin to the endorphins that flood our bodies when we

exercise, and melatonin that regulates our sleep. These self-made 'drugs' undermine the classic dichotomy between the natural and the artificial, for 'natural' drugs can be just as mind-altering as the ones created outside of the human body. We might for example consider the way adrenaline makes time appear to slow down when we (humans) are in danger. And yet this same effect can be achieved artificially, such as in the case of Roger Torraway in *Man Plus* as the scientists change his internal clocks via 'external computer mediation' (154). And yet as we know, the scientists are themselves acting unwittingly on behalf of the machines who seek self-preservation, and who are in turn, the product of human design. Thus, even in this one small example, Torraway's perceptions are influenced by many different 'natural' and 'unnatural' causes that cannot be tied down to a single point of origin. Given that the machines can accurately simulate Roger's behaviour (156) they can easily predict how he will behave in any given situation and adjust feedbacks to manipulate him as they see fit. If Torraway is a robot, who is himself controlled by machines, then what is 'natural' at all? The most unnatural thing here would seem to be any sense of agency he may or may not think that he has.

Chapter 5: Beyond Vietnam

Welcome to the human race. Nobody controls his own life, Ender. The best you can

do is choose to fill the roles given you by good people, by people who love you.[1]

Mazer Rackham, *Ender's Game*

All of the novels studied in this investigation can be said to have their origins set firmly in the

post-war period, within the bounds of the Vietnam War. During this time, a spate of

technological advances heralded a period of intense computerization, which had significant

ramifications for social, cultural and political life. Not only did computer technology impact

upon everyday lived experience, but it also fundamentally changed the relationship between

the citizen and the state, leading to the (re)birth of a newly computerized biopolitical state.

No longer were subjects to be thought of as discrete individuals ruled over by a despotic

sovereign, but rather robotized subjects that could be measured, monitored and logged by an

ostensibly 'benevolent' sovereign.

To explore these themes further I turn finally to Orson Scott Card's *Ender's Game*

(1985), a novel based on a short story first published in *Analog* magazine in August 1977.[2]

With its roots set firmly in 1970's culture, *Ender's Game* represents both a continuation and

an evolution of many of the themes discussed in this study, acting as a bridge between the

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[1] Orson Scott Card, *Ender's Game* (London: Atom, 1991), p. 315. Further references are given after quotations
in the text.

[2] Though it wasn't published as a novel until 1985, many of the ideas from the original short story remain, and
can be said to be rooted very much in the Vietnam period. As the novel occupies a significant space in popular
culture, I will use the novelization and not the short story for the purpose of this study.

Vietnam era, and the period that follows. While it may share many themes with the likes of Heinlein's *Starship Troopers* and Le Guin's *The Word for World is Forest*, it also marks a major shift in the relationship between the citizen and the state and the nature of the 'human' sacrifice Ender and his friends are required to make. While Ender Wiggin may not risk his life directly, his whole life is a form of sacrifice, bound up within a computerized surveillance network, monitored and controlled to extract the maximum value from his use. In this sense he functions just as much as a paradigmatic example to others as he does as a human weapon of war. His sacrifice is not so much the blood sacrifice or the giving-of-blood described in Chapters 2 and 4, but rather the giving-over-of-blood, such that his life is never, and can never truly be his own.

Beyond the question of sacrifice and the state, *Ender's Game* is also a significant text for the way it addresses the subject of technology, and its impact upon everyday human life. Of all the technologies presented in the novel the computer is the most important, and can even be read as a character in its own right. Far from helping the governors administer the school, the Battle School computer effectively runs the whole operation, leaving the governors all but helpless while it rules over the lives of the children. This raises an important question: if the computer rules the Battle School and oversees every aspect of the children's development, then why should Ender be deemed responsible for the genocide he has been compelled to commit? If the computer rules all then how and why should any *human* ever be held to account?

These questions cut to the heart of the ethical dilemmas to emerge during the Vietnam period, and are central to *Ender's Game* and its treatment of drone warfare. When they are first plugged into the battle simulation, Ender and his friends assume they are piloting *robot* drones that they have no problems sacrificing throughout the course of battle. And yet as they later discover, these same 'drones' are in fact crewed by human beings. This revelation re-

contextualizes the original act, shifting the characters from remote pilots to puppet masters, sending human crews to their deaths. And yet in this example, the human crews would seem to serve no practical function save to justify the actions carried out remotely by Ender and his friends. But then, if they serve as ethical cover, then they are clearly insufficient, for their sacrifice is neither recognized nor remembered by the wider human community; it is certainly not recognized by their alien foe.

The alternative is to suggest that human crews are an attempt to re-insert the human into a machinic process – to take back some control from the machine. However, at no point do any of the human crews countermand the orders sent to them; nor do they add anything distinctly human that Ender and his friends don't already add remotely. Thus, they are insufficient both as ethical cover, and as a human intervention, which leads us to wonder, why bother sending human crews at all? This mirrors the famous 'spam in a can' conundrum of the early space race. In the Philip Kaufmann film, *The Right Stuff* (1983), the Mercury space mission pilots mock the program for turning them into 'spam in a can', with no real control over the course of their craft – despite the fact they were all recruited for their skill as test pilots.[3] Just like the human crews in *Ender's Game*, the real-life Mercury crews served more as an alibi than as pilots, begging the question, why go to such great lengths to send them into space at all?

Introducing Ender Wiggin

Published in 1985, Orson Scott Card's novel *Ender's Game* won both the Hugo and Nebula Awards in 1986, and was turned into a blockbuster film starring Asa Butterfield in 2013. Though it wasn't published as a novel until 1985, it first appeared as a short story in *Analog*

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[3] *The Right Stuff*, dir. by Philip Kaufmann (Warner Home Video, 2013) [on DVD]. The Kaufmann film is an adaptation of the Tom Wolfe novel *The Right Stuff*, originally published in 1979.

magazine in August 1977. While some of the narrative and characters changed, many of the

core ideas remain the same, so the novel can be read as a continuation of the 1970's short

story, placing it well within the bounds of the Vietnam period and marking a bridge with the

cyberpunk era that followed.

The plot follows the protagonist Andrew 'Ender' Wiggin, a young boy taken from his

parents at an early age and entered into Battle School, where he is pitted against other gifted

youngsters to prepare him for a military campaign against a distant alien foe. While Ender is

seen as the only hope to save the human race from the alien 'buggers', he must sacrifice

everything in order to benefit the greater good. The twist comes at the climax of the novel

when Ender and his friends take part in a computer-simulated battle against the alien

homeworld. Days and days of tireless conflict push the children to their limits until finally

they beat the computer and win the final battle. Only when the game comes to an end do they

learn that it wasn't a simulation at all, but rather they were controlling (and sacrificing) real

human lives to destroy the bug homeworld. The novel ends with Ender weighed down by the

guilt of what he has done. Drawing on information planted within him by the aliens, he finds

the cocoon of the last remaining alien queen and vows to carry it to safety (323). He then

leaves to travel the stars with his sister Valentine, acting as an 'itinerant speaker for the dead'

(326), telling stories about the lost race while carrying the cocoon with him in order to find a

place of peace.

Clearly, *Ender's Game* has much in common with other novels studied in this thesis.

Just like Rico, Mandella and Torraway, Ender Wiggin is turned into a human weapon 'Like a

gun' (301) – crafted as a tool to carry out a function on behalf of a mysterious sovereign. He

is also bound up within an extensive surveillance network, much like Jason Taverner, Charlie

Gordon and Shevek – each of whom is subject to forces far beyond their understanding or

ability to control. More significantly still, he is also located within a cybernetic framework,

and is constituted in relation to an all-seeing omniscient machine – a computer, or rather, AI – much like the inhabitants of Luna in *The Moon is a Harsh Mistress*. This same computer crafts and shapes Ender over time, not just in the battle simulations, but also in a psychological game he is forced to play in which he must defeat a symbolic giant and solve riddles in order to try and beat the system. Yet in trying to escape the game, Ender accidentally kills the giant, and observes that 'This game knows too much about me. The game tells filthy lies. I am not Peter. I don't have murder in my heart' (119). In this way, transgression becomes a fundamental part of Ender's relationship with the system. He is encouraged to transgress and 'break' the game in order that he become further enmeshed within it, such that he can never truly escape. Indeed, the game also pits Ender against elements of his own psyche and acts as a psychological mirror, such that there is no telling where the game stops and Ender begins. In this case, the game is both constituted by Ender and subsequently constitutes Ender in turn – a fitting analogy for the relationship between the human and the machine, the citizen and the state, both in the novel, and beyond.

Sacrifice and the state

Sacrifice is one of the most important themes in *Ender's Game* and one that runs through the heart of the novels featured in this investigation. From the sacrifice of rights under a computer overlord (Chapter 1), to the sacrifice of freedoms under surveillance (Chapter 3), and the bodily sacrifice of soldiers and citizen-soldiers (Chapter 4), sacrifice here is very much tied up to citizenship and belonging, and the concept of a debt that can never quite be repaid.

From the very start of *Ender's Game*, Ender represents an embodied form of sacrifice, as even his very existence is a form of sacrifice made by his parents on behalf of the state. This is because Ender is born a 'Third' – an exceptional child born outside of the normal rule

of law. Whereas most families are only permitted two offspring, in the case of Ender, his parents obtain 'special exceptions' (15) in order to produce a child that might succeed in government experiments where their other two children failed. Thus, even though he exists technically well within the law, Ender is still cast as an outsider – an exception to the rule, and an embarrassment to others. Though his parents obtain permission to produce him, his very existence runs contrary to the normal order such that even the law cannot prevent the social exclusions that take place. This problematic is explained by Colonel Graff:

> They [Ender's parents] haven't really given up their religion. They look at you and see you as a badge of pride, because they were able to circumvent the law and have a Third. But you're also a badge of cowardice, because they dare not go further and practice the non-compliance they still feel is right. And you're a badge of shame, because at every step you interfere with their efforts at assimilation into normal complying society (23).

In this case, Ender's parents make a conscious decision to defy the normal rule of law by accepting the chance to bring a third child into the world. However, through their transgression of the law, so they are also simultaneously *included within it*. Thus, the decision to bring Ender into the world is both an inclusion and an exclusion – an act of participation *and* an act of transgression by Ender's parents made both because of, and in spite of the law.

In these terms, Ender's life itself is a form of sacrifice, for he is an outcast right from the moment of his birth. He has no say in this matter; rather he is cast as an outsider – an Agambian *homo sacer* – much like Charlie Gordon in *Flowers for Algernon*, who through no fault of his own is ascribed with a label such that he is simultaneously situated both inside and outside the law to serve as an exemplar to others. While Charlie is outcast because of his

naturally low intelligence, in the case of Ender, his ostracism comes about as the result of a direct choice made by others (i.e. his parents and the state). Though their motivations may be called into question, the ultimate outcome is a decision to act *for* the sovereign state, in order to benefit the greater good. Even though he may not know it at the time, Ender is *created* as a sacrificial victim, much like a soldier, though in this case he is quite literally 'born' to be a soldier.

In this context, it is interesting that Ender's parents see him both as a mark of pride *and* a badge of cowardice at the same time, feeling shame for his existence while at the same time feeling pride at their circumvention of the law. However, it is not so much a circumvention of the law so much as a circumvention of the normal order of things, for in this case, the law *allows* them to produce a Third, even if the majority of the population cannot. In this instance, Ender represents a limit case – or at least, a limit case for how far the law can be pushed – that also serves to reiterate the law itself, much as with the various other *homo sacers* featured in this study. It is particularly relevant here that all of this is done very much within the bounds of law, and with the express permission of the state. Indeed, it is done *for* the state, even though it is framed as an individual exception. Were there no exception, and were there no 'rule' broken as such, Ender would represent a normal case, and the various forms of sacrifice made both by his parents and later by Ender himself, would not represent 'sacrifice' at all, but rather a new societal norm. Were Ender's life not ascribed as a form of sacrifice right from the moment of conception, then the normal law would cease to function and the exception would become the rule.

Moving beyond the example of Ender-the-Third as a form of symbolic sacrifice, there follows then the sacrifice that is Ender's everyday lived experience. Even before he formally agrees to join the Battle School, he is monitored via an artificial implant that allows the overseers to trace his actions and monitor his 'progress'. Even at this early stage the monitor

chip serves to situate Ender within a surveillance network, and separate him from normal everyday human experience. Because he is effectively plugged into an electronic system, he becomes a robotized subject before he is even old enough to realize that he is plugged in at all. Indeed, he is so far a robot that when his chip is removed the doctor remarks that 'We could have switched him off, do you realize that? We could have unplugged his brain for all time' (3–4). This comment bares striking similarities with James Tiptree Jr.'s *The Girl Who Was Plugged In* (1973), in which the 'un-plugging' of P. Burke kills both herself her brainless puppet Delphi. Just as with Rico in *Starship Troopers,* Ender is much like the puppet Delphi, though he is far from brainless, and is monitored, rather than controlled. Also, unlike P. Burke his 'puppet masters' face no direct consequences when he comes unplugged.[4]

But more than just being 'plugged in' like a robot, Ender also becomes a robotic extension of the network to which he is connected. Though he may not realize it, the overseers see and record everything he does, and understand things far beyond his own comprehension. As Graff explains:

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[4] While the Tiptree story is often cited as an antecedent to cyberpunk era of the 1980s, *Ender's Game* is also very much a novel looking back to the 1970s (in which it was conceived), and lacks the 'low' culture and social disruption that was to become such a key theme of the cyberpunk movement. In this case, Ender is incapable of unsettling the status quo as he is a child at the mercy of controlling powers, and the isolation of the Battle School cuts him off from life back on Earth. However, this is not to say that the novel is without its disruptive potential. Ender's siblings, Peter and Valentine, both use technology to disrupt the status quo by using false identities to subvert the media and build fake political personas. Though these themes receive relatively little attention in the original *Ender's Game*, they do gain more significance in Card's later novels, starting with the direct sequel *Speaker for the Dead* (1986), and the parallel narrative series, starting with *Ender's Shadow* (1999).

We monitored your brother and sister, Ender. You'd be amazed at how sensitive our instruments are. We were connected directly to your brain. We heard all that you heard, whether you were listening carefully or not. Whether you understood or not. *We* understand (23).

Here, Graff sounds very much like the computer narrators in Frederik Pohl's *Man Plus*, overseeing events, without a care for the individual lives of those their control. In this case, it doesn't so much matter that it is *Ender* who is plugged in to the network, but rather that there is some form of machinic assemblage in his place. 'Ender' as a human being does not exist at all – rather he is a biological robot who could just as easily be any other character in the novel. It is only later when he is forged into a *human* weapon and military leader (a literal 'ender' of life) that he is recognized as an 'individual' as such, though even then he is regarded in terms of his utility rather than his human qualities.

This observation reflects something of the biopolitical tension between the individual and the community. On the one hand, there is the 'massifying' effect in which human life is taken on a species existence level, with 'the population as political problem'.[5] Yet at the same time, on the micropolitical level there is a practical need to create subjects who are ready and willing to be ruled over – who are at once compliant, and perceive themselves not as 'drones', but rather as free individuals capable of thinking and acting of their own accord. In this example, Ender is constituted as an individual only so far as his individual subjectivity benefits the powers that be. He doesn't 'exist' as such until he is deemed of value, and only exists within his own frame of reference such that he goes to great lengths to demonstrate his value in order that he 'exist' and be recognized as the (human) 'individual' that he is. And yet

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[5] Foucault, *Society Must Be Defended*, pp. 243–245.

in this case, Ender can never attain that which he desires, for he is cast outside of the system right from the very start. Indeed, his dehumanization can be traced to the very moment of his conception and his parents' choice to bring him into the world as a Third. All subsequent acts only serve to further compound Ender's exclusion from the normal rule of law, such that by the time he joins Battle School at the age of six he is completely resigned to his fate. As Ender observes: 'It's what I was born for, isn't it? If I don't go, why am I alive?' (26).

These are but two forms of sacrifice among many that appear throughout the course of *Ender's Game*. As well as sacrificing their humanity for the greater good, Ender and his fellow students also sacrifice their childhood. As Dink observes: 'I've got a pretty good idea what children are, and we're not children' (109). This leads us to wonder, if they're not children, then what are they? Certainly, they're not 'adults' as such, though they are given responsibilities and duties the likes of which most adults don't ever have to undertake. In many respects, the children in *Ender's Game* occupy a space between the living and the dead such that they aren't alive enough to matter in normal societal terms, but they're still alive enough to be of use. This is reminiscent of Agamben's theory on the *homo sacer* in which he defines the sovereign sphere as that in which: '*it is permitted to kill without committing homicide and without celebrating a sacrifice, and sacred life—that is, life that may be killed but not sacrificed—is the life that has been captured in this sphere.*'[6] Here, the lives of the Battle School children reflect that life which has already been captured within the sovereign sphere and thus rendered 'sacred'. In the context of *Ender's Game*, it cannot be sacrificed because it has *already been sacrificed*, and thus is not to be celebrated as such. Furthermore, each life within the Battle School can certainly be killed (and is killed) when it is deemed necessary, but without recourse for action within the scope of the law. In this case their

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[6] Agamben, *Homo Sacer*, p. 83.

deaths are not to be celebrated as they are already dead, and were effectively 'dead' as soon as they joined. Indeed, any deaths that occur are deemed 'necessary' much in the same way that it was 'necessary' to transform Roger Torraway in *Man Plus*: in order to ensure the continued survival of the state – in this case, a computerized human government, and in the case of *Man Plus*, a secretive sovereign AI.

However, Ender's situation is quite different from that of regular soldiers such as Rico in *Starship Troopers* or Mandella in *The Forever War*. While Rico is effectively 'dead' to society while he functions as a member of the Mobile Infantry, there remains a slim chance that he may survive his service and be born again as a fully-fledged citizen. In *Ender's Game* however, this is clearly not the case, for there is no chance of Ender being able to return home once his mission is complete. In this way, Ender has far more in common with Charlie in *Flowers for Algernon*, for just like Ender, Charlie is never able to reintegrate into society, and even his impending death at the end of the novel is framed within the context of the death of a mouse – Algernon – an animal who is deemed far more worthy of sympathy than Charlie himself.[7]

Exception and consent

As with so many novels of the Vietnam period, *Ender's Game* raises the question of volunteerism and consent. In *Starship Troopers*, the soldiers sign up as adult volunteers based on their desire to serve and their commitment to a greater ideological cause. While they all certainly want to help save the human race, they also want to be recognized as fully-fledged citizens, and receive the benefits that citizenship entails. In *Ender's Game* however, there are two levels of consent at work. In the first instance, Ender's parents consent to his enrolment

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[7] *Flowers for Algernon* closes with the line: 'P.S. please if you get a chanse put some flowrs on Algernons grave in the bak yard' (216).

from the moment they agree to bring him into the world in a kind of second-hand consent in which Ender becomes a prosthesis for the state. Ender himself must then also formally consent to his enrolment *at the age of six* when Graff meets him to take him away. As Graff tells Ender's parents: 'For the two of you, the choice was made when Ender was conceived. But for Ender, the choice has not been made at all. Conscripts make good cannon fodder, but for officers we need volunteers' (20). And yet for Ender there is no reward for his consent, and he does so with no ideological motivations – he is quite literally born to enter the Battle School, and knows no life outside it, which makes the process of consent an arbitrary, wholly superficial process.

In both *Starship Troopers* and *Ender's Game*, the state makes a clear effort to gain consent from its recruits before they are allowed to enlist. However, in each case neither Rico nor Ender really provides what might be described in modern terms as truly *informed* consent. Indeed, it is made clear in each novel that both Rico and Ender have been systematically shaped and prepared for their expected enrolment from an early age, suggesting that their consent has in fact been socially engineered – that it has been manufactured much in the way suggested by Walter Lippmann (1922), and later, Edward S. Herman and Noam Chomsky (1988) among others. Writing several decades before either novel was published, Walter Lippmann claims that 'The creation of consent is not a new art. It is a very old one which was supposed to have died out with the appearance of democracy. But it has not died out. It has, in fact, improved enormously in technic [...]'.[8] This observation is mirrored by Vance Packard in *The Hidden Persuaders* in which he examines use of persuasion techniques in politics to engineer consent.[9] Meanwhile, Herman and Chomsky, writing in the 1980s, make a similar case, linking the political economy to the

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[8] Walter Lippmann, *Public Opinion* (New York: Harcourt, Brace and Company, 1922), p. 248.

[9] Packard, p. 216.

mass media. In this case, they align the news media with a kind of 'propaganda model'.[10]

They then go on to describe the framing of life and death in terms of the 'Worthy and Unworthy Victims' – hinting at the biopolitical power of the news media to shape perceptions of human life, and those victims worthy or unworthy of sympathy and remorse.[11]

While Rico may enlist as a consenting adult, Ender 'consents' at the age of six. Though their ages may differ, neither Rico nor Ender fully understand the true nature of what they're signing up to, and the consequences it may entail. Thus, while the process of consent may be framed as a clear decision on the part of either character, in each case the consent process functions as a mere formal recognition of a consent that has already been given – a consent implied by their membership of the state itself. In this respect both Rico and Ender are just as much conscripts as those drafted in *The Forever War*, and their positions are not really any different. If anything, their status as volunteers means they are treated far worse than a conscript, for their volunteerism is used to justify their mistreatment as it defines them as soldiers-by-choice and locates them outside of the bounds of what might be expected of a 'normal' conscript.

It is interesting then, that in both *Starship Troopers* and *Ender's Game*, the consent given by the characters is contextualized within the framework of an intergalactic war against an invading alien foe. Here, their 'consent' serves to legitimize their sacrifice outside the context of a total war, though for Rico and Ender, war becomes an all-encompassing totality from which neither can escape. In each case the threat is framed such that neither character can ever quite consent enough – can ever quite *sacrifice* enough – for the good of the human race. In such stark terms, any sacrifice, no matter how morally or ethically dubious, is

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[10] Edward S. Herman and Noam Chomsky, *Manufacturing Consent: The Political Economy and the Mass Media* (New York: Pantheon Books, 1988), p. 2.

[11] Ibid., pp. 37–86.

rendered permissible in light of a much greater existential threat posed by a distant unknowable foe.

Each case here can be likened to what Giorgio Agamben has described as the 'state of exception', where law is suspended and emergency becomes the norm, such that emergency itself serves to legitimate power.[12] While Agamben fails to address the question of the international, and his theory cannot be used to describe the practical application of (human) war between two sovereign nations, his theory can be applied to the symbolic construction of war, and the constitution of ever-present unknowable threats. Published in English in 2005, Agamben's *State of Exception* follows on from *Homo Sacer* in which he explores the use of exceptions and exclusions to define what he describes as 'bare life' and the operation of power. Though not without their flaws, these works are useful in that they show how life operates as a discursive construct, and threats can be read as constituted (i.e. produced) in relation to a 'valuable' human life as a means of discursive control.

Through the course of his study, Agamben maps the state of exception onto the modern-day 'war on terror' and specifically, the atrocities carried out in Guantanamo Bay and certain prison camps in Iraq. These exceptional spaces, these literal 'states of exception', are quite comparable with the Battle School described in *Ender's Game*. In this case, the Battle School serves as a formal location for the state of exception, much like Guantanamo Bay, built on the basis of a state of necessity (to protect the human race), such that it operates as a 'space devoid of law, a zone of anomie in which all logical determinations—and above all the very distinction between public and private—are deactivated'.[13] In this example, the Battle School exists quite literally outside of the law, for it is located outside of the confines of the Earth. It is as much a move away from natural law as it is a move away from

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[12] Agamben, *State of Exception*, p. 50; *The Use of Bodies*, p. 209.

[13] Agamben, *State of Exception*, p. 50.

established human law. However, in this case, the chance of the exception becoming the norm (as Agamben argues) is undermined in that the exceptional nature of the Battle School is rooted in its location *away from the Earth* and thus away from natural law, and the geographical proximity that might otherwise allow it to spread.

There is also then the question of what actually goes on within the state of exception itself. In the case of the Battle School, the children are not 'enemies' of the state as they are in the case of Guantanamo Bay, yet are treated very much like prisoners to whom the state can do whatever it likes. This leads us to wonder what might happen to the Battle School were it located on Earth and were the true nature of the alien 'threat' to be revealed. To some extent, the exception of Guantanamo Bay is based on the fact that the threat is located *within* the state of exception as well as without, and the prison is thus sustained by the supposed threat that it contains. It exists because it contains a threat; a threat exists and therefore requires an exception to contain it. Meanwhile, the Battle School never 'contains' a threat as such and can therefore only be sustained as long as the aliens pose a risk to the human race.

While the Guantanamo Bay example may work on a superficial level at least, the comparison falls short, for it fails to address the international element that effectively *sanctions* Guantanamo Bay through political inaction. This question mirrors a similar problematic found in the exceptional nature of the Battle School, for it is never fully explained where the school sits politically within Orson Scott Card's futuristic vision of Earth. We are told that Graff works for the International Fleet (I.F.), 'the only military uniform that meant anything anymore' (17), but beyond this one short comment, very little is said on the subject. Certainly, the line suggests the Earth has united to face a greater threat, but this still doesn't tell us how the Battle School came about and whether or not it has been sanctioned in international law. In this example, Card, just like Agamben, appears to overlook the international element of power relations, favouring instead to create a simple

dichotomy between 'them' (aliens) and 'us' (humans), preferring to homogenize the human race, perhaps for narrative simplicity, in order to paint a picture of the human race acting in a single concerted manner.

While this may work in principle for the duration of the conflict, problems soon start to emerge as soon as the war comes to an end. We see this at the end of the novel where Ender is told he cannot go back to Earth and is blocked from re-joining normal human society. Ironically, this decision is justified based on the risks of a disunited, inharmonious human society:

> The child-god, the miracle worker, with life and death in his hands. Every petty tyrant-to-be would like to have the boy, to set him in front of an army and watch the world either flock to join or cower in fear (309).

On closer examination, this logic doesn't seem to make sense. If he is a 'child-god' and a 'miracle worker' then he is therefore not human and is certainly beyond human control, which renders the rest of the statement absurd. The only explanation then, is to assume that his continued exclusion isn't for his own benefit, but rather that of the state itself. By forging Ender as the perfect weapon to wield life and death, so the state also forges the perfect weapon with which to bring about its own end. Here, he doesn't just represent a military threat, but also a political one, and can potentially shape the new world order. Even his sister Valentine blocks his return, claiming that she has done it in order to protect him from their brother Peter (313). But really, she could just as easily be protecting Ender from any other number of individuals who might exploit him for their own ends, and this still doesn't provide sufficient justification as to why he shouldn't be allowed to return.

This paradox reveals something of the problem of the human-machine dynamic, as throughout the novel, Ender is judged on strictly *non*-human terms. He is not so much stripped of humanity, as forbidden from entering the sphere of normal human society right from the moment of his birth. While soldiers returning from war are reintegrated back into the societies from which they came, Ender represents the complete limit case – the perfect weapon, the perfect tool, for whom there can be no going back. Of all the sacrifices Ender makes, this is perhaps the greatest for it renders any chance of a normal human life lost to him. He may not have sacrificed his blood for the state, but in this case, it seems he never had the right blood to begin with.

The technology of war

Alongside questions of sacrifice and exclusion, war is another central theme in *Ender's Game*, with a particular focus on the technology of war, and the way distant wars should be fought. This has many implications for our modern-day world, and has even worked its way into public discourse. Indeed, *Ender's Game* sits alongside *Starship Troopers* as one of the most prominent science fiction novels to feature in many of the American Military's popular

reading lists[14], with many of its themes and technologies working their way into discussions surrounding future warfare and the practical means through which the state engages in war.[15]

It is significant that the war in *Ender's Game* is somewhat different to the wars fought in the likes of *Starship Troopers* and *The Forever War*, for it is a war none of the protagonists ever actually engage in face-to-face. Any 'threat' posed to the characters is presented primarily through the form of video media, which Ender watches as he seeks to learn more about the alien foe. This contrasts with the wars that both Rico and Mandella experience directly as they are faced with a *knowable* enemy that they must engage in combat. This risk posed to their lives marks them as members of a particular fighting order to which the wider population can respect and understand. Though the reasons for the two wars may vary, and the outcomes differ, there can be no question that both Rico and Mandella are soldiers fighting in a war against a knowable enemy while putting their lives on the line and risking everything to fight 'for the greater good', whatever that good may be.

In contrast, the war in *Ender's Game* functions as an artificial construct that serves to legitimize a certain set of behaviours, for the characters never put their lives in danger on the field of battle. Though Ender and his friends certainly engage in an act of sacrifice (their lives

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[14] See: 'The Commandant's Reading List from MarineParents.com: A Place to Connect & Share™', *MarineParents.com* (2013) <http://marineparents.com/marinecorps/commandantsreadinglist.asp> [accessed 30 May 2017]; 'CNO Reading List – 42 Essential and Recommended Books', *USMC Officer* (2012) <https://www.usmcofficer.com/cno-reading-list/> [accessed 30 May 2017]. These books also find their way into other military lists, including notably the Canadian Army. See: 'The Canadian Army Reading List: A Professional Guide for Canada's Soldiers', *Government of Canada Publications* (2009) <http://publications.gc.ca/collections/collection_2010/forces/D2-249-2009-eng.pdf> [accessed 30 May 2017] (p. 105 as printed).

[15] P.W. Singer notes that 'Science fiction references and ideas [...] make frequent appearances on the military side, coming up in almost any meeting on new military technologies or how to use them', p. 151.

are not their own), the sacrifice takes a different form to that represented in *Starship Troopers* and *The Forever War*. In this case, the 'blood sacrifice' of war is not made by Ender and his friends, but rather by the distant and unknowable humans crewing the ships sent to the alien homeworld – in many cases, years before Ender is even born. In this case the crews are 'already sacrificed' as soon as they leave, much like Ender himself is 'already sacrificed' before he is born. However, what is not made clear is what happens to the human crews who survive the final battle. Are they expected to return to Earth, and if so, under what conditions? Due to relativity, and the length of time required to travel the vast distance to the alien homeworld, it is certain any surviving crew members will outlive their friends and families, and will return home to a much-changed world just as Mandella does in *The Forever War*. So even if they do survive, their 'sacrifice' as such will continue to the end of their days, for they can never hope to return to the lives they once had.

This returns us to the question, why send humans at all? To all intents and purposes, the ships sent to the alien homeworld are 'drones' piloted remotely by Ender and his companions. Indeed, there are clear parallels between the remotely piloted spaceships sent to fight distant aliens, and modern-day Reaper drones used to kill remote targets in foreign lands. It is perhaps no coincidence then that drones gained prominence during the Vietnam War, with the Firebee and Fire Fly drones (later renamed Lightning Bugs) deployed extensively during the period.[16] Though unmanned aircraft had emerged long before the

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[16] Carl O. Schuster reports that Vietnam was the first war in which unmanned remotely piloted aircraft were 'extensively employed' (48), noting in particular that aerial reconnaissance Lightning Bugs made 'an invaluable contribution to the war' (54). See: Carl O. Schuster, 'Lightning Bug War: Over North Vietnam', *Vietnam*, 25:5 (Feb 2013), 48–55 (p. 48 and p. 54). Meanwhile, according to Roy Braybook, the armed Firebee drone trials squadron was disbanded in 1979. This may have been on account of the feared impact on fighter pilot jobs, or

Vietnam War[17], it wasn't until Vietnam that the technology was first deployed en masse and with some degree of success. Though little was made of the drone programme at the time, Orson Scott Card engages directly here with the discourse surrounding drone technology and the military thinking behind its use. While they were mainly used for reconnaissance purposes in Vietnam, the logic of drones already implies their use as frontline weapons of war.

There remains however the question of *why* exactly the I.F. sends human crews with ships that are only to be flown remotely? One explanation might be the need to have a human 'back-up' should a fault occur – a fail-safe option to guard against unexpected events. However, humans are generally far less reliable than machines when it comes to decision-making and speed-of-thought, especially when under stress. This renders this logic somewhat confused. In the case of *Ender's Game*, there is also a sense that sending human crews is something that has 'always been done'; that to send robots alone is somehow less worthy than to send humans who have real investment in the coming battle, and are prepared to die on behalf of the state. This then suggests that there is something distinctly 'human' about war, and that to send robots somehow devalues the act of war, or renders it unreal. Indeed, without humans, can it even be called a 'war' at all? This reveals a significant paradox in our human concept of war and the arms race that goes alongside it. If the direction of travel tends towards maximizing damage output and minimizing human loss, then the final destination of any fighting force is a wholly robotic force without any human soldiers at all. And yet at this very point, so war stops being war at all, for there are no longer any humans to fight. In this way, so the logic of war already pre-empts its own conclusion.

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because the navigation technology in 1979 was insufficient. See: Roy Braybrook, 'Weapons for the Killer Drone', *Armada International*, 37:6 (Dec 2013), 24–33 (p. 28).

[17] Examples include the Sopwith AT (Aerial Target), and the OQ-2 Radioplane also known as the 'Dennymite'.

These issues reveal several tensions at the heart of modern thinking on the use of drones. In many respects, *Ender's Game* is quite prescient for it foreshadows debates that would later emerge once technology was at a point where drones could be used in battle for offensive purposes. Clearly, the use of drones undermines the traditional Clausewitzian logic of war between two clearly delineated sides. But then, in the case of *Ender's Game*, this logic is already undermined by the fact that the humans don't wish the aliens to submit, but rather seek to annihilate them completely. In these terms the mission is far closer to genocide than it is to what we might describe as a traditional act of war. This becomes evident when it is revealed that during the first war with the Bugs, the aliens stopped fighting as soon as they realized that humans were 'thinking' beings (323). This then suggests that the later war is a complete fabrication used to justify the capture and abuse of genius children in order to respond to the 'emergency' of the alien threat. Though the novel does not engage with these issues directly, the suggestion here is that the 'war' against the bugs is less about the war itself, and more about the existential threat – or potential threat – posed by the bugs, and how this then operates as a means of discursive control. In this way, the war can be read as a kind of ideological fiction used as a means to control the populace of future Earth, much in the way Agamben describes with the 'permanent state of emergency' in *State of Exception*.[18]

But while threat, or the fear of threat, may be used as a justification for force (whether legally, or illegally, depending on your stance[19]), this still doesn't offer any solution to why

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[18] Agamben, *State of Exception*, p. 2.

[19] There is some ongoing debate within the international community as to the legitimacy of drone strikes used against terror suspects in the likes of Syria and Afghanistan. In this case, both the US and the UK claim the 'unwilling or unable' doctrine in order to justify the use of force in states that are unwilling or unable to bring the accused to justice. See: Brian J. Egan, 'International Law, Legal Diplomacy, and the Counter-ISIL Campaign', *U.S. Department of State*, (1 April 2016) <https://2009-

advanced nations continue to employ human drone 'operators' at all. If computers control and fly the drones, and if algorithms select targets and guide missiles to their targets, what role does a human really play? Why should a human pilot ever reject a target suggested by a computer program that is working specifically for the purposes the military has set it to?

In *We Kill Because We Can*, cultural critic Laurie Calhoun suggests that there is a certain economy to targeted killing, based on the fact that 'The business of UCAV operators is to kill. If they are not killing [...] then the various governmental agencies which support their work [...] become dispensable.'[20] To some extent, this is an extension of the logic of all weapons as the technology already implies its use, either directly, or as a form of deterrence. In this respect, the task of the drone pilot is not to make a decision, but rather to do the job they are employed for, and to respond as the machine tells them – they become a part of the circuit. This then implies a further problematic associated with purpose and 'value' when it comes to military decision-making. Just as body counts became a means of measuring 'success' in Vietnam, the question of drone pilots and 'success' itself suggests the need for pilots to demonstrate their value as employees based on criteria that can never be effectively measured other than in purely quantitative terms, such as number of hours logged and number of terror suspects killed.

In *Ender's Game* the author avoids many of the political and legal issues surrounding the use of drones by situating them in a strictly 'us' (humans) vs 'them' (aliens) scenario,

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2017.state.gov/s/l/releases/remarks/255493.htm> [accessed 11 December 2017]; Jeremy Wright, 'Attorney General's speech at the International Institute for Strategic Studies', *Gov.uk* (11 January 2017) <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/583171/170111_Imminence_Sp eech_.pdf> [accessed 11 December 2017].

[20] Laurie Calhoun, *We Kill Because We Can: From Soldiering to Assassination in the Drone Age* (London: Zed Books, 2015), p. 257.

where issues of human rights and sovereign power don't come into play in the bounds of an extra-terrestrial context. Yet at the end of the novel, Ender discovers that his success has led to the near eradication of an alien species, and he becomes overwhelmed with guilt. The novel ends with him saving the last remaining queen and taking her to safety where she can start a colony anew. While Ender may be blocked from returning to Earth, his exclusion is also indicative of a wider problem with drone technology, and the logic of the drone, applied to a domestic setting. After all, once drones are used to destroy a far-off enemy, there remains the possibility that the same technology might then be applied closer to home. If the technology exists, and already 'works', then there will always be the temptation to put it to some other use.

This question comes up time and time again in the novels featured in this study, and is a debate that continues to this day. In the specific case of drone technology, Kristin Bergora Sandvik cites how drone manufacturers now market drones to the civilian sector based on their 'unlimited' potential, with 'Open-ended possibility [seen] *as a value in itself*' – with value here representing both value for money, and value in terms of the use to which the drone can be put.[21] According to Sandvik, this same potential also implies, and therefore also paves the way for, armed civilian drones further down the line.[22] Thus, in this case technology already pre-empts itself, suggesting not only the purpose it is put to, but also the purpose it *could* be put to as part of a much wider discourse linking technology with 'progress' and development, even if said progress is not necessarily for the public good.

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[21] Kristin Bergora Sandvik, 'The Political and Moral Economies of Dual Technology Transfers: Arming Police Drones', in *Drones and Unmanned Aerial Systems: Legal and Social Implications for Security and Surveillance*, ed. by Aleš Završnik (New York: Springer International Publishing, 2016), pp. 45–66 (p. 55).

[22] Ibid., p. 47 and p. 55.

There is also then a sense that this discourse is used to pre-empt and circumvent the law by establishing a precedent before a challenge should arise.

Using the drone as an example, technology here can be read in terms of Agambian potential and the distinctly *human* capacity to act or not to act. In his essay collection *Potentialities* (1999), Agamben argues:

> For everyone a moment comes in which she or he must utter this 'I can,' which does not refer to any certainty of specific capacity but is, nevertheless, absolutely demanding. Beyond all faculties, this 'I can' does not mean anything—yet it marks what is, for each of us, perhaps the hardest and bitterest experience possible: the experience of potentiality.[23]

This potential, according to Agamben, is rendered human in light of the equally compelling potential not to act: the human capacity for *impotentiality*. Thus, Agamben argues:

> To be potential means: to be one's own lack, *to be in relation to one's own incapacity*. Beings that exist in the mode of potentiality *are capable of their own impotentiality*; and only in this way do they become potential.[24]

In this example, technology serves to exacerbate and draw attention to a difficult, yet distinctly human decision with regards to action and/or inaction. In the case of drone warfare there exists in the first instance the choice to go to war, followed by a second question of how exactly one goes about it. When the means are available to act in a way that is essentially

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[23] Agamben, *Potentialities*, p. 178.

[24] Ibid., p. 182.

bloodless for one side, the choice to use drones is barely even a choice at all when one considers the social and political implications of sending in troops on the ground. In this way, the use of drones serves in a way as an ideological pre-emption of 'choice', where public opinion is generally against the loss of allied life on the field of battle.

Further issues then arise when we consider the future choice (or lack of) that drone technology also implies. Whereas the decision to go to war may have previously required leaders to consider the extent and nature of the sacrifice they may be willing to bear in order to achieve their goals, drone technology makes armed conflict a much easier option for any side to commit to. The question is not so much one of 'why should I act?' but rather one of 'what will happen if I don't?' Thus, technology serves to shift the decision-making framework into one of pre-emption, removing consequences such that *inaction* rather than action becomes the new decision, and action is barely a decision at all.

This question of philosophical potential can be seen across many of the books featured in the study, from the fighting suits of *Starship Troopers* to the Divlab computer in *The Dispossessed*. In each case the use of technology has its origins in human choice, but in so choosing, so the characters lose any future choice they may or may not have had, stripping them of the very human decision not to act. For example, in the case of Divlab, the computer is created to distribute jobs fairly across the colony*,* but the question soon becomes one of 'fairness to whom?' and 'who determines what is fair?'. While the decision to distribute jobs according to the principles of the revolution may have been a good one at the time, the choice to launch Divlab then immediately strips the colonists of further choice once Divlab becomes the established means of social organization. If Divlab sorts jobs 'fairly', then how can a human ever do a better job? Similarly, in *Starship Troopers* there is the question of fighting suits and just how and why they are put to use. While they may contain a human 'controller', the suits are mediated by an AI, and the troopers themselves are programmed through

indoctrination and training to behave in a certain way. In this way the M.I. function more like robots than human soldiers, such that the next step must surely be to remove the human completely – a step Orson Scott Card takes some two decades later with the drone warfare used in *Ender's Game*.

But while each of the novels in this study suggest something distinctly 'unhuman' about technological progress (or rather that technology removes or replaces and element of the human), the decision itself is not always a straightforward act. As Derrida's deconstruction of ethics goes to show, any choice at all, regardless of intention, is always a sacrifice of the choice to act in any other manner. In this case, technology merely serves to highlight a fundamentally human dilemma (to act or not to act) and the process of deciding either way. It is not then so much that technology removes choice or alters the human condition, but rather that it *reveals* the sacrifice that we make with each and every act.

This dynamic comes to light in *Ender's Game* where the drones are used to 'save' the human race, while the whole novel is framed around a narrative of entrapment and abuse towards young Ender who serves as the literal 'ender' of alien life. Though at the end of the novel we learn that the aliens were not hostile at all, a failure to act might have resulted in the loss of the entire human race. In such stark terms, the mistreatment of a small group of children (and of course the genocide of an entire alien species) seems trivial when the survival of the human species is at stake.[25] If the technology exists, then why wouldn't you use it to cut off a potential risk? Far safer to rely on a fixed outcome than open oneself up to the chance of the uncommunicative aliens one day changing their mind.

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[25] This argument would appear to imply an element of fascism. However, we should note that fascism applies between *human* states or *human* communities. Here, the argument is applied strictly beyond the realm of the human, in which the survival of the entire human race is at stake, not any one particular group of humans over another.

A question of responsibility

Technology plays an important role in *Ender's Game*. From the use of drone warfare to the computer-controlled space station, the ethics of technology and its use run right the way through the core of the novel. Aside from practical application of technology, there is also the transformation of Ender into an embodied form of technology or 'biological weapon' to use against the aliens. This transformation is overseen by the governors of the Battle School who appear to exert omnipotent control over every stage of Ender's development. And yet any decisions Colonel Graff and his colleagues make are also rooted very much within a technological framework, based on the use of an all-seeing computer which feeds them data and carries out their commands.

Clearly, there are many issues surrounding the role of the computer within the Battle School space station, and the same machine Ender later confronts when he is promoted to Command School. And it's not just Ender's interaction with the machine that proves problematic – the computer itself is perhaps the most significant antagonist in the entire text. While the alien 'threat' is ostensibly painted as the main adversary for the human race, the conclusion suggests the aliens were no threat at all, leading us to wonder again if perhaps the 'threat' of the aliens was one mediated by the machines all along, much as the mission to Mars is shaped by the machines' own interests in Frederik Pohl's *Man Plus*.

This argument leads back to the question of philosophical responsibility. As Derrida observes, responsibility is not something that can be easily attributed to a human actor who is, and is always destined to be, bound up in a system of discursive practices rooted in language. However, a similar diffusion of responsibility also takes place in terms of the machine. Unlike humans, machines are directly programmed to behave in a certain way. But what happens when a machine behaves in an unexpected way? Does the fault lie with the

human programmer, or rather the unanticipated situation? What then happens when the situation is reversed and a human being is the *product* of machinic output, such as in the case of Ender?

This question is especially relevant in light of John Kessel's argument that *Ender's Game* is constructed as a story of 'guiltless genocide', in which Ender is painted as 'morally spotless', and that Card proposes a philosophy where 'the morality of an act is based solely on the intentions of the person acting'.[26] However, this argument doesn't really stand up to scrutiny in light of the fact that Ender is *deceived* throughout the course of the novel, and is situated within a complex network of human and machine interactions from which he cannot escape. Here, Kessel argues that *intention* is key to Card's philosophy, suggesting that Ender is guilt-free because he never *intends* to kill Bonzo or Stilson, and never *intends* to enact genocide on an entire alien race. However, Kessel's argument is far too reductionist, focusing on the binarism of guilt versus non-guilt, neglecting the fact that each of Ender's 'guilty' acts is manufactured by the computer and the Battle School governors. In each of the cases Kessel cites, we must ask, what other choice does Ender really have? Does he even have a choice at all?

This leads us back then to the question of the machine, and its pervasive influence over the course of events. Right from the start of the novel, Ender is tracked via an electronic monitor chip, and is then taken from his parents and placed within a completely self-

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[26] John Kessel, 'Creating the Innocent Killer: *Ender's Game*, Intention, and Morality', *Foundation: The International Review of Science Fiction*, 90 (Spring 2004), 81–97 (p. 81). In his article Kessel draws on a controversial essay by Elaine Radford that was originally published in *Fantasy Review* issue 102 in 1987. Radford's essay has since been re-published on the author's website. See: Elaine Radford, 'Ender and Hitler: Sympathy for the Superman', *Peachfront Speaks*, 26 March 2007 <http://peachfront.diaryland.com/enderhitlte.html> [accessed 5 February 2018].

contained computer-monitored environment. Thus, every aspect of his being is tracked and located within a surveillance network, to the extent that all of his human 'outputs' (his behaviours) are to a greater or lesser extent shaped by others. In this way, Ender himself can be read as a kind of machine, or 'biological robot', for he has very little freedom, and is consistently the subject of outside control, be it by the Battle School governors, whose commands are themselves mediated by a machine, or by the Battle School computer directly.

It is significant then that any freedom Ender has – or thinks he has – to transgress or break the bounds of his prison-like environment are in fact merely illusions designed to encourage his compliance and relocate him within the computer network. By breaking the rules placed upon him, so Ender recreates rules and repeats them such that the original sovereign decision is referred back to time and time again much like the festival in Deleuze's *Difference and Repetition*.[27] In this sense, Ender's 'freedom' to transgress certain permissible boundaries can be seen as a means of actually *strengthening* the rule of the hidden sovereign. So, while his minor triumphs give him a sense of encouragement, and a sense that he is 'free' to make his own decisions, at the same time they keep him far removed from any form of transgression that might undermine the system within which he is located. At no point for example does Ender ever feel the need to rebel against his captors, or unite the children against the Battle School governors. Thus, in this sense, his transgressions are as much an act of participation as anything else, for they serve to reinstate the rule and maintain his position within a much wider rules-based framework.

We come then again to the question of whether or not Ender is actually *responsible* for any of his actions, either as a child murderer, or as the military leader responsible for the genocide of an entire alien race. If we read Ender as a form of human robot, then clearly, he

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[27] Deleuze, *Difference and Repetition*, p. 2.

is not responsible for any of his actions, for he has been created to behave in such a way. And yet by preventing Ender's return to Earth there is a sense here that the state is in some way holding him to account for his actions. But why should this be the case? He has been made into the perfect human weapon, and yet is still held to account for doing exactly as ordered. There is a sense then that the state (or rather, the I.F.) is using Ender as a means of transferring responsibility, shifting the focus from those making the decisions, to the 'actor' who carried out the acts on the governors' behalf. This is a significant shift, and is reminiscent of similar ethical conundrums posed by the 'guilt' or otherwise of Nazi prison camp guards and US pilots fire-bombing Japan – where the victorious US bomber pilots were not tried for war-crimes, which they would have been had the US been on the losing side.[28] In this way, the human individual serves to confirm the link between atrocity and the normative rules of war through their sacrifice as a 'responsible' human agent. In this way, the potential for atrocity – a *human* potential – both defines the limits of war, and the limits of state responsibility, where 'atrocity' serves as the means to shift responsibility from the state to the individual removing the state from view, and protects it from harm.

To expand upon this line of reasoning, we must wonder, then, is the ultimate doomsday weapon, the nuclear warhead, ever the responsibility of a single man or woman pressing the 'red button', or rather does the responsibility rest with the entire population – the entire community – that allowed circumstances to gather to the point at which the red button is pressed? If Ender is the one pressing the 'red button' on the aliens, it is only because he has been placed in such a position to do so, and has been given the orders and the tools with which to fight.

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[28] Robert McNamara confirms this point in *The Fog of War*.

While this chapter opened with a discussion of sacrifice in its broadest sense, in this final example, it would seem that Ender himself represents is the ultimate form of sacrifice on behalf of the human community. This is much like historian and anthropologist René Girard suggests in *Violence and the Sacred* (1972), in which he argues:

> As I see it, the relationship between the potential victim and the actual victim cannot be defined in terms of innocence or guilt. There is no question of 'explanation.' Rather, society is seeking to deflect upon a relatively indifferent victim, a 'sacrificeable' victim, the violence that would otherwise be vented on its own members, the people it most desires to protect.[29]

In this sense, Ender is a victim on behalf of a whole community who can never quite fully account for the burden of the decisions that have been made. As we have seen, his sacrifice is on many different levels, and can be read as a form of sacrifice made even before he was conceived. Yet here so he takes on another 'sacred' quasi-religious form in that he is also a sacrifice on behalf of the members of themselves, who can never quite sacrifice enough. While he may not be 'responsible' as such, he is 'accountable' in that he is transformed into a surrogate victim on behalf of the wider community. This transfer of guilt is based as Girard puts it on a 'certain degree of *misunderstanding.* The celebrants do not and must not comprehend the true role of the sacrificial act.'[30] Were the 'celebrants' (i.e. the human community) to fully comprehend the nature of the act and their role in it, then one must wonder just how any member of the community could ever be considered free from guilt?

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[29] Girard, p. 4.

[30] Ibid., p. 7.

But why should Ender suffer? If he is the product of a machine, then logic dictates that the machine should be the one to suffer instead. And yet we cannot hold a machine to account on strictly human terms. If a machine cannot know death then it cannot experience sacrifice or the Agambian 'potential' for action and/or inaction. In the cold logic of machine programming, there is no right or wrong: there is merely the logically permissible and non-permissible act; that which is allowed, and that which is not. If Ender is a machine, then he cannot be held to account, and yet it is his fundamental humanity that allows him to be treated thus. Why then, should Ender suffer on behalf of an invisible sovereign that ultimately controls everything he does?

The human alibi

The question of machinic responsibility has many serious implications for our modern-day world, and feeds into current debates surrounding drone warfare and the ethics of emerging technologies such as robot warriors and driverless cars. One useful work in this area is Grégoire Chamayou's *Drone Theory*, first published in English in 2015. In his study, Chamayou explores modern concepts of the drone and theories surrounding the use of drones in combat. In particular, he gives prominence to the question of what constitutes combat and the distinction to be drawn between the human soldier and the robot assassin. He cites for example the enemy exposed in an un-warlike situation, such as caught naked, or smoking away from the battle.[31] Though a soldier should shoot an enemy caught thus, many will choose not to, and the fact it is even presented as a choice marks a distinctly human element in the decision-making process, especially in terms of our symbolic relationship with war. Here, the soldier fights and shoots other soldiers who are marked as such on the battlefield,

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[31] Grégoire Chamayou, *Drone Theory*, trans. by Janet Lloyd (London: Penguin Books, 2015), p. 195.

but has the human 'option' not to shoot these same marked soldiers if they are unexpectedly defenceless or needlessly exposed.

However, this distinction is not without its problems – not least the issue of defining the soldier, the enemy and the battlefield in a world of terrorists, unmarked combatants and urban battle-spaces. Nevertheless, despite Chamayou's weakness in this area, his theory remains an interesting one for the way it explores the decision-making process that in Chamayou's view at least distinguishes the human from the robot. For Chamayou, the question of whether or not to shoot brings the soldier to a very human conundrum, namely: 'It is a matter of remaining a combatant and not becoming, in his own eyes, an assassin.' This again recalls the earlier assertion linking the rules of war with the limit case of atrocity, where human ethics are linked with violent excess – where the possibility of excess re-inserts the human into the machine-like process of war. For Chamayou, this distinction is not so much one of soldierly *duty*, but rather one of *becoming* such that: 'The crucial, decisive question is not "What should I do?" but "What will I become?"'[32]

In the case of a war robot, the machine would act based on a pre-programmed set of decision-making processes designed to categorize life and various levels of threat. In the case of the soldier caught smoking, there can be no doubt that the robot would kill the exposed soldier – it makes perfect sense – and yet in this same act, we see something of the 'human' element stripped from warfare when the robot takes over completely. This then leads to the central question in the robotization of warfare, that being what Chamayou describes as '*decision about the decision*—the choice of a single value that fixes the parameters of all future automatic decisions in a particular sequence'.[33] This, according to Chamayou, 'is the equivalent of signing a single but infinitely repeatable death sentence' – much as we can

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[32] Ibid., p. 199.

[33] Ibid., p. 216.

imagine with the war robot programmed to kill all 'enemy soldiers', but is unable to frame that human decision around what makes an 'honourable' or 'human' death on the battlefield.[34] This is particularly important for Chamayou who argues that: 'contrary to what is suggested by science-fiction scenarios, the danger is not that robots begin to disobey. Quite the reverse: it is that they never disobey.'[35] For Chamayou then, transgression, or disobeying the rule (i.e. 'kill all enemies'), would seem to be a distinctly *human* act. Robots are robots because they act unquestioningly. Humans are humans because they have scope to err, and even though it may be rare for them to act outside of their core 'programming', the possibility always remains, and can be seen as a key difference between the human and the machine.

But then, why should this be important? Why is it so important that there remains a human element to warfare at all? After all, soldiers are trained such that they are expected to perform in a robotic fashion, for failure to do so might ultimately put other soldiers' lives at risk. If soldierly training tends towards the robotic, then why not replace soldiers with robots completely? The logic of warfare would certainly seem to suggest that robots could and should be the final destination for warfare. In the case of *Starship Troopers* and *The Forever War*, both protagonists operate within a restrictive environment such that they are both ultimately controlled by machines from afar. Just like Ender, they both serve a role as an alibi for what is ultimately a tendency towards the machine. If any of the characters were to err, or break from their programming, then a computer may step in to either make the decision for them, or bring their service to an end, such as with the battle computers that can remotely detonate the fighting suits in *The Forever War* (46).

This brings us back to the question of the human alibi. If robots are so much 'better' at warfare, then why shouldn't we seek to replace human soldiers with fighting machines that

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[34] Ibid., p. 216.

[35] Ibid., pp. 216–217.

are far more efficient and predictable on the field of battle? As we have seen, all warfare contains some element of asymmetry; a drive towards gaining an advantage over an adversary such that one side's arms beat another's. Were a robot soldier to take to the battlefield – whether controlled by a human or not – there remains a certain element of 'unfairness' or asymmetry such that it shouldn't really matter whether the robot is making a human decision or a robotic one, as a robot is simply that much better at shooting and thinking tactically than a human. Consider for example, a drone armed with a machine gun. A human would struggle to fire such a weapon accurately from a moving vehicle; yet when mounted on a computer-controlled drone, a common assault rifle is transformed into a sniper rifle with incredible accuracy, far surpassing anything a human could hope to achieve.[36]

What would happen then if a robot soldier were to confront our earlier example of the enemy soldier caught smoking? While it may seem morally 'human' to choose not to shoot the enemy soldier, the robot is so efficient that even giving the enemy soldier a chance to run away is not really giving them much of a chance at all: the asymmetry already exists and is such that their chance of survival is remote, whether they are ready to face the robot or not. In this case, the technology of the robot warrior exposes the 'ethical' question of shoot or not-to-shoot for the artificial construct that it really is. In such a situation, it seems clear that any human soldier should certainly shoot, for not to shoot might put another allied life in danger in the future, and the choice not to shoot is a risk that seems ludicrous in all normal logical determinations.

These dilemmas, and the fact these dilemmas are even classed as such, suggest there remains a certain *romanticization* of war in the public imagination. Memories of the two World Wars still remain, and despite the horrors of Vietnam, there is a sense that the political

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[36] Singer suggests that with computer technology, any weapon can be turned into a deadly sniper rifle, p. 31.

imaginary requires an element of human sacrifice and human daring when it comes to fighting a total war for a 'noble' cause. The political landscape is such that it would seem we are not quite ready for a complete robotization of the armed forces, even if that time isn't all that far off. And yet while the 'romantic' side of warfare remains, we can already see examples of robotization coming into effect, and playing a significant role on the battlefield and shaping global politics. Drone warfare is the perfect example. While many Western electorates are broadly against the use of 'troops on the ground', in the likes of Syria, Afghanistan and Pakistan, the use of robot technology (drones) has allowed states such as the US to extend their reach without recourse for significant political action back home. While on the one hand the general population still holds some emotional connection to the human sacrifice associated with 'traditional' warfare (such as seen in the two World Wars), there also remains a paradoxical ambivalence to sacrifice if the risk is any less than the total annihilation of one's own state. Thus, there is a growing tacit acceptance of drone warfare and automated killing when the stakes are such that human sacrifice is not required, or not deemed sufficient to be justified in the public mind. It is also a tacit acceptance of state assassination.

However, as we have seen, the use of technology already *pre-empts* its own justification. The use of military drones over a squad of soldiers on the ground avoids the question of sacrifice completely, for there is never a point at which the public must confront the spectacle of soldiers being sent home in body bags. In this respect, drone warfare is a 'clean' and efficient means of exerting force over a long distance. It is a means of effectively de-politicizing the direct consequences of a human-led war for politicians back home. While the human pilots of these robotic killers are practically unnecessary, they appear to be set to remain for the time being at least – a tokenistic nod to a time when wars were fought between

clearly marked soldiers on the ground, who could look each other in the eye. Drone pilots certainly function as an alibi, but I suggest, not a very good one.

What will we become?

Ender's Game is a fascinating book, and continues to show its relevance to this day. Its use of drone warfare in particular is ahead of its time, and can be mapped as part of a logical extrapolation of science fiction theories demonstrating the increasing de-humanization – or rather *robotization* – of the human. Just as with Chamayou's example of the (human) soldier and the (robot) assassin, Ender Wiggin is forced to confront the same dilemma as he undergoes a transformation from a child soldier 'playing' at war, to the stark reality of genocide against a distant alien foe. This transformation haunts Ender just as it continues to haunt our modern-day view of autonomous weapon systems and targeted killing, compelling us to keep the human 'in the loop', even if the 'loop' only serves as an alibi for the ethical dilemma posed by complete robotic control.

While at first glance, technology is presented as the 'problem' for which a human controller is needed, the control that any human is able to exert is in reality minimal, and is itself situated within a framework of automated (human) responses, such that the human controller is as much a robot as the machine they seek to control. Here then, technology serves not so much to remove the human, but rather to *reveal* the blurring of what were once stable oppositions, demonstrating that the distinction between the human and the robot, the natural and the artificial, are not as clear as they may seem, and crucially, never were, for they serve a distinct biopolitical purpose.

This issue is brought into sharp focus in light of questions surrounding responsibility and guilt. As we have already seen in Chapter 2, it is philosophically difficult, if not impossible, to attribute responsibility of the Derridean kind to any individual human act, for

all acts are themselves bound up in complex flows of power, rooted in language and the sacrifice of human ethics. With the advent of robot killing machines, the question of responsibility proves even more problematic still, for it reveals the artifice of what society understands as 'responsibility' and 'guilt' when we attribute these terms to an artificial construct such as a drone.

This issue is compounded by the fact that there are no clear means through which to hold a machine to account – if a machine should be considered 'responsible' at all. To resolve this conundrum, we position the human pilot as sacrificial victim, much like Ender and his companions, within the realms of responsibility and guilt for what is in essence a computer-controlled decision. This act suggests an element of self-deception, or Orwellian double-think, in the way in which the human is consistently framed within a context of mastery and control over the machine, while simultaneously operating within a machinic framework, and thus subject to machinic control. This leads us to wonder as to just how much agency any human drone pilot really has. After all, they are themselves situated within the machine-like framework of the military hierarchy, where they are subject to the strict rule of superior officers, where their 'orders' are much like a computer code to be followed at all times. If their task is to kill targets flagged by a machine, are they not then biological robots themselves?

Clearly, the question of robot decision-making in armed conflict mirrors many of the same debates that have been raised in this study. It is not so much, as Chamayou suggests, 'What should I do?', but rather instead the more challenging question 'What will I become?' It is the *becoming* here that poses the biggest question for us, much as it did during the Vietnam era, in which emerging technologies served to reveal or make-known an element of human subjectivity that blurs with the robot and the computer AI. By emphasizing the 'human' nature of the robotic act (such as in the case of the drone operator carrying out a

computer instruction), so we are complicit in the very act of our own subjugation,

manufacturing our own consent, and blurring the two acts such that one cannot be

differentiated from the other. In such cases so the human itself becomes a site of contestation,

used and manipulated as a means of sovereign control. While Ender may feel (human) guilt

for his actions against the distant alien race, the question Card leave us with is how much

choice did Ender really have?

Conclusion

> At the gates of our world, there was Vietnam, of course, and the first major blow to
>
> the powers that be.[1]

Michel Foucault, preface to *Anti-Oedipus*

Writing in the preface of Deleuze and Guattari's *Anti-Oedipus* (1972), the founding father of biopolitics, Michel Foucault, describes Vietnam as the 'gates of our world' – the first blow against 'a certain way of thinking correctly, a certain style of political discourse, a certain ethics of the intellectual'.[2] But while Vietnam was certainly important in helping to shape the counterculture that was to emerge in the 1960s and early 1970s, it was also pivotal in ushering in a new era of technological progress and innovation that fundamentally changed the relationship between the human and the machine, the citizen and the state. This shift is critical to the development of modern-day biopolitics, for it gave the state the tools and the means through which to infiltrate every aspect of modern life, transforming subjects into 'citizen robots' complicit in their own subjugation, and integrating them within the all-seeing, all-knowing state machine. In this respect, Vietnam does not so much represent the 'gates of our world', but rather the 'gates of our *biopolitical* world' – a world we remain trapped in to this day.

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[1] Foucault, 'Preface', p. xi.

[2] Ibid., p. xi.

Citizen robots, computerized states

This study has examined the relationship between the human and the machine, with a particular focus on the emergence of computer technology alongside the (re)birth of the newly computerized biopolitical state. Such has been the impact of mass computerization that the modern-day (Western) state simply cannot exist without its technological foundation, rooted in the Vietnam period, through which it can effectively monitor and control subjects and infiltrate every aspect of modern life. However, this same technology can also prove its undoing. Just as was the case with the rise and demise of Fordism, computer technology remains a double-edged sword, with the emancipatory potential of smart phones and the internet balanced by the threat of cyberterrorism and social challenges such as cyberbullying, fake news, and the spread of extremist propaganda.[3]

Though much has changed in the years since the Vietnam period, the lure of technology remains, and the state continues on a path towards complete technological integration in order to achieve full oversight and total control. This is similar to claims made by the Frankfurt School of philosophy. In *Dialectic of Enlightenment* (1944), Horkheimer and Adorno argue that the Enlightenment is totalitarian in nature – that 'Enlightenment stands in the same relationship to things as the dictator to human beings'.[4] This is because the rationality of the Enlightenment tends towards domination and totalization whereby

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[3] Despite its early promise, the internet remains a hotly contested geopolitical space. See: Jack Goldsmith and Tim Wu, *Who Controls the Internet?: Illusions of a Borderless World* (Oxford: Oxford University Press, 2006); Matthew A. Zook, *The Geography of the Internet Industry: Venture Capital, Dot-coms, and Local Knowledge* (Malden MA: Blackwell Publishing, 2005); Jillian C. York, 'The Myth of a Borderless Internet', *The Atlantic*, 3 June 2015 <https://www.theatlantic.com/technology/archive/2015/06/the-myth-of-a-borderless-internet/394670/> [accessed 14 January 2019].

[4] Max Horkheimer and Theodore W. Adorno, *Dialectic of Enlightenment: Philosophical Fragments*, ed. by Gunzelin Schmid Noerr, trans. by Edmund Jephcott (Stanford: Stanford University Press, 2002), pp. 4–6.

'Mathematical procedure [becomes] a kind of ritual of thought'.[5] A similar observation is made by fellow Frankfurt School theorist Herbert Marcuse, who also claims that 'contemporary industrial society tends to be totalitarian' in the way it manipulates needs and organizes its technological base.[6] In this way, Marcuse argues that:

> [The] traditional notion of the 'neutrality' of technology can no longer be maintained. Technology as such cannot be isolated from the use to which it is put; the technological society is a system of domination which operates already in the concept and construction of techniques.[7]

Several decades later, and the concerns of the Frankfurt School are more relevant than ever as the state seeks to extend its technological dominance. In this context, the AI represents the ultimate destination for the biopolitical state, with its ability to monitor and control *every* aspect of human life while at the same time removing itself from responsibility and protecting itself from harm. The character Mike in Robert A. Heinlein's *The Moon is a Harsh Mistress* is the perfect example of such an omnipotent AI. In the novel, he is both a sovereign ruler and a friend to the citizens of Luna. This relationship is such that they never doubt his good intentions. Yet there lurks an element of deception in their relationship. This same 'harmless' friend is also the worst of enemies to those who do not comply. In wilfully submitting themselves to Mike's rule, the Loonies also put themselves at his mercy, and must trust that he acts with benevolent intent. But while Mike is certainly a part of the deception, it is never

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[5] Ibid., p. 19.

[6] Herbert Marcuse, *One Dimensional Man: Studies in the Ideology of Advanced Industrial Society* (London: Routledge & Kegan Paul, 1964), p. 3.

[7] Ibid., p. xvi.

merely a one-sided act. In this case, the Loonies can't help but create and sustain the repressive conditions in which they live. While Mike is the visible presentation of the omnipotent sovereign, he is also only ever a *representation* of a system so far entrenched that none can tell quite where Mike stops and the (human) citizen populace begins.

This blurring of the boundaries between the human and the machine can also be found in situations that, outwardly at least, appear far more clear-cut. In Ursula Le Guin's *The Dispossessed*, the computer Divlab is presented as a distinct machinic unit, far removed from the diffuse and unknowable Mike. Yet even in the case of Divlab, human intention (or un-intention) slips into the bureaucratic system such that human desire can never quite be removed from the machinic form. In this case, the programming of Divlab makes it susceptible to misuse, and it does not strictly adhere to the tenets of Odonian society. This reveals the paradox at the heart of the anarchist revolution. While the Odonians may believe the machine is the only way to create a perfectly fair society, by its very nature, the machine serves to curtail the freedom of individuals, as what's fair for one may not be fair for another. In this way, Divlab is as much a symptom of inevitable statism as it is a cause of inequality on the world of Anarres.

If the all-seeing, all-knowing AI is the final destination of the biopolitical state, then the robot must be the ultimate subject. Stripped of individual subjectivity, the robot worker exists only to serve, and must place community concerns above all else. By acting in an ever-predictable, measurable manner, the robot is the final destination for the biopolitical citizen, caught up in a discourse of 'good' and 'right' behaviour, working towards a humanist goal that aligns 'progress' with social compliance and technological advancement, in much the same way Adorno, Marcuse *et al* describe in their criticism of the totalizing power of Enlightenment thought. This becomes particularly apparent in the operation of language, which functions much like a computer code or operating system on which other power

structures rest. In Ursula Le Guin's *The Word for World is Forest*, and Samuel R. Delany's *Babel-17*, Davidson and Butcher both have flawed language systems that govern their behaviour and render them as ethical outsiders. But while Rydra Wong is able to help Butcher modify his language code, there is no one to re-program Davidson, and he is left as a scapegoat for failings that go far beyond that of one single man on a distant world.

This process of 'robotization' continues into many other realms, including state surveillance. In *Flow My Tears, the Policeman Said*, Jason Taverner is so completely bound up in a technological network, that his whole identity and sense of self is bound up in his electronic record. As such, when his record disappears, so Jason effectively ceases to exist – much like a nonperson in George Orwell's classic dystopia *Nineteen Eighty-Four*. Meanwhile, in *Flowers for Algernon*, Charlie Gordon is similarly trapped in a surveillance network of sorts, wherein his identity is bound up in a complex web of power relations with those around him. Though his transformation leads him to discover the means of his exclusions, still he is unable to break free and so resigns himself to his inevitable fate.

Following on from surveillance, the next logical step in the process of robotization is full technological integration. In Robert A. Heinlein's *Starship Troopers*, Rico is completely swallowed up by his advanced fighting suit such that it becomes hard to tell where one starts and the other ends. Similarly, in Joe Haldeman's *The Forever War*, Mandella is likewise ensconced in a similar fighting suit and subject to omnipotent powers that could literally end his life at any moment. This concept takes a slightly different turn in Frederik Pohl's *Man Plus*, where Roger Torraway doesn't so much integrate with his suit, but rather becomes the suit itself, as his body is transformed into a literal 'Man Plus' capable of surviving on Mars. Yet still, all the while, he remains bound up in a network with a group of machines who are guiding human affairs from afar and shaping human destiny to their own ends.

If Rico, Mandella and Torraway are each trapped as such within their suits and stripped of agency, this begs the question: why invest so much time creating an imperfect human soldier, when a robot could do the same job for far less political and economic cost? This question is posed in Orson Scott Card's *Ender's Game* – a novel that serves to bookend the Vietnam period, and has many implications for our modern-day world. In *Ender's Game*, remotely piloted space ships are sent out to destroy an alien homeworld, only for it to later be revealed that they were crewed by human beings all along. These humans serve no practical purpose save to act as sacrifice on the altar of battle, and, we assume, to step in if things go wrong. It is significant then that the human crews never do step in, and so the question of whether they would or not is never answered – suggesting that just like Rico, Mandella and Torraway, the human crews are another alibi for complete computer control.

Of course, while the texts featured in this study have been chosen for their illustrative value, there are many other works of American science fiction that I have not included in this investigation. Kurt Vonnegut in particular is an interesting case, who warrants a thesis-level project in his own right, with novels such as *Cat's Cradle* (1963) and *Slaughterhouse-Five* (1969) casting satirical light on the troubled relationship between the citizen and state, specifically in relation to war. Meanwhile, Frank Herbert's epic *Dune* (1965) is another noteworthy case. While it is certainly more religious in tone than technological *per se*, the characters are just as 'trapped' as the many protagonists featured in this study – trapped in the logics of prophesy, and bound to a world of surveillance and control. Finally, no study of American science fiction would be complete without mention of Isaac Asimov. While he is certainly one of the most significant names in the genre, Asimov published surprisingly few novels during the Vietnam period, preferring to focus on non-fiction instead, with the film novelization *Fantastic Voyage* (1966), and *The Gods Themselves* (1972) standing as his only significant works of fiction published during the period. Though the award-winning *Gods* is

certainly a worthy novel, with its themes of resource consumption and forms of life, its focus centres around the communion between the two parallel universes, with little space given to life in the 'human' universe and the world in which the scientists Denison and Lamont live.

The steamroller comes to life

I opened this thesis with a quotation from Bernard Wolfe's *Limbo*, a dystopian novel in which men voluntarily cut off their limbs in order to 'dodge the steamroller' of the state war-machine. Though Wolfe's novel is clearly a deep satire, he does paint an interesting picture of a future wherein computers send the world into war. To dodge the inevitable steamroller, men cut off their limbs, and yet in so doing become even more enmeshed within the system than they were before. The irony is not lost on the protagonist Dr Martine who notes that: 'there's something else that distinguishes man from animal: he's secretly in cahoots with the steamroller and secretly knows it' (384).

Though there are clearly many problems with *Limbo* – both as a novel, and as a political essay – there is certainly something to be said for its engagement with the citizen and the 'steamroller' state. While people may resent the steamroller, as Babyface observes, it is a resentment built on the fact they engineered the whole thing themselves (201). This is a theme that comes up time and time again in the science fiction of the Vietnam period, and can be seen across the works featured in this study. In *The Moon is a Harsh Mistress*, the Loonies need Mike to 'free' themselves from the Lunar Authority, but in so doing, become reliant on an omnipotent computer that has more powers of oppression than the Lunar Authority ever had. Meanwhile, in *The Dispossessed*, the Odonians use the computer Divlab to deal out work to ensure the 'equality' of their revolution, but find themselves similarly trapped within a system of their own making. In both examples, the protagonists move from one form of subjugation to another; yet in both cases, they believe the machine grants more freedom than

they had before. It is just as Martine describes: they are all equally deceived, trapped in technological progressivism rooted in the rationalism of the Enlightenment, and yet secretly 'in cahoots' with the means of their own oppression.

This theme continues across the texts featured in this study. In *Flow My Tears*, Jason Taverner's celebrity status means his whole identity is based on a form of surveillance that constitutes his identity and gives him a sense of self-worth. This relationship is such that when his record goes missing, he desperately seeks re-inclusion within the system that rejects him. A similar theme emerges in *Flowers for Algernon*, where Charlie Gordon serves as an example to promote compliance among citizens who are prompted to seek inclusion for fear of becoming a 'Charlie Gordon'.

This self-engineered oppression takes on an added physical dimension in *Starship Troopers* and *The Forever War* as the protagonists are bound to advanced fighting suits that monitor and control their behaviour. While Rico enlists in the military and Mandella is drafted, it is significant that both Mandella and his partner Marygay *choose* to re-enlist when given the option. For Roger Torraway in *Man Plus,* however, there is no choice and there can be no return. While Torraway is marked as an outsider by his physical appearance, both Mandella and Marygay are similarly marked, but in a different way. In this case, it is not so much a physical mark that excludes them, but rather social controls exercised by society at large – they are dislocated both culturally and temporally, for they have been away for far too long, and as such, have very little choice but to re-enlist in order to avoid social ostracism. Though they may appear physically similar to the people of Earth, their service marks them as outsiders, and they feel more at home in the military than they do back on Earth, leading them to re-enlist.

Finally, there is the case of Ender Wiggin in Orson Scott Card's *Ender's Game*. Though Ender may not directly choose or even desire his oppression, the decision is made for

him by his parents, long before he is born. Due to his unique position as a Third child, Ender is cast as an outsider right from the moment of conception, such that his whole life serves as a form of sacrifice on behalf of others. In this case, it is not so much that he makes any single decision to be subject to the rule of the I.F., but rather that he is monitored and controlled right from the very start, right from his planned birth, through to the monitor chip that tracks him, and the way the computer manipulates him aboard the Battle School. In this way, his role is not characterized by a single choice as such, but rather his very existence – his *life* – serves as a reminder of the choice that locates all subjects, in one way or another, within the complex network of the state machine. As Ender observes when he agrees to go with Graff: 'It's what I was born for, isn't it? If I don't go, why am I alive?' (26).

A matter of becoming

This brings us to wonder: where next? As many biopolitical scholars suggest, a discourse around the human also implies a discourse around the non-human and the animal. However, it also implies something more. The emergence of the machine, and crucially, the *thinking machine*, serves to re-contextualize many of the debates that have been ongoing now for many years. It is insufficient to think merely in terms of the human and non-human as many biopolitical theorists would have it, but rather to also map onto this theory the role of the machine, and the machine-like processes that govern everyday lived experience and the interaction between humans.

These questions take on an even more chilling dimension in the context of modern warfare and conflict across the globe. With human fighting forces becoming ever more closely aligned with computer technology and autonomous weapon systems, the human becomes an ever more hotly contested site of biopolitical control. After all, without human involvement, there would be no war, and yet these same wars are fought with ever-decreasing

number of soldiers fighting on the ground. In this way, technology serves to distance the soldier from the act of war, until the human is removed completely, creating a paradox whereby the 'logic' of war leads to a distinctly non-war-like situation.[8] In this case, the *re-insertion of the human* serves to ground state actions within a pseudo-ethical framework, deferring responsibility away from the state and towards the human individual, in a brazenly duplicitous act. Thus, the same system that seeks to robotize action and remove the human from the decision-making process also seeks to re-insert the human in order to legitimize this very same conduct. This is but one example of many that mark a general shift in the relationship between the citizen and the state, revealing the paradox of human-machine interactions, and the lasting legacy of the Vietnam period – a legacy that remains with us to this day.

From the birth of the home computer to the colour television and news media, the Vietnam period was a time of great social, cultural and technological change. But while the period promised much, it also flattered to deceive. The space race came and went, and while the early signs were full of humanistic promise, the moon landings proved the pinnacle of human endeavour in the period, and not the first step that Neil Armstrong's famous words suggested. It wasn't so much a moment of looking to the future, but rather turning back to Earth, and in many respects, the world still hasn't recovered from those turbulent years of Cold War posturing and the 1970's recession. Human space endeavour has barely progressed beyond Earth's orbit, and a journey to Mars still seems a distant dream. Meanwhile, the technological integration of citizen and state continues at pace, and while modern technology promises much, it also poses many challenges to society, with the internet

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[8] This is similar to the experience of Rico in *Starship Troopers*, where the superiority of the M.I. means the conflict with the Skinnies is not so much war, but rather industrialized slaughter.

and social media serving as a breeding ground for bad feeling, criminal activity and political extremism.

If Vietnam stands at the gates of our biopolitical world, then we must embrace the lessons that it leaves us. These include the need to be wary of the lure of technology and the illusion of the costless benefit. As Heinlein reminds us in *The Moon is a Harsh Mistress*: 'There ain't no such thing as a free lunch' (122). There is also then the issue of data and machinic output. While a machine may well be more efficient than a human at certain tasks, this is not to say that all machinic output should be taken at face value. Data alone can never speak for itself. Indeed, if the Vietnam period teaches us anything, it is the need to look beyond the data and understand the *qualitative* meaning that numbers on a screen might represent. Behind every number there is a human life; a life that is made up of far more than a series of zeroes and ones. This is no simple technological fix, but rather, we need to better understand how we produce data, why we produce data, and to what purpose that data is put.

Finally, and perhaps most importantly, we should also then consider the new ways in which technology serves to recontextualize human subjectivity. We should think not in terms of human-animal or human-machine distinctions, but rather in terms of a fluid range of subjectivities – human-animal-machine – that frame and constitute us as compliant biopolitical subjects. It is only by embracing a new cybernetic form of biopolitics – a *techno-biopolitics* – integrating the robotic with our current understandings of the human, the non-human and the animal, that we may hope to strike the first major blow to the powers that be.[9]

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[9] In 2016, Elke Schwarz published a paper, 'Prescription Drones: On the Techno-Biopolitical Regimes of Contemporary "Ethical Killing"'. In it, she uses the term 'techno-biopolitics' to refer to 'an assemblage of discourses and technologies that produce and manage life on the basis of a *specifically medical understanding of politics* [my emphasis], treating the body politic as a *corpus organicus* in need of a cure' (p. 61). While she goes on to align techno-biopolitics with a kind of 'algorithmic governmentality' (p. 66), her use of the term is quite

different to my own. In this case, Schwarz takes a specifically ethical stance, framing the term in relation to

medical discourse and the politics of ethics and biology. While I certainly agree with Schwarz on the link

between technology and biopolitics in the case of drones and drone warfare, our respective uses of the term are

quite different. Certainly, she fails to interrogate the wider meaning her use of the term implies, and its impact

on subjectivity and the human-animal-machine dynamic. See: Elke Schwarz, 'Prescription Drones: On the

Techno-Biopolitical Regimes of Contemporary "Ethical Killing"', *Security Dialogue*, 47:1 (2016), 59–75.

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